

103 年下半年度「車輛安全檢測基準」部分條文修正草案討論（二）

會議紀錄

- 一、 開會時間：中華民國 104 年 4 月 17 日星期五下午 1 時 30 分
- 二、 開會地點：統一鹿港文創會館 2 樓 204 會議室
- 三、 會議主席：許志成 處長
- 四、 會議記錄：黃聖智
- 五、 出席人員：如簽到表
- 六、 會議結論：

（一） 本次會議主要討論內容係有：（1）UN 法規增修涉及國內車輛檢測基準 1 項（「五十六之三、電磁相容性(草案)」），及（2）臨時動議：國際法規調和推動案研擬之基準「汽車控制器標誌(草案)」，配合 UN R121 01 版修正內容討論。

（二） 有關 UN 法規增修涉及基準「五十六之三、電磁相容性(草案)」，綜合意見如下：

（1） 配合本次 UN R10 法規之新版次 05，調整本次草案為「五十六之三、電磁相容性(草案)」。

（2） 原「2.9 車輛線束…電源電壓，匯流排系統…。」
修訂為「2.9 車輛線束…電源電壓、匯流排系統…。」

（3） 原「4.1 申請者以完成車執行本項檢測時…。」
修訂為「4.1 申請者以底盤車或完成車執行本項檢測時…。」

（4） 原「4.1.3 申請者…電機/電子裝置的設計連接…整體配線布置，發動機變化及軸距式樣或零部件的變化、感知器數量等。提供 REESS 充電耦合系統相關車輛的電機/電子系統或電機/電子裝置，可能會發出顯著寬頻或窄頻輻射及/或與影響本基準 2.10 所述之免疫力相關功能。」

修訂為「4.1.3 申請者…電機/電子系統或電機/電子裝置之設計連接…整體配線布置、內燃機及/或推動馬達變化、與軸距或零部件之變化等。相關電機/電子系統或電機/電子裝置，係包含車輛及

REESS 充電耦合系統，可能會發出顯著寬頻或窄頻輻射及/或影響本基準 2.10 所述之免疫力相關功能。」

- (5) 原「4.1.4 對於 M、N 及 O 類車輛…申請者必須提供證明 RF 放射機對性車性能無不良影響。」

修訂為「4.1.4 對於 M、N 及 O 類車輛…申請者必須提供 RF 放射機對車輛性能無不良影響之聲明。」

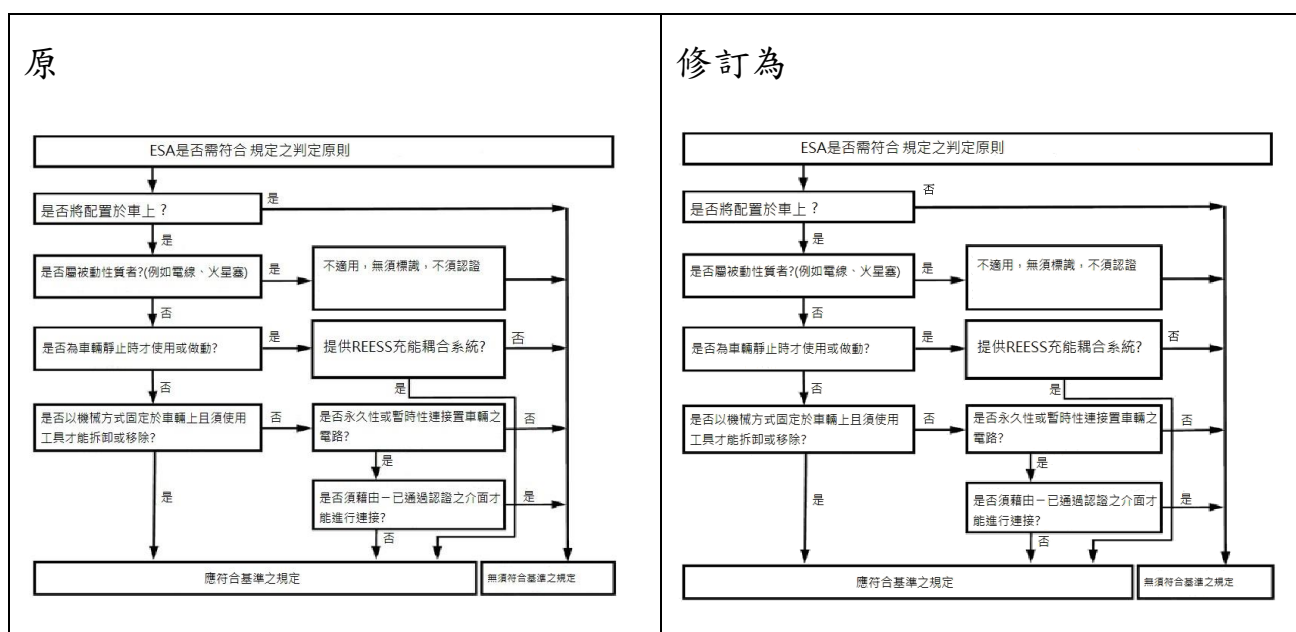
- (6) 原「21.3.1 依據 CISPR 16-2-1 章節 7.4.1 落地型設備…」

修訂為「21.3.1 依據 CISPR 16-2-1 章節 7.4.1 桌上型設備…」

- (7) 原「23.5.1.2 試驗程序 ESA 應置放於地面上…」

修訂為「23.5.1.2 試驗程序 ESA 應置放於接地平面上…」

- (8) ESA 是否需符合規定之判定原則流程圖修訂，修訂如下圖所示



- (9) 條文中所有名詞「微亨」皆修訂為「微亨利」。

- (10) 條文中所有名詞「半回聲室」皆修訂為「半電波暗室(Semi anechoic chamber)」。

- (11) 條文中所有名詞「擬峰值」皆修訂為「準峰值」。

- (12) 條文中所有數值及單位皆調整為中文化表示。

(三) 關於本次所討論之基準「五十六之三、電磁相容性(草案)」，其檢測能量現況及實施日期：

(1) 國內檢測機構已具備相關之檢測能量。

(2) 本項基準草案係對應 UN R10 05 版，其實施日期新型式及既有型式皆為 106 年 10 月 9 日，本項基準實施日期考量於 UN 實施日期之後一年，爰 L1、M1 及 N1 類車輛新型式實施時程：108 年 1 月 1 日，既有型式之實施時程：109 年 1 月 1 日；M2、M3、N2、N3 及 O 類車輛新型式實施時程：109 年 1 月 1 日，既有型式之實施時程：110 年 1 月 1 日。

(四) 另考量基準 56-2 與 56-3 各型式車輛之實施日期間隔一年，爰擬建議主管機關讓既有型式以一次到位之方式符合最新版之基準，即既有型式以符合 56-3 之實施時程為統合目標。

(五) 有關臨時動議，國際法規調和推動案研擬之基準「汽車控制器標誌(草案)」，配合 UN R121 01 版修正內容討論，並無相關修訂意見。

七、 散會(下午 4 時 40 分)

103 年度下半年「車輛安全檢測基準」增修條文內容檢討 (二)

會議資料（104/4/17 會議修正）

- 1.增修訂 103 年度（103/07~103/12）涉及國內車輛安全法規內容彙整．．． P.2
- 2.基準實施日期列表．．．．． P.238
- 3.待公告車輛安全檢測基準增修案規劃表．．．．． P.258

中華民國一〇四年四月十七日

增修訂103年度（103/07~103/12）涉及國內車輛安全法規之UN法規修正內容彙整（計1項）

項次	法規名稱	修訂法規內容	新增之法規項目	頁碼	UN 版本別	內容摘要
1	五十六之三、電磁相容性(草案)		◎	P.2	UN R10 05 2014/10/16	1.參考 ECE R10 05 版增訂 REESS 連接至電網充電模式之名詞釋義。 2.參考 05 版增訂各 ESA 所造成寬頻電磁干擾之規定。 3.參考 05 版增訂充電站/電源、模擬網路、阻抗穩定、電源充電/通訊電纜等相關規定。 4.參考 05 版增訂由 ESA 沿交流電源線所產生諧波放射之試驗方法、ESA 交流電源線的電壓變化、電壓波動及閃爍等放射之試驗方法、由 ESA 沿交流及直流電源線之射頻傳導擾動放射試驗方法、由 ESA 於網路及電信存取界面之射頻傳導擾動放射試驗方法、沿交流及直流電源線進行電性快速暫態脈波/叢訊擾動傳導之 ESA 免疫力試驗方法、沿交流及直流電源線進行突波傳導之所有 ESA 免疫力試驗方法等相關規定。
2	五十六之二、電磁相容性	◎		P.4		考量基準 56-2 與 56-3 各型式車輛之實施日期間隔一年，爰修正既有型式以一次到位之方式符合最新版之基準，即既有型式之實施時程參照基準 56-3 之規定。

UN R10 UNIFORM PROVISIONS CONCERNING THE APPROVAL OF VEHICLES WITH REGARD TO ELECTROMAGNETIC COMPATIBILITY
05 2014/10/16 車輛電磁相容性

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
05			

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
1. Scope ... 1.3. It covers: (a) Requirements regarding the immunity to radiated and conducted disturbances for functions related to direct control of the vehicle, related to driver, passenger and other road users' protection, related to disturbances, which would cause confusion to the driver or other road users, related to vehicle data bus functionality, related to disturbances, which would affect vehicle statutory data; (b) Requirements regarding the control of unwanted radiated and conducted emissions to protect the intended use of electrical or electronic equipment at own or adjacent vehicles or nearby, and the control of disturbances from accessories that may be retrofitted to the vehicle. (c) Additional requirements for vehicles and ESAs providing coupling systems for charging the REESS regarding the control of emissions and immunity from this connection between vehicle and power grid. 13. Transitional provisions 13.11. As from 36 months after the date of entry into force of the 05 series of	1. Scope ... 1.3. It covers: (a) Requirements regarding the immunity to radiated and conducted disturbances for functions related to direct control of the vehicle, related to driver, passenger and other road users' protection, related to disturbances, which would cause confusion to the driver or other road users, related to vehicle data bus functionality, related to disturbances, which would affect vehicle statutory data; (b) Requirements regarding the control of unwanted radiated and conducted emissions to protect the intended use of electrical or electronic equipment at own or adjacent vehicles or nearby, and the control of disturbances from accessories that may be retrofitted to the vehicle. (c) Additional requirements for vehicles providing coupling systems for charging the RESS regarding the control of emissions and immunity from this connection between vehicle and power grid.	<u>五十六之三、電磁相容性(草案)</u> <u>1. 實施時間及適用範圍:</u> <u>1.1 中華民國一〇八年一月一日起，新型式之L、M1及N1類車輛及一〇九年一月一日起，各型式之L、M1及N1類車輛，應符合本項「電磁相容性」規定。</u> <u>1.1.1 符合車輛安全檢測基準項次「五十六之二、電磁相容性」規定之既有型式L、M1及N1類非電動車輛，亦視同符合本項規定。</u> <u>1.2 中華民國一〇九年一月一日起，新型式之M2、M3、N2、N3及O類車輛及一一〇年一月一日起，各型式之M2、M3、N2、N3及O類車輛，應符合本項「電磁相容性」規定。</u> <u>1.2.1 符合車輛安全檢測基準項次「五十六之二、電磁相容性」規定之既有型式M2、M3、N2、N3及O類非電動車輛，亦視同符合本項規定。</u> 1.3 同一申請者同一年度同型式規格之M1、L3或L5類車輛，申請少量車型安全審驗且總數未逾三輛者，得免符合本項中「電磁免疫力」規定。 1.4 同一申請者同一年度同型式規格車輛，申請逐車少量車型安全審驗且總數未逾二十輛者，得免符合本	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
amendments, Contracting Parties applying this Regulation shall grant type approvals only if the vehicle type, component or separate technical unit, to be approved meets the requirements of this Regulation as amended by the 05 series of amendments. (聯合國法規之生效日期：2014/10/09；<u>所有</u>型式緩衝36個月(3年)，即2017/10/09。)		項中「電磁免疫力」規定。 1.5機關、團體、學校或個人進口自行使用之車輛，得免符合本項「電磁相容性」規定。 五十六之二、電磁相容性 1. 實施時間及適用範圍： 1.1中華民國一〇五年一月一日起，新型式之L類車輛應符合本項「電磁相容性」規定。 1.2中華民國一〇六年一月一日起，新型式之M1及N1類車輛應符合本項「電磁相容性」規定。 1.3中華民國一〇七年一月一日起，新型式之M2、M3、N2及N3類車輛應符合本項「電磁相容性」規定。 1.4中華民國一〇八年一月一日起，新型式之O類車輛應符合本項「電磁相容性」規定。 1.5同一申請者同一年度同型式規格之M1、L3或L5類車輛，申請少量車型安全審驗且總數未逾三輛者，得免符合本項中「電磁免疫力」規定。 1.6同一申請者同一年度同型式規格車輛，申請逐車少量車型安全審驗且總數未逾二十輛者，得免符合本項中「電磁免疫力」規定。 1.7機關、團體、學校或個人進口自行使用之車輛，得免符合本項「電	五十六之二、電磁相容性 1. 實施時間及適用範圍： 1.1中華民國一〇五年一月一日起，新型式之L類車輛<u>及一〇七年一月一日起，各型式之L類車輛</u>，應符合本項「電磁相容性」規定。 <u>1.1.1符合車輛安全檢測基準項次「五十六之一、電磁相容性」規定之既有型式L類非電動車輛，亦視同符合本項規定。</u> 1.2中華民國一〇六年一月一日起，新型式之M1及N1類車輛<u>及一〇八年一月一日起，各型式之M1及N1類車輛</u>，應符合本項「電磁相容性」規定。 <u>1.2.1符合車輛安全檢測基準項次「五十六之一、電磁相容性」規定之既有型式M1及N1類非電動車輛，亦視同符合本項規定。</u> 1.3中華民國一〇七年一月一日起，新型式之M2、M3、N2及N3類車輛<u>及一〇九年一月一日起，各型式之M2、M3、N2及N3類車輛</u>，應符合本項「電磁相容性」規定。 <u>1.3.1符合車輛安全檢測基準項次「五十六之一、電磁相容性」規定之既</u>

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
		磁相容性」規定。 【依據4/17 103年度下半年「車輛安全檢測基準」增修條文內容檢討(二)會議結論，考量業者提出基準56-2與56-3各型式車輛之開始實施日期過於接近，爰擬配合刪除56-2 L、M、N及O類車輛既有型式之實施時程，即其既有型式之實施時程參照基準56-3之規定。】	<u>有型式M2、M3、N2及N3類非電動車輛，亦視同符合本項規定。</u> 1.4中華民國一〇八年一月一日起，新型式之O類車輛<u>及一一〇年一月一日起，各型式之O類車輛</u>，應符合本項「電磁相容性」規定。 <u>1.4.1符合車輛安全檢測基準項次「五十六之一、電磁相容性」規定之既有型式O類非電動車輛，亦視同符合本項規定。</u> 1.5同一申請者同一年度同型式規格之M1、L3或L5類車輛，申請少量車型安全審驗且總數未逾三輛者，得免符合本項中「電磁免疫力」規定。 1.6同一申請者同一年度同型式規格車輛，申請逐車少量車型安全審驗且總數未逾二十輛者，得免符合本項中「電磁免疫力」規定。 1.7機關、團體、學校或個人進口自行使用之車輛，得免符合本項「電磁相容性」規定。
2. Definitions ... 2.3. "Electromagnetic immunity" means the ability of a vehicle or component(s) or separate technical unit(s) to operate without degradation of performance in the	2. Definitions ... 2.3. "Electromagnetic immunity" means the ability of a vehicle or component(s) or separate technical unit(s) to operate without degradation of performance in the	2. 名詞釋義 2.3 電磁免疫力 (Electromagnetic immunity): 意指車輛、零件或獨立的技術元件在受從車輛內部或外部無線電機或工業-科學-醫療儀器無線電頻率訊號之電磁擾動下仍	2. 名詞釋義 2.3 "電磁免疫力"意指車輛、零件或獨立的技術元件在受從車輛內部或外部無線電機或工業-科學-醫療儀器無線電頻率訊號之電磁擾動下仍能正常操作之能力。

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
presence of (specified) electromagnetic disturbances which includes wanted radio frequency signals from radio transmitters or radiated in-band emissions of industrial-scientific-medical (ISM) apparatus, internal or external to the vehicle. 2.4. "Electromagnetic environment" means the totality of electromagnetic phenomena existing at a given location. 2.5. "Broadband emission" means an emission, which has a bandwidth greater than that of a particular measuring apparatus or receiver (International Special Committee on Radio Interference (CISPR) 25). 2.6. "Narrowband emission" means an emission which has a bandwidth less than that of a particular measuring apparatus or receiver (CISPR 25). 2.7. "Electrical/electronic system" means (an) electrical and/or electronic device(s) or set(s) of devices together with any associated electrical connections which form part of a vehicle but which are not intended to be type approved separately from the vehicle."	presence of (specified) electromagnetic disturbances which includes wanted radio frequency signals from radio transmitters or radiated in-band emissions of industrial-scientific-medical (ISM) apparatus, internal or external to the vehicle. 2.4. "Electromagnetic environment" means the totality of electromagnetic phenomena existing at a given location. 2.5. "Broadband emission" means an emission, which has a bandwidth greater than that of a particular measuring apparatus or receiver (International Special Committee on Radio Interference (CISPR) 25, <i>second edition 2002 and corrigendum 2004</i>). 2.6. "Narrowband emission" means an emission which has a bandwidth less than that of a particular measuring apparatus or receiver (CISPR 25, <i>second edition 2002 and corrigendum 2004</i>). 2.7. "Electrical/electronic system" means (an) electrical and/or electronic device(s) or set(s) of devices together with any associated electrical connections which form part of a vehicle but which are not intended to be type approved separately from the vehicle. <i>Both RESS and Coupling system for charging the RESS are</i>	能正常操作之能力。 2.4 電磁環境 (Electromagnetic environment):在選定的地區中所全部存在的電磁現象。 <u>2.5寬頻放射(Broadband emission)：</u> <u>意指頻寬大於專用測量儀器或接收機（國際特別委員會無線電干擾 (International Special Committee on Radio Interference (CISPR) 25) 之放射。</u> <u>2.6窄頻放射(Narrowband emission)：</u> <u>意指頻寬小於專用測量儀器或接收機 (CISPR 25) 之放射。</u> <u>2.7 電機 / 電子系統</u> (Electric/Electronic system):指電機/電子裝置或其餘裝置其聯接相關電線構成車輛之一部份，但不個別與車輛分開進行型式<u>認證</u>。	2.4 電磁環境 (Electromagnetic environment):在選定的地區中所全部存在的電磁現象。 <u>2.9 電機/電子系統(Electric/Electronic system):指電機/電子裝置或其餘裝置其聯接相關電線構成車輛之一部份，但不個別與車輛分開進行型式審驗。可再充電式能量儲存系統 (RESS)及其充電連結系統亦視為電機/電子系統。</u>

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
2.8. "Electrical/electronic sub-assembly" (ESA) means an electrical and/or electronic device or set(s) of devices intended to be part of a vehicle, together with any associated electrical connections and wiring, which performs one or more specialized functions. An ESA may be approved at the request of a manufacturer or his authorized representative as either a "component" or a "separate technical unit (STU)". 2.9. "Vehicle type" in relation to electromagnetic compatibility includes all vehicles, which do not differ essentially in such respects as: 2.9.1. The overall size and shape of the engine compartment; 2.9.2. The general arrangement of the electrical and/or electronic components and the general wiring arrangement; 2.9.3. The primary material of which the body or shell of the vehicle is constructed (for example, a steel, aluminium or fiberglass body shell). The presence of panels of different material does not change the vehicle type provided the primary material of the body is unchanged. However, such variations must be notified.	considered electrical/electronic systems. 2.8. "Electrical/electronic sub-assembly" (ESA) means an electrical and/or electronic device or set(s) of devices intended to be part of a vehicle, together with any associated electrical connections and wiring, which performs one or more specialized functions. An ESA may be approved at the request of a manufacturer or his authorized representative as either a "component" or a "separate technical unit (STU)".	2.8 電機電子裝置 (Electrical/Electronic sub-assembly(ESA):指電機/電子裝置或車輛零組件之一部分的電子裝置，其聯接相關之電線以作動一或多個特定功能。該ESA可能為申請者所要求進行認證之任一個"零組件(Component)"或"獨立技術元件(Separate technical unit, STU)。	2.10 電機電子裝置 (Electrical/Electronic sub-assembly(ESA):指電機/電子裝置或車輛零組件之一部分的電子裝置，其聯接相關之電線以作動一或多個特定功能。該ESA可能為申請者所認可要求之任一個"零組件(Component)"或"獨立技術元件(Separate technical unit, STU)。

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
2.10. An "ESA type" in relation to electromagnetic compatibility means ESAs, which do not differ in such essential respects as: 2.10.1. The function performed by the ESA; 2.10.2. The general arrangement of the electrical and/or electronic components, if applicable. 2.11. "Vehicle wiring harness" means supply voltage, bus system (e.g. CAN), signal or active antenna cables, which are installed by the vehicle manufacturer. 2.12. "Immunity related functions" are: (a) Functions related to the direct control of the vehicle: (i) By degradation or change in: e.g. engine, gear, brake, suspension, active steering, speed limitation devices; (ii) By affecting drivers position: e.g. seat or steering wheel positioning; (iii) By affecting driver's visibility: e.g. dipped beam, windscreen wiper. (b) Functions related to driver, passenger and other road user protection: (i) E.g. airbag and safety restraint systems. (c) Functions which when disturbed cause confusion to the driver or other road users: (i) Optical disturbances: incorrect operation of e.g. direction indicators, stop lamps, end outline marker lamps, rear position lamp,	2.11. "Vehicle wiring harness" means supply voltage, bus system (e.g. CAN), signal or active antenna cables, which are installed by the vehicle manufacturer. 2.12 "Immunity related functions" are: (a) Functions related to the direct control of the vehicle: (i) By degradation or change in: e.g. engine, gear, brake, suspension, active steering, speed limitation devices; (ii) By affecting drivers position: e.g. seat or steering wheel positioning; (iii) By affecting driver's visibility: e.g. dipped beam, windscreen wiper. (b) Functions related to driver, passenger and other road user protection: (i) E.g. airbag and safety restraint systems. (c) Functions which when disturbed cause confusion to the driver or other road users: (i) Optical disturbances: incorrect operation of e.g. direction indicators, stop lamps, end outline marker lamps, rear position lamp,	<u>2.9 車輛線束 (Vehicle wiring harness):意指申請者安裝之電源電壓、匯流排系統(如CAN)、訊號或主動式天線電纜。</u> <u>2.10 "免疫力相關功能"為:</u> (a) 車輛有與直接控制相關之功能: (i) 藉降低或改變:例如引擎、入檔、煞車、懸吊、主動轉向及限速裝置。 (ii) 藉影響駕駛位置:例如座位或轉向輪胎定位。 (iii) 藉影響駕駛視野:例如近光燈及擋風玻璃雨刷。 (b) 駕駛、乘客及其他用路人保護之相關機能。 (i) 例如氣囊和安全束縛系統。 (c) 受干擾之下而造成駕駛或其他用路人困惑之功能 (i) 光學干擾:如方向燈、煞車燈、輪廓邊界標識燈、後位置燈、緊急系統警示燈、錯誤訊號或可能從駕駛視野直接被觀察到與(a)或(b)所述功能相關之警告指示器、燈或顯示幕等所示之錯誤資訊。 (ii) 聽覺干擾:如防盜警報器、喇叭之不正確作動。 (d) 與車輛資料匯流功能相關之機能 (i) 阻斷車輛資料匯流系統上之資料傳輸,該系統係用以傳輸資料,及確保其他耐受相關功能正確運作。	<u>2.11 "免疫力相關功能"為:</u> (a) 車輛有與直接控制相關之功能 (i) 藉降低或改變:例如引擎、入檔、煞車、懸吊、主動轉向及限速裝置。 (ii) 藉影響駕駛位置:例如座位或轉向輪胎定位。 (iii) 藉影響駕駛視野:例如近光燈及擋風玻璃雨刷。 (b) 駕駛、乘客及其他用路人保護之相關機能。 (i) 例如氣囊和安全束縛系統。 (c) 受干擾之下而造成駕駛或其他用路人困惑之功能 (i) 光學干擾:如方向燈、煞車燈、輪廓邊界標識燈、後位置燈、緊急系統警示燈、錯誤訊號或可能從駕駛視野直接被觀察到與(a)或(b)所述功能相關之警告指示器、燈或顯示幕等所示之錯誤資訊。 (ii) 聽覺干擾:如防盜警報器、喇叭之不正確作動。 (d) 與車輛資料匯流功能相關之機能

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
light bars for emergency system, wrong information from warning indicators, lamps or displays related to functions in subparagraphs (a) or (b) which might be observed in the direct view of the driver; (ii) Acoustical disturbances: incorrect operation of e.g. anti-theft alarm, horn. (d) Functions related to vehicle data bus functionality: (i) By blocking data transmission on vehicle data bus-systems, which are used to transmit data, required to ensure the correct functioning of other immunity related functions. (e) Functions which when disturbed affect vehicle statutory data: e.g. tachograph, odometer. (f) Function related to charging mode when coupled to the power grid: (i) for vehicle test: by leading to unexpected vehicle motion (ii) for ESA test: by leading to an incorrect charging condition (e.g. over-current, over-voltage) 2.13. "REESS" means the rechargeable energy storage system that provides electric energy for electric propulsion of the vehicle. 2.14. "Coupling system for charging the REESS" means the electrical circuit installed in the vehicle used for charging	light bars for emergency system, wrong information from warning indicators, lamps or displays related to functions in subparagraphs (a) or (b) which might be observed in the direct view of the driver; (ii) Acoustical disturbances: incorrect operation of e.g. anti-theft alarm, horn. (d) Functions related to vehicle data bus functionality: (i) By blocking data transmission on vehicle data bus-systems, which are used to transmit data, required to ensure the correct functioning of other immunity related functions. (e) Functions which when disturbed affect vehicle statutory data: e.g. tachograph, odometer. (f) Function related to the RESS in charging mode coupled to the power grid; (i) By leading to unexpected vehicle motion. 2.13. "RESS" means the rechargeable energy storage system that provides electric energy for electric propulsion of the vehicle. 2.14. "Coupling system for charging the RESS" means the electrical circuit installed in the vehicle used for charging the RESS.	(e) 受干擾之下而影響車輛狀態資料之功能：如行車紀錄器、里程計。 (f) 有關連接至電網充電模式下之功能： (i) <u>車輛試驗</u>：經由導致車輛非預期的移動。 <u>(ii) 電機電子裝置試驗：經由導致不正確充電狀態（如過大電流、過大電壓）。</u> <u>2.11 可充電式能量儲存系統 (REESS)：用來提供電動推進所需電能之可充能之能量儲存系統。</u> <u>2.12 REESS 充能耦合系統(Coupling system for charging the REESS)：指充能系統使用外部電源供應器之電路來充電。</u> <u>2.13 「REESS 充電模式連接至電網 (Power grid)」：意指在車輛及/或充電系統的正常充電操作模式。</u> 【102年上下半年度主要修訂電動汽車之電氣安全等，將條文內所有 RESS 修訂為 REESS。本次 R10 05 版，將條文內所有 RESS 修訂為	(i) 阻斷車輛資料匯流系統上之資料傳輸，該系統係用以傳輸資料，及確保其他耐受相關功能正確運作。 (e) 受干擾之下而影響車輛狀態資料之功能：如行車紀錄器、里程計。 (f) 有關RESS連接到電網於充電模式下之功能： (i) 經由導致車輛非預期的移動。 <u>2.12 可充電式能量儲存系統 (RESS)：用來提供電動推進所需電能之可充能之能量儲存系統。</u> <u>2.13 RESS 充能耦合系統(Coupling system for charging the RESS)：指充能系統使用外部電源供應器之電路來充電。</u>

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
the REESS." 2.15. "REESS charging mode coupled to the power grid" means the normal charging operation mode of the vehicle and/or charging system	參照CNS 15491-7(無英文版僅中文版) 3.5 基準限制值(Reference limit):於判定類型上，車輛符合限制值規定之基準。 3.6 參考天線(Reference antenna):參考天線應使用平衡式偶極天線(參照CNS 13306-1-4)。頻率於80MHz或以上時，天線長度應調至該頻率的共振長度，於80MHz以下時，則使用80MHz之共振長度。 3.7 寬頻電磁擾動(Broadband electromagnetic disturbances):電磁擾動的頻寬大於接收機所設定之檢測頻寬。 3.8 窄頻電磁擾動(Narrowband electromagnetic disturbances):電磁擾動的頻寬小於接收機所設定之檢測頻寬。	REESS】 2.14 基準限制值(Reference limit):在判定的類型上，該物符合限制值規定的基準。 2.15 參考天線(Reference antenna):參考天線應使用平衡式偶極天線(參照CNS 13306-1)。頻率在<u>80兆赫</u>或以上時，天線長度應調在該頻率的共振長度，在<u>80兆赫</u>以下時，則使用<u>80兆赫</u>之共振長度。 2.16 寬頻電磁擾動(Broadband electromagnetic disturbances):電磁擾動的頻寬大於接收機所設定的檢測頻寬。 2.17 窄頻電磁擾動(Narrowband electromagnetic disturbances):電磁擾動的頻寬小於接收機所設定的檢測頻寬。	2.5 基準限制值(Reference limit):在判定的類型上，該物符合限制值規定的基準。 2.6 參考天線(Reference antenna):參考天線應使用平衡式偶極天線(參照CNS 13306-1)。頻率在<u>80MHz</u>或以上時，天線長度應調在該頻率的共振長度，在<u>80MHz</u>以下時，則使用<u>80MHz</u>之共振長度。 2.7 寬頻電磁擾動(Broadband electromagnetic disturbances):電磁擾動的頻寬大於接收機所設定的檢測頻寬。 2.8 窄頻電磁擾動(Narrowband electromagnetic disturbances):電磁擾動的頻寬小於接收機所設定的檢測頻寬。
2.9. "Vehicle type" in relation to electromagnetic compatibility includes all vehicles, which do not differ essentially in such respects as: 2.9.1. The overall size and shape of the engine compartment; 2.9.2. The general arrangement of the electrical and/or electronic components		3. 電磁相容性之適用型式及其範圍認定原則： 3.1 若以完成車執行本項檢測時，其適用型式及其範圍認定原則： 3.1.1 車種代號相同。 3.1.2 廠牌及車輛型式系列相同。 3.1.3 底盤車廠牌相同。 3.1.4 底盤車製造廠宣告之底盤車	3. 電磁相容性之適用型式及其範圍認定原則： 3.1 若以完成車執行本項檢測時，其適用型式及其範圍認定原則： 3.1.1 車種代號相同。 3.1.2 廠牌及車輛型式系列相同。 3.1.3 底盤車廠牌相同。 3.1.4 底盤車製造廠宣告之底盤車

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
and the general wiring arrangement; 2.9.3. The primary material of which the body or shell of the vehicle is constructed (for example, a steel, aluminium or fiberglass body shell). The presence of panels of different material does not change the vehicle type provided the primary material of the body is unchanged. However, such variations must be notified. ... 3.1.9. Vehicle type approval shall be applied for both REESS and coupling system for charging the REESS as they are considered as electrical/electronic systems.	3.1.9. Vehicle type approval shall be applied for both RESS and Coupling system for charging the RESS as they are considered as electrical/electronic systems.	型式系列相同。 3.1.5 車輛推進動力來源種類(內燃機或純電動馬達或混合動力)相同。 3.2 若以底盤車代替完成車執行本項全部或部分檢測時，其適用型式及其範圍認定原則： 3.2.1 適用車種代號相同。 3.2.2 底盤車廠牌相同。 3.2.3 底盤車製造廠宣告之底盤車型式系列相同。 3.2.4 車輛推進動力來源種類(內燃機或純電動馬達或混合動力)相同。 3.3 若以電機/電子裝置(Electrical/Electronic sub-assembly(ESA))執行本項檢測時，其適用型式及其範圍認定原則： 3.3.1 電機/電子裝置廠牌相同。 3.3.2 電機/電子裝置型式系列相同。 3.3.3 電機/電子裝置功能相同。 3.3.4 電機/電子裝置配置相同(若適用)。	型式系列相同。 3.1.5 車輛推進動力來源種類(內燃機或純電動馬達或混合動力)相同。 3.2 若以底盤車代替完成車執行本項全部或部分檢測時，其適用型式及其範圍認定原則： 3.2.1 適用車種代號相同。 3.2.2 底盤車廠牌相同。 3.2.3 底盤車製造廠宣告之底盤車型式系列相同。 3.2.4 車輛推進動力來源種類(內燃機或純電動馬達或混合動力)相同。 3.3 若以電機/電子裝置(Electrical/Electronic sub-assembly(ESA))執行本項檢測時，其適用型式及其範圍認定原則： 3.3.1 電機/電子裝置廠牌相同。 3.3.2 電機/電子裝置型式系列相同。 3.3.3 電機/電子裝置功能相同。 3.3.4 電機/電子裝置配置相同(若適用)。
3. Application for approval ... 3.1.2. A model of information document is shown in Annex 2A.	3. Application for approval ... 3.1.2. A model of information document is shown in Annex 2A.	<u>4.一般規定</u> <u>4.1申請者以底盤車或完成車執行本項檢測時，應至少提供一部代表車(或以電機/電子裝置檢測所必要部</u>	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
3.1.3. The vehicle manufacturer shall draw up a schedule describing all relevant vehicle electrical/electronic systems or ESAs, body styles, variations in body material, general wiring arrangements, engine variations, left-hand/right-hand drive versions and wheelbase versions. Relevant vehicle electrical/electronic systems or ESAs are those which may emit significant broadband or narrowband radiation and/or those which are involved in immunity related functions of the vehicle (see paragraph 2.12.) and those which provide coupling systems for charging the REESS. 3.1.4. A vehicle representative of the type to be approved shall be selected from this schedule by mutual agreement between the manufacturer and the Competent Authority. The choice of vehicle shall be based on the electrical/electronic systems offered by the manufacturer. One or more vehicles may be selected from this schedule if it is considered by mutual agreement between the manufacturer and the Competent Authority that different electrical/electronic systems are included which are likely to have a significant effect on the vehicle's electromagnetic compatibility compared with the first	3.1.3. The vehicle manufacturer shall draw up a schedule describing all relevant vehicle electrical/electronic systems or ESAs, body styles, variations in body material, general wiring arrangements, engine variations, left-hand/right-hand drive versions and wheelbase versions. Relevant vehicle electrical/electronic systems or ESAs are those which may emit significant broadband or narrowband radiation and/or those which are involved in immunity related functions of the vehicle (see paragraph 2.12.) and those which provide coupling systems for charging the RESS. 3.1.4. A vehicle representative of the type to be approved shall be selected from this schedule by mutual agreement between the manufacturer and the Competent Authority. The choice of vehicle shall be based on the electrical/electronic systems offered by the manufacturer. One or more vehicles may be selected from this schedule if it is considered by mutual agreement between the manufacturer and the Competent Authority that different electrical/electronic systems are included which are likely to have a significant effect on the vehicle's electromagnetic compatibility compared with the first representative vehicle.	<u>份)及下列文件予檢測機構，確認實車(或以電機/電子裝置)與文件內容一致。</u> <u>4.1.1規定3.之車輛及/或電機/電子裝置規格資料，與實車圖示及/或電機/電子裝置照片。</u> <u>4.1.2 依檢測機構要求用以佐證符合本項規定之車輛及/或電機/電子裝置外表面圖面。</u> <u>4.1.3申請者文件應說明車輛上所有相關電機/電子系統或電機/電子裝置之設計連接，車身式樣(如適用)、車身材料變化(如適用)、整體配線布置、內燃機及/或推動馬達變化、與軸距或零部件之變化等。相關電機/電子系統或電機/電子裝置，係包含車輛及REESS充電耦合系統，可能會發出顯著寬頻或窄頻輻射及/或影響本基準2.10所述之免疫力相關功能。</u> <u>4.1.4對於M、N及O類車輛，若配置RF放射機，申請者也必須提供頻寬、功率範圍、天線位置與RF放射機安裝規定。申請者必須提供RF放射機對車輛性能無不良影響之聲明。</u> <u>4.1.5對於電機/電子裝置(ESA)是否符合本基準規定之判定原則，參考如下圖所述。</u> (請參考頁末表格)	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
representative vehicle. 3.1.5. The choice of the vehicle(s) in conformity with paragraph 3.1.4. above shall be limited to vehicle/electrical/electronic system combinations intended for actual production. 3.1.6. The manufacturer may supplement the application with a report on tests which have been carried out. Any such data provided may be used by the approval authority for the purpose of drawing up the communication form for type-approval. 3.1.7. If the Technical Service responsible for the type approval test carries out the test itself, then a vehicle representative of the type to be approved according to paragraph 3.1.4. shall be provided. 3.1.8. For vehicles of categories M, N, and O the vehicle manufacturer must provide a statement of frequency bands, power levels, antenna positions and installation provisions for the installation of radio frequency transmitters (RF-transmitters), even if the vehicle is not equipped with an RF transmitter at time of type approval. This should cover all mobile radio services normally used in vehicles. This information must be made publicly available following the type approval.	3.1.5. The choice of the vehicle(s) in conformity with paragraph 3.1.4. above shall be limited to vehicle/electrical/electronic system combinations intended for actual production. 3.1.6. The manufacturer may supplement the application with a report on tests which have been carried out. Any such data provided may be used by the approval authority for the purpose of drawing up the communication form for type-approval. 3.1.7. If the Technical Service responsible for the type approval test carries out the test itself, then a vehicle representative of the type to be approved according to paragraph 3.1.4. shall be provided. 3.1.8. For vehicles of categories M, N, and O the vehicle manufacturer must provide a statement of frequency bands, power levels, antenna positions and installation provisions for the installation of radio frequency transmitters (RF-transmitters), even if the vehicle is not equipped with an RF transmitter at time of type approval. This should cover all mobile radio services normally used in vehicles. This information must be made publicly available following the type approval. Vehicle manufacturers		

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
Vehicle manufacturers must provide evidence that vehicle performance is not adversely affected by such transmitter installations. 3.1.9. Vehicle type approval shall be applied for both REESS and coupling system for charging the REESS as they are considered as electrical/electronic systems. 3.2. ESA type approval 3.2.1. Applicability of this Regulation to ESA: 【請參考頁末表格】 3.2.2. The application for approval of a type of ESA with regard to its electromagnetic compatibility shall be submitted by the vehicle manufacturer or by the manufacturer of the ESA. 3.2.3. A model of information document is shown in Annex 2B. 3.2.4. The manufacturer may supplement the application with a report on tests which have been carried out. Any such data provided may be used by the approval authority for the purpose of drawing up the communication form for type-approval. 3.2.5. If the Technical Service responsible for the type approval test carries out the test itself, then a sample of the ESA system representative of the type to be approved shall be provided, if necessary,	must provide evidence that vehicle performance is not adversely affected by such transmitter installations. 3.1.9. Vehicle type approval shall be applied for both RESS and Coupling system for charging the RESS as they are considered as electrical/electronic systems. 3.2. ESA type approval 3.2.1. Applicability of this Regulation to ESA: 【請參考頁末表格】 3.2.2. The application for approval of a type of ESA with regard to its electromagnetic compatibility shall be submitted by the vehicle manufacturer or by the manufacturer of the ESA. 3.2.3. A model of information document is shown in Annex 2B. 3.2.4. The manufacturer may supplement the application with a report on tests which have been carried out. Any such data provided may be used by the approval authority for the purpose of drawing up the communication form for type-approval. 3.2.5. If the Technical Service responsible for the type approval test carries out the test itself, then a sample of the ESA system representative of the type to be approved shall be provided, if necessary, after		

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
after discussion with the manufacturer on, e.g., possible variations in the layout, number of components, number of sensors. If the Technical Service deems it necessary, it may select a further sample. 3.2.6. The sample(s) must be clearly and indelibly marked with the manufacturer's trade name or mark and the type designation.	discussion with the manufacturer on, e.g., possible variations in the layout, number of components, number of sensors. If the Technical Service deems it necessary, it may select a further sample. 3.2.6. The sample(s) must be clearly and indelibly marked with the manufacturer's trade name or mark and the type designation.		
3.2.9. Components sold as aftermarket equipment and intended for the installation in motor vehicles need no type approval if they are not related to immunity related functions (see paragraph 2.12.). In this case a declaration shall be issued by the manufacturer that the ESA fulfils the requirements of this Regulation and in particular the limits defined in paragraphs 6.5., 6.6., 6.7., 6.8. and 6.9.	3.2.9. Components sold as aftermarket equipment and intended for the installation in motor vehicles need no type approval if they are not related to immunity related functions (see paragraph 2.12.). In this case a declaration must be issued by the manufacturer that the ESA fulfils the requirements of this Regulation and in particular the limits defined in paragraphs 6.5., 6.6., 6.8. and 6.9.	認證申請不影響國內檢測基準	無
Annex 2A Information document for type approval of a vehicle with respect to electromagnetic compatibility The following information shall be supplied in triplicate and shall include a list of contents. Any drawings shall be supplied in appropriate scale and in sufficient detail on size A4 or in a folder of A4 format. Photographs, if any, shall show sufficient	Annex 2A Information document for type approval of a vehicle with respect to electromagnetic compatibility The following information shall be supplied in triplicate and shall include a list of contents. Any drawings shall be supplied in appropriate scale and in sufficient detail on size A4 or in a folder of A4 format. Photographs, if any, shall show sufficient		

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
detail. If the systems, components or separate technical units have electronic controls, information concerning their performance shall be supplied. General 1. Make (trade name of manufacturer): 2.Type: 3.Category of vehicle: 4.Name and address of manufacturer: Name and address of authorised representative, if any: 5.Address(es) of assembly plant(s): General construction characteristics of the vehicle 6. Photograph(s) and/or drawing(s) of a representative vehicle: 7. Position and arrangement of the engine: Power plant 8. Manufacturer: 9. Manufacturer's engine code as marked on the engine: 10. Internal combustion engine:	detail. If the systems, components or separate technical units have electronic controls, information concerning their performance shall be supplied. General 1. Make (trade name of manufacturer): 2.Type: 3.Category of vehicle: 4.Name and address of manufacturer: Name and address of authorised representative, if any: 5.Address(es) of assembly plant(s): General construction characteristics of the vehicle 6. Photograph(s) and/or drawing(s) of a representative vehicle: 7. Position and arrangement of the engine: Power plant 8. Manufacturer: 9. Manufacturer's engine code as marked on the engine: 10. Internal combustion engine: 11. Working principle: positive		

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
11. Working principle: positive ignition/compression ignition, four-stroke/two stroke1 12. Number and arrangement of cylinders: 13. Fuel feed: 14. By fuel injection (compression ignition only): yes/no1. 15. Electronic control unit: 16. Make(s): 17. Description of the system: 18. By fuel injection (positive ignition only): yes/no1. 19. Electrical system: 20. Rated voltage: V, positive/negative ground1 21. Generator: 22. Type: 23. Ignition: 24. Make(s): 25. Type(s): 26. Working principle: 27. LPG fuelling system: yes/no1. 28. Electronic engine management control unit for LPG fuelling: 29. Make(s): 30. Type(s):	ignition/compression ignition, four-stroke/two stroke1 12. Number and arrangement of cylinders: 13. Fuel feed: 14. By fuel injection (compression ignition only): yes/no1. 15. Electronic control unit: 16. Make(s): 17. Description of the system: 18. By fuel injection (positive ignition only): yes/no1. 19. Electrical system: 20. Rated voltage: V, positive/negative ground1 21. Generator: 22. Type: 23. Ignition: 24. Make(s): 25. Type(s): 26. Working principle: 27. LPG fuelling system: yes/no1. 28. Electronic engine management control unit for LPG fuelling: 29. Make(s): 30. Type(s): 31. NG fuelling system: yes/no1. 32. Electronic engine management control		

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
31. NG fuelling system: yes/no1. 32. Electronic engine management control unit for NG fuelling: 33.Make(s): 34.Type(s): 35.Electric motor: 36.Type(winding,excitation): 37. Operating voltage: Gas fuelled engines (in the case of systems laid-out in a different manner, supply equivalent information) 38. Electronic control unit (ECU): 39.Make(s): 40.Type(s): Transmission 41. Type (mechanical, hydraulic, electric, etc.): 42. A brief description of the electrical/electronic components (if any): Suspension 43. A brief description of the electrical/electronic components (if any): Steering 44. A brief description of the electrical/electronic components (if any): Brakes	unit for NG fuelling: 33.Make(s): 34.Type(s): 35.Electric motor: 36.Type(winding,excitation): 37. Operating voltage: Gas fuelled engines (in the case of systems laid-out in a different manner, supply equivalent information) 38. Electronic control unit (ECU): 39.Make(s): 40.Type(s): Transmission 41. Type (mechanical, hydraulic, electric, etc.): 42. A brief description of the electrical/electronic components (if any): Suspension 43. A brief description of the electrical/electronic components (if any): Steering 44. A brief description of the electrical/electronic components (if any): Brakes 45.Anti-lock braking system: yes/no/optional1		

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
45. Anti-lock braking system: yes/no/optional 46. For vehicles with anti-lock systems, description of system operation (including any electronic parts), electric block diagram, hydraulic or pneumatic circuit plan: Bodywork 47. Type of bodywork: 48. Materials used and methods of construction: 49. Windscreen and other windows: 50. A brief description of the electrical/electronic components (if any) of the window lifting mechanism: 51. Rear-view mirrors (state for each mirror): 52. A brief description of the electronic components (if any) of the adjustment system: . 53. Safety belts and/or other restraint systems: 54. A brief description of the electrical/electronic components (if any): 55. Suppression of radio interference: 56. Description and drawings/photographs of the shapes and constituent materials of the part of the body forming the engine	46. For vehicles with anti-lock systems, description of system operation (including any electronic parts), electric block diagram, hydraulic or pneumatic circuit plan: Bodywork 47. Type of bodywork: 48. Materials used and methods of construction: 49. Windscreen and other windows: 50. A brief description of the electrical/electronic components (if any) of the window lifting mechanism: 51. Rear-view mirrors (state for each mirror): 52. A brief description of the electronic components (if any) of the adjustment system: . 53. Safety belts and/or other restraint systems: 54. A brief description of the electrical/electronic components (if any): 55. Suppression of radio interference: 56. Description and drawings/photographs of the shapes and constituent materials of the part of the body forming the engine compartment and the part of the passenger compartment nearest to		

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
compartment and the part of the passenger compartment nearest to it: 57. Drawings or photographs of the position of the metal components housed in the engine compartment (e.g. heating appliances, spare wheel, air filter, steering mechanism, etc.): 58. Table and drawing of radio interference control equipment: 59. Particulars of the nominal value of the direct current resistance and, in the case of resistive ignition cables, of their nominal resistance per metre: Lighting and light signalling devices 60. A brief description of electrical/electronic components other than lamps (if any): Miscellaneous 61. Devices to prevent unauthorised use of the vehicle: 62. A brief description of the electrical/electronic components (if any): 63. Table of installation and use of RF transmitters in the vehicle(s), if applicable (see paragraph 3.1.8. of this Regulation): 【請參考頁末表格】	it: 57. Drawings or photographs of the position of the metal components housed in the engine compartment (e.g. heating appliances, spare wheel, air filter, steering mechanism, etc.): 58. Table and drawing of radio interference control equipment: 59. Particulars of the nominal value of the direct current resistance and, in the case of resistive ignition cables, of their nominal resistance per metre: Lighting and light signalling devices 60. A brief description of electrical/electronic components other than lamps (if any): Miscellaneous 61. Devices to prevent unauthorised use of the vehicle: 62. A brief description of the electrical/electronic components (if any): 63. Table of installation and use of RF transmitters in the vehicle(s), if applicable (see paragraph 3.1.8. of this Regulation): 【請參考頁末表格】 64. Vehicle equipped with 24 GHz		

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
64. Vehicle equipped with 24 GHz short-range radar equipment: yes/no/optional1. The applicant for type approval must also supply, where appropriate: Appendix 1: A list with make(s) and type(s) of all electrical and/or electronic components concerned by this Regulation (see paragraphs 2.9. and 2.10. of this Regulation) and not previously listed. Appendix 2: Schematics or drawing of the general arrangement of electrical and/or electronic components (concerned by this Regulation) and the general wiring harness arrangement. Appendix 3: Description of vehicle chosen to represent the type: Body style: Left or right hand drive: Wheelbase: Appendix 4: Relevant test report(s) supplied by the manufacturer from a test laboratory accredited to ISO 17025 and recognized by the Approval Authority for the purpose of drawing up the type approval certificate. 65. Charger: on board/external/without1: 66. Charging current: direct current/alternating current (number of	short-range radar equipment: yes/no/optional1. The applicant for type approval must also supply, where appropriate: Appendix 1: A list with make(s) and type(s) of all electrical and/or electronic components concerned by this Regulation (see paragraphs 2.9. and 2.10. of this Regulation) and not previously listed. Appendix 2: Schematics or drawing of the general arrangement of electrical and/or electronic components (concerned by this Regulation) and the general wiring harness arrangement. Appendix 3: Description of vehicle chosen to represent the type: Body style: Left or right hand drive: Wheelbase: Appendix 4: Relevant test report(s) supplied by the manufacturer from a test laboratory accredited to ISO 17025 and recognized by the Approval Authority for the purpose of drawing up the type approval certificate. 65. Charger: on board/external/without1: 66. Charging current: direct current/alternating current (number of phases/frequency)1:		

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
phases/frequency)1: 67. Maximal nominal current (in each mode if necessary): 68. Nominal charging voltage: 69. Basic vehicle interface functions: ex: L1/L2/L3/N/E/control pilot:..... frequency bands [Hz] max. output power [W] antenna position at vehicle, specific conditions 70. Minimum Rsce value (see chapter 7.3.) 71. Charging cable delivered with the vehicle: yes/no1 72. If charging cable delivered with the vehicle: Length (m) Cross sectional area (mm2)	67. Maximal nominal current (in each mode if necessary): 68. Nominal charging voltage: 69. Basic vehicle interface functions: ex: L1/L2/L3/N/E/control pilot:..... frequency bands [Hz] max. output power [W] antenna position at vehicle, specific conditions		
Annex 2B Information document for type approval of an electric/electronic sub-assembly with respect to electromagnetic compatibility The following information, if applicable, shall be supplied in triplicate and must include a list of contents. Any drawings shall be supplied in appropriate scale and in sufficient detail on size A4 or on a folder of A4 format. Photographs, if any, shall show sufficient detail.	Annex 2B Information document for type approval of an electric/electronic sub-assembly with respect to electromagnetic compatibility The following information, if applicable, shall be supplied in triplicate and must include a list of contents. Any drawings shall be supplied in appropriate scale and in sufficient detail on size A4 or on a folder of A4 format. Photographs, if any, shall show sufficient detail. If the systems, components or separate technical units have electronic controls,		

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
If the systems, components or separate technical units have electronic controls, information concerning their performance shall be supplied. 1.Make (trade name of manufacturer): 2.Type: 3. Means of identification of type, if marked on the component/separate technical unit:1 3.1.Location of that marking: 4.Name and address of manufacturer: Name and address of authorized representative, if any: 5. In the case of components and separate technical units, location and method of affixing of the approval mark: 6. Address(es) of assembly plant(s): 7. This ESA shall be approved as a component/STU2 8. Any restrictions of use and conditions for fitting: 9. Electrical system rated voltage: V, positive/negative2	information concerning their performance shall be supplied. 1.Make (trade name of manufacturer): 2.Type: 3. Means of identification of type, if marked on the component/separate technical unit:1 3.1.Location of that marking: 4.Name and address of manufacturer: Name and address of authorized representative, if any: 5. In the case of components and separate technical units, location and method of affixing of the approval mark: 6. Address(es) of assembly plant(s): 7. This ESA shall be approved as a component/STU2 8. Any restrictions of use and conditions for fitting: 9. Electrical system rated voltage: V, positive/negative2		

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
ground. Only applicable for charging systems: 10. Charger: on board/external1 11. Charging current: direct current/alternating current (number of phases/frequency)1 . 12. Maximal nominal current (in each mode if necessary) 13. Nominal charging voltage 14. Basic ESA interface functions: ex. L1/L2/L3/N/PE/control pilot 15. Minimum Rsce value (see chapter 7.11.) Appendix 1: Description of the ESA chosen to represent the type (electronic block diagram and list of main component constituting the ESA (e.g. make and type of microprocessor, crystal, etc.). Appendix 2: Relevant test report(s) supplied by the manufacturer from a test laboratory accredited to ISO 17025 and recognized by the Approval Authority for the purpose of drawing up the type approval certificate.	ground. Appendix 1: Description of the ESA chosen to represent the type (electronic block diagram and list of main component constituting the ESA (e.g. make and type of microprocessor, crystal, etc.). Appendix 2: Relevant test report(s) supplied by the manufacturer from a test laboratory accredited to ISO 17025 and recognized by the Approval Authority for the purpose of drawing up the type approval certificate.		
3.2.10. In case an ESA is (part of) a light source, the applicant shall: (a) Specify the approval number according to Regulation No. 37, Regulation No. 99 or Regulation No. 128, granted to this ESA; Or (b) Provide a test report by a Technical		認證申請不影響國內檢測基準	無

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
Service designated by the Approval Authority, stating that this ESA is not mechanically interchangeable with any light source according to Regulation No. 37, Regulation No. 99 or Regulation No. 128.			
4. Approval ... 4.1.1.1. Approval of a vehicle installation A vehicle installation may be type approved directly by following the provisions laid down in paragraph 6. and, if applicable, in paragraph 7. of this Regulation. If this procedure is chosen by a vehicle manufacturer, no separate testing of electrical/ electronic systems or ESAs is required.	4. Approval ... 4.1.1.1. Approval of a vehicle installation A vehicle installation may be type approved directly by following the provisions laid down in paragraph 6 of this Regulation. If this procedure is chosen by a vehicle manufacturer, no separate testing of electrical/electronic systems or ESAs is required.	認證不影響國內檢測基準	無
4.2.1.1. If the representative vehicle fulfils the requirements of paragraph 6. and, if applicable, paragraph 7. of this Regulation, type approval shall be granted.	4.2.1.1. If the representative vehicle fulfills the requirements of paragraph 6 of this Regulation, type approval shall be granted.	認證不影響國內檢測基準	無
4.2.2.1. If the representative ESA system(s) fulfil(s) the requirements of paragraph 6. and, if applicable, paragraph 7. of this Regulation, type approval shall be granted	4.2.2.1. If the representative ESA system(s) fulfill(s) the requirements of paragraph 6 of this Regulation, type approval shall be granted.	認證不影響國內檢測基準	無
4.2.4. In case an ESA is (part of) a light source and if the documentation as specified in paragraph 3.2.10. is missing, approval of this ESA according to Regulation No. 10 shall not be granted.		認證不影響國內檢測基準	無

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
5. Markings 5.1. An approval number shall be assigned to each vehicle or ESA type approved. The first two digits of this number (at present 05) shall indicate the series of amendments corresponding to the most recent essential technical amendments made to the Regulation at the date of approval. A Contracting Party may not assign the same approval number to another type of vehicle or ESA.	5. Markings 5.1. An approval number shall be assigned to each vehicle or ESA type approved. The first two digits of this number shall indicate the series of amendments corresponding to the most recent essential technical amendments made to the Regulation at the date of approval. A Contracting Party may not assign the same approval number to another type of vehicle or ESA.	標誌不影響國內檢測基準	無
6. Specification in configurations other than REESS charging mode coupled to the power grid 6.1. General specifications 6.1.1. A vehicle and its electrical/electronic system(s) or ESA(s) shall be so designed, constructed and fitted as to enable the vehicle, in normal conditions of use, to comply with the requirements of this Regulation. 6.1.1.1. A vehicle shall be tested for radiated emissions and for immunity to radiated disturbances. No tests for conducted emissions or immunity to conducted disturbances are required for vehicle type approval. 6.1.1.2. ESA(s) shall be tested for radiated and conducted emissions, for immunity to radiated and conducted disturbances.	6. Specifications in configurations other than RESS charging mode coupled to the power grid 6.1. General specifications 6.1.1. A vehicle and its electrical/electronic system(s) or ESA(s) shall be so designed, constructed and fitted as to enable the vehicle, in normal conditions of use, to comply with the requirements of this Regulation. 6.1.1.1. A vehicle shall be tested for radiated emissions and for immunity to radiated disturbances. No tests for conducted emissions or immunity to conducted disturbances are required for vehicle type approval. 6.1.1.2. ESA(s) shall be tested for radiated and conducted emissions, for immunity to radiated and conducted disturbances.	4.2 非 REESS 連接至電網充電模式組態之規定 4.2.1 一般規格 4.2.2 車輛(及其電機電子系統或所有 ESA)的設計及安裝，在正常使用狀況下車輛應能符合本法規的要求。 4.2.2.1 車輛應試驗輻射放射及輻射擾動免疫力。對車輛型式認證來說不需執行傳導放射與傳導擾動免疫力試驗。 4.2.2.2 所有 ESA 應執行輻射放射和傳導放射，及輻射擾動和傳導擾動之免疫力試驗。	4. 非 RESS 連接至電網充電模式組態之規定 4.1 一般規格 4.1.1 車輛(及其電機電子系統或 ESA)的設計及安裝，在正常使用狀況下車輛應能符合本法規的要求。 4.1.1.1 車輛應試驗輻射放射及輻射干擾免疫力。對車輛型式認證來說不需執行傳導放射與傳導干擾免疫力測試。 4.1.1.2 ESA 應執行電磁和擾動傳導及傳導干擾免疫力測試。

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
6.1.2. Before testing the Technical Service has to prepare a test plan in conjunction with the manufacturer, which contains at least mode of operation, stimulated function(s), monitored function(s), pass/fail criterion(criteria) and intended emissions. 6.2. Specifications concerning broadband electromagnetic radiation from vehicles 6.2.1. Method of measurement The electromagnetic radiation generated by the vehicle representative of its type shall be measured using the method described in Annex 4. The method of measurement shall be defined by the vehicle manufacturer in accordance with the Technical Service. 6.2.2. Vehicle broadband type approval limits 6.2.2.1. If are made using the method described in Annex 4 using a vehicle-toantenna spacing of 10.0 +/- 0.2 m, the limits shall be 32 dB microvolts/m in the 30 to 75 MHz frequency band and 32 to 43 dB microvolts/m in the 75 to 400	6.1.2. Before testing the Technical Service has to prepare a test plan in conjunction with the manufacturer, which contains at least mode of operation, stimulated function(s), monitored function(s), pass/fail criterion(criteria) and intended emissions. 6.2. Specifications concerning broadband electromagnetic radiation from vehicles 6.2.1. Method of measurement The electromagnetic radiation generated by the vehicle representative of its type shall be measured using the method described in Annex 4. The method of measurement shall be defined by the vehicle manufacturer in accordance with the Technical Service. 6.2.2. Vehicle broadband type approval limits 6.2.2.1. If are made using the method described in Annex 4 using a vehicle-toantenna spacing of 10.0 +/- 0.2 m, the limits shall be 32 dB microvolts/m in the 30 to 75 MHz frequency band and 32 to 43 dB microvolts/m in the 75 to 400 MHz	【參考 CNS14299 電磁擾動 (electromagnetic disturbances) 電磁干擾 (electromagnetic interference) 分別代表引起設備性能降低原因和結果，但常被無區別使用；另外電磁輻射 (electromagnetic radiation) 能量以電磁波型態從空中轉移。】 4.2.3 試驗之前，檢測機構必須與申請者共同準備試驗計畫，內容應至少包含操作模式、增進功能 (Stimulated function)、監控功能、合格/不合格標準及預設之放射規格條件。 4.3 關於車輛寬頻電磁輻射之規格 4.3.1 試驗方法：試驗代表車所產生之電磁輻射應使用6.描述之方法量測。量測方法應由申請者及檢測機構共同定義。 4.3.2 車輛寬頻之基準限制值 4.3.2.1 依6.中的方法量測，若選定車輛至天線的距離為一0正負0.二公尺時，限制值為：頻率範圍三0至七五兆赫為三二dBμV/m；頻	4.1.2 測試之前檢測機構必須與申請者共同準備測試計畫，內容應至少包含操作模式、增進功能、監控功能、合格/不合格標準及意圖放射。 4.2 關於車輛寬頻電磁輻射之規格 4.2.1 檢測方法：檢測代表車所產生之電磁輻射應使用6.描述之方法量測。量測方法應由製造廠及檢測機構一致定義。 4.2.2 車輛所產生寬頻電磁擾動之限制值 4.2.2.1 依7.中的方法量測，若選定車輛至天線的距離為10.0±0.2m時，限制值為：頻率範圍30至75 MHz為

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MHz frequency band, this limit increasing logarithmically with frequencies above 75 MHz as shown in Appendix 2. In the 400 to 1,000 MHz frequency band the limit remains constant at 43 dB microvolts/m. 6.2.2.2. If measurements are made using the method described in Annex 4 using a vehicle-toantenna spacing of 3.0 +/- 0.05 m, the limits shall be 42 dB microvolts/m in the 30 to 75 MHz frequency band and 42 to 53 dB microvolts/m in the 75 to 400 MHz frequency band, this limit increasing logarithmically with frequencies above 75 MHz as shown in Appendix 3. In the 400 to 1,000 MHz frequency band the limit remains constant at 53 dB microvolts/m. 6.2.2.3. On the vehicle representative of its type, the measured values, expressed in dB microvolts/m shall be below the type approval limits. 6.3. Specifications concerning narrowband electromagnetic radiation from vehicles 6.3.1. Method of measurement The electromagnetic radiation generated by the vehicle representative of its type shall be measured using the method described in Annex 5. These shall be defined by the vehicle manufacturer in accordance with the Technical Service. 6.3.2. Vehicle narrowband type approval	frequency band, this limit increasing logarithmically with frequencies above 75 MHz as shown in Appendix 2. In the 400 to 1,000 MHz frequency band the limit remains constant at 43 dB microvolts/m. 6.2.2.2. If measurements are made using the method described in Annex 4 using a vehicle-toantenna spacing of 3.0 +/- 0.05 m, the limits shall be 42 dB microvolts/m in the 30 to 75 MHz frequency band and 42 to 53 dB microvolts/m in the 75 to 400 MHz frequency band, this limit increasing logarithmically with frequencies above 75 MHz as shown in Appendix 3. In the 400 to 1,000 MHz frequency band the limit remains constant at 53 dB microvolts/m. 6.2.2.3. On the vehicle representative of its type, the measured values, expressed in dB microvolts/m shall be below the type approval limits. 6.3. Specifications concerning narrowband electromagnetic radiation from vehicles 6.3.1. Method of measurement The electromagnetic radiation generated by the vehicle representative of its type shall be measured using the method described in Annex 5. These shall be defined by the vehicle manufacturer in accordance with the Technical Service. 6.3.2. Vehicle narrowband type approval	率範圍<u>七五至四〇〇兆赫</u>是由<u>三二至四三dBμV/m</u>對數(線性)遞增(如圖一);頻率範圍<u>四〇〇至一〇〇〇兆赫</u>為<u>四三dBμV/m</u>。 <u>4.3.2.2</u> 依<u>6</u>中的方法量測,若選定車輛至天線的距離為<u>三正負〇・〇五公尺</u>時,電磁輻射的基準限制值為:頻率範圍<u>三〇至七五兆赫</u>為<u>四二dBμV/m</u>;頻率範圍<u>七五至四〇〇兆赫</u>是由<u>四二至五三dBμV/m</u>對數(線性)遞增(如圖二);頻率範圍<u>四〇〇至一〇〇〇兆赫</u>為<u>五三dBμV/m</u>。 <u>4.3.2.3</u> 車輛認證時,以dBμV/m表示之量測值應低於規定值。 <u>4.4 關於車輛窄頻電磁輻射</u>規定 <u>4.4.1</u> 試驗方法:試驗代表車輛所產生的電磁輻射應以7.中所敘述的方法進行量測。量測方法應依據檢測機構及<u>申請者共同</u>選定。	<u>32dBμV/m</u>;頻率範圍<u>75至400 MHz</u>是由<u>32-43dBμV/m</u>對數(線性)遞增(如圖一);頻率範圍<u>400至1000 MHz</u>為<u>43dBμV/m</u>。 <u>4.2.2.2</u> 依<u>5</u>中的方法量測,若選定車輛至天線的距離為<u>3.0±0.05 m</u>時,電磁輻射的基準限制值為:頻率範圍<u>30至75 MHz</u>為<u>42dBμV/m</u>;頻率範圍<u>75至400 MHz</u>是由<u>42-53dBμV/m</u>對數(線性)遞增(如圖二);頻率範圍<u>400至1000 MHz</u>為<u>53dBμV/m</u>。 <u>4.2.2.3</u> 車輛認證時,以dBμV/m表示之量測值應低於規定值。 <u>4.3 車輛所產生窄頻電磁擾動之相關</u>規定 <u>4.3.1</u> 檢測方法:檢測代表車輛所產生的電磁輻射應以7.中所敘述的方法進行量測。量測方法應依據檢測機構及<u>車輛製造廠</u>選定。

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limits 6.3.2.1. If measurements are made using the method described in Annex 5 using a vehicle-toantenna spacing of 10.0 +/- 0.2 m, the limits shall be 22 dB microvolts/m in the 30 to 75 MHz frequency band and 22 to 33 dB microvolts/m in the 75 to 400 MHz frequency band, this limit increasing logarithmically with frequencies above 75 MHz as shown in Appendix 4. In the 400 to 1,000 MHz frequency band the limit remains constant at 33 dB microvolts/m. 6.3.2.2. If measurements are made using the method described in Annex 5 using a vehicle-toantenna spacing of 3.0 +/- 0.05 m, the limit shall be 32 dB microvolts/m in the 30 to 75 MHz frequency band and 32 to 43 dB microvolts/m in the 75 to 400 MHz frequency band, this limit increasing logarithmically with frequencies above 75 MHz as shown in Appendix 5. In the 400 to 1,000 MHz frequency band the limit remains constant at 43 dB microvolts/m. 6.3.2.3. On the vehicle representative of its type, the measured values, expressed in dB microvolts/m, shall be below the type approval limit. 6.3.2.4. Notwithstanding the limits defined in paragraphs 6.3.2.1., 6.3.2.2. and 6.3.2.3. of this Regulation, if, during the initial step	limits 6.3.2.1. If measurements are made using the method described in Annex 5 using a vehicle-toantenna spacing of 10.0 +/- 0.2 m, the limits shall be 22 dB microvolts/m in the 30 to 75 MHz frequency band and 22 to 33 dB microvolts/m in the 75 to 400 MHz frequency band, this limit increasing logarithmically with frequencies above 75 MHz as shown in Appendix 4. In the 400 to 1,000 MHz frequency band the limit remains constant at 33 dB microvolts/m. 6.3.2.2. If measurements are made using the method described in Annex 5 using a vehicle-toantenna spacing of 3.0 +/- 0.05 m, the limit shall be 32 dB microvolts/m in the 30 to 75 MHz frequency band and 32 to 43 dB microvolts/m in the 75 to 400 MHz frequency band, this limit increasing logarithmically with frequencies above 75 MHz as shown in Appendix 5. In the 400 to 1,000 MHz frequency band the limit remains constant at 43 dB microvolts/m. 6.3.2.3. On the vehicle representative of its type, the measured values, expressed in dB microvolts/m, shall be below the type approval limit. 6.3.2.4. Notwithstanding the limits defined in paragraphs 6.3.2.1., 6.3.2.2. and 6.3.2.3. of this Regulation, if, during the initial step	<u>4.4.2</u> 車輛窄頻之 <u>基準</u> 限制值 <u>4.4.2.1</u> 依7.中的方法量測，若選定車輛至天線的距離為 <u>一〇正負〇・二公尺</u> 時，電磁輻射的基準限制值為：頻率範圍 <u>三〇至七五兆赫</u> 為 <u>二二dBμV/m</u> ；頻率範圍 <u>七五至四〇〇兆赫</u> 是由 <u>二二至三三dBμV/m</u> 對數(線性)遞增(如圖三)；頻率範圍 <u>四〇〇至一〇〇〇兆赫</u> 為 <u>三三dBμV/m</u> 。 <u>4.4.2.2</u> 依7.中的方法量測，若選定車輛至天線的距離為 <u>三正負〇・〇五公尺</u> 時，電磁輻射的基準限制值為：頻率範圍 <u>三〇至七五兆赫</u> 為 <u>三二dBμV/m</u> ；頻率範圍 <u>七五至四〇〇兆赫</u> 是由 <u>三二至四三dBμV/m</u> 對數(線性)遞增(如圖四)；頻率範圍 <u>四〇〇至一〇〇〇兆赫</u> 為 <u>四三dBμV/m</u> 。 <u>4.4.2.3</u> 車輛認證時，以dB μ V/m表示之量測值應低於規定值。 <u>4.4.2.4</u> 儘管 <u>4.4.2.1</u> 、 <u>4.4.2.2</u> 與 <u>4.4.2.3</u> 已定義限制範圍，在7.敘述之初始	<u>4.3.2</u> 車輛 <u>所產生</u> 窄頻 <u>電磁擾動之基準</u> 限制值 <u>4.3.2.1</u> 依7.中的方法量測，若選定車輛至天線的距離為 <u>10.0±0.2 m</u> 時，電磁輻射的基準限制值為：頻率範圍 <u>30至75 MHz</u> 為 <u>22dBμV/m</u> ；頻率範圍 <u>75至400 MHz</u> 是由 <u>22－33dBμV/m</u> 對數(線性)遞增(如圖三)；頻率範圍 <u>400至1000 MHz</u> 為 <u>33dBμV/m</u> 。 <u>4.3.2.2</u> 依8.中的方法量測，若選定車輛至天線的距離為 <u>3.0±0.05 m</u> 時，電磁輻射的基準限制值為：頻率範圍 <u>30至75 MHz</u> 為 <u>32dBμV/m</u> ；頻率範圍 <u>75至400 MHz</u> 是由 <u>32－43dBμV/m</u> 對數(線性)遞增(如圖四)；頻率範圍 <u>400至1000 MHz</u> 為 <u>43dBμV/m</u> 。 <u>4.3.2.3</u> 車輛認證時，以dB μ V/m表示之量測值應低於規定值。 <u>4.3.2.4</u> 儘管 <u>4.3.2.1</u> 、 <u>4.3.2.2</u> 與 <u>4.3.2.3</u>

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described in paragraph 1.3. of Annex 5, the signal strength measured at the vehicle broadcast radio antenna is less than 20 dB micro-volts over the frequency range 76 to 108 MHz measured with an average detector, then the vehicle shall be deemed to comply with the limits for narrowband emissions and no further testing will be required.	described in paragraph 1.3. of Annex 5, the signal strength measured at the vehicle broadcast radio antenna is less than 20 dB micro-volts over the frequency range 76 to 108 MHz measured with an average detector, then the vehicle shall be deemed to comply with the limits for narrowband emissions and no further testing will be required.	步驟期間，以均值檢波器測量之頻率範圍 <u>七六至一〇八兆赫</u> 間，車輛無線電天線的訊號強度若低於 <u>二〇 dBμV/m</u> ，則不需符合此規定，車輛可視為符合 <u>窄頻放射</u> 之限制值而不需再進行進一步之試驗。	已定義限制範圍，在7.敘述之初始步驟期間，以均值檢波器測量之頻率範圍 <u>76至108 MHz</u> 間，車輛無線電天線的訊號強度若低於 <u>20dBμV</u> ，則不需符合此規定，車輛可視為符合 <u>窄頻電磁擾動</u> 之限制值而不需再進行進一步之試驗。
6.4. Specifications concerning immunity of vehicles to electromagnetic radiation	6.4. Specifications concerning immunity of vehicles to electromagnetic radiation	<u>4.5</u> 關於車輛電磁輻射免疫力之規範	<u>4.4</u> 關於車輛電磁輻射免疫力之規範
6.4.1. Method of testing The immunity to electromagnetic radiation of the vehicle representative of its type shall be tested by the method described in Annex 6.	6.4.1. Method of testing The immunity to electromagnetic radiation of the vehicle representative of its type shall be tested by the method described in Annex 6.	<u>4.5.1</u> 試驗方法：應依 <u>10</u> 之方法量測代表車輛之電磁輻射免疫力。	<u>4.4.1</u> 測試方法：應依 <u>11</u> 之方法量測代表車輛之電磁輻射免疫力。
6.4.2. Vehicle immunity type approval limits	6.4.2. Vehicle immunity type approval limits	<u>4.5.2</u> 車輛免疫力之基準限制值	<u>4.4.2</u> 車輛免疫力之基準限制值
6.4.2.1. If tests are made using the method described in Annex 6, the field strength shall be 30 volts/m rms (root mean squared) in over 90 per cent of the 20 to 2,000 MHz frequency band and a minimum of 25 volts/m rms over the whole 20 to 2,000 MHz frequency band.	6.4.2.1. If tests are made using the method described in Annex 6, the field strength shall be 30 volts/m rms (root mean squared) in over 90 per cent of the 20 to 2,000 MHz frequency band and a minimum of 25 volts/m rms over the whole 20 to 2,000 MHz frequency band.	<u>4.5.2.1</u> 當依 <u>10</u> 的方法量測時，其場強在 <u>二〇至二〇〇〇兆赫</u> 之百分之九〇頻寬時應為 <u>三〇 V/m rms</u> ，且 <u>二〇至二〇〇〇兆赫</u> 頻寬時最小值應為 <u>二五 V/m rms</u> 。	<u>4.4.2.1</u> 當依 <u>11</u> 的方法量測時，其場強在 <u>20至2,000 MHz</u> 之百分之九〇頻寬時應為 <u>30V/m rms</u> ，且 <u>20至2,000 MHz</u> 頻寬時最小值應為 <u>25V/m rms</u> 。
6.4.2.2. The vehicle representative of its type shall be considered as complying with immunity requirements if, during the tests performed in accordance with Annex 6, there shall be no degradation of performance of "immunity related functions", according to	6.4.2.2. The vehicle representative of its type shall be considered as complying with immunity requirements if, during the tests performed in accordance with Annex 6, there shall be no degradation of performance of "immunity related functions", according to	<u>4.5.2.2</u> 試驗代表車應符合免疫力規範，且在 <u>10</u> 試驗期間，"功能相關免疫力"之性能不能降低，並符合 <u>11.2.1</u> 車輛處於非 <u>REESS</u> 充電模式下連結 <u>電網</u> 配置之條款規定。	<u>4.4.2.2</u> 檢測代表車應符合免疫力規範，且在 <u>11</u> 測試期間，"功能相關免疫力"之性能不能降低，並符合 <u>11.2.1</u> 車輛處於非 <u>RESS</u> 充電模式下

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paragraph 2.1. of Annex 6. 6.5. Specification concerning broadband electromagnetic interference generated by ESAs. 6.5.1. Method of measurement The electromagnetic radiation generated by the ESA representative of its type shall be measured by the method described in Annex 7. 6.5.2. ESA broadband type approval limits 6.5.2.1. If measurements are made using the method described in Annex 7, the limits shall be 62 to 52 dB microvolts/m in the 30 to 75 MHz frequency band, this limit decreasing logarithmically with frequencies above 30 MHz, and 52 to 63 dB microvolts/m in the 75 to 400 MHz band, this limit increasing logarithmically with frequencies above 75 MHz as shown in Appendix 6. In the 400 to 1,000 MHz frequency band the limit remains constant at 63 dB microvolts/m. 6.5.2.2. On the ESA representative of its type, the measured values, expressed in dB microvolts/ m, shall be below the type approval limits. 6.6. Specifications concerning narrowband electromagnetic interference generated by	paragraph 2.1. of Annex 6. 6.5. Specification concerning broadband electromagnetic interference generated by ESAs. 6.5.1. Method of measurement The electromagnetic radiation generated by the ESA representative of its type shall be measured by the method described in Annex 7. 6.5.2. ESA broadband type approval limits 6.5.2.1. If measurements are made using the method described in Annex 7, the limits shall be 62 to 52 dB microvolts/m in the 30 to 75 MHz frequency band, this limit decreasing logarithmically with frequencies above 30 MHz, and 52 to 63 dB microvolts/m in the 75 to 400 MHz band, this limit increasing logarithmically with frequencies above 75 MHz as shown in Appendix 6. In the 400 to 1,000 MHz frequency band the limit remains constant at 63 dB microvolts/m. 6.5.2.2. On the ESA representative of its type, the measured values, expressed in dB microvolts/ m, shall be below the type approval limits. 6.6. Specifications concerning narrowband electromagnetic interference generated by	4.6 所有ESA所產生寬頻電磁干擾規定 4.6.1 試驗方法：ESA(車上電機/電子裝置) 試驗代表件所產生的電磁輻射應以8.中所敘述的方法進行量測。 4.6.2 ESA(車上電機/電子裝置)之寬頻基準限制值 4.6.2.1 依8.中的方法量測，電磁輻射的基準限制值為：頻率範圍<u>三〇至七五兆赫</u>為<u>六二至五二dBμV/m</u>，在頻率<u>三〇兆赫</u>以上限制為對數(線性)遞減；頻率範圍<u>七五至四〇〇兆赫</u>是由<u>五二至六三dBμV/m</u>對數(線性)遞增(如圖五)；頻率範圍<u>四〇〇至一〇〇〇兆赫</u>為<u>六三dBμV/m</u>。 4.6.2.2 ESA(車上電機/電子裝置)認證時，以dBμV/m表示之量測值應低於規定值。 4.7 所有ESA所產生窄頻電磁干擾規定	連結電源介面配置之條款規定。 4.5 <u>ESA(車上電機/電子裝置)</u>所產生寬頻電磁擾動之相關規定 4.5.1 檢測方法：ESA(車上電機/電子裝置)<u>型式代表零件</u>所產生的電磁擾動應以8.中所敘述的方法進行量測。 4.5.2 ESA(車上電機/電子裝置)之寬頻基準限制值 4.5.2.1 依8.中的方法量測，電磁輻射的基準限制值為：頻率範圍<u>30至75 MHz</u>為<u>62-52dBμV/m</u>，在頻率<u>30MHz</u>以上限制為對數(線性)遞減；頻率範圍<u>75至400 MHz</u>是由<u>52-63dBμV/m</u>對數(線性)遞增(如圖五)；頻率範圍<u>400至1000 MHz</u>為<u>63dBμV/m</u>。 4.5.2.2 ESA(車上電機/電子裝置)認證時，以dBμV/m表示之量測值應低於規定值。 4.6 <u>ESA(車上電機/電子裝置)</u>所產生

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
ESAs. 6.6.1. Method of measurement The electromagnetic radiation generated by the ESA representative of its type shall be measured by the method described in Annex 8. 6.6.2. ESA narrowband type approval limits 6.6.2.1. If measurements are made using the method described in Annex 8, the limits shall be 52 to 42 dB microvolts/m in the 30 to 75 MHz frequency band, this limit decreasing logarithmically with frequencies above 30 MHz, and 42 to 53 dB microvolts/m in the 75 to 400 MHz band, this limit increasing logarithmically with frequencies above 75 MHz as shown in Appendix 7. In the 400 to 1,000 MHz frequency band the limit remains constant at 53 dB microvolts/m. 6.6.2.2. On the ESA representative of its type, the measured value, expressed in dB microvolts/m shall be below the type approval limits.	ESAs. 6.6.1. Method of measurement The electromagnetic radiation generated by the ESA representative of its type shall be measured by the method described in Annex 8. 6.6.2. ESA narrowband type approval limits 6.6.2.1. If measurements are made using the method described in Annex 8, the limits shall be 52 to 42 dB microvolts/m in the 30 to 75 MHz frequency band, this limit decreasing logarithmically with frequencies above 30 MHz, and 42 to 53 dB microvolts/m in the 75 to 400 MHz band, this limit increasing logarithmically with frequencies above 75 MHz as shown in Appendix 7. In the 400 to 1,000 MHz frequency band the limit remains constant at 53 dB microvolts/m. 6.6.2.2. On the ESA representative of its type, the measured value, expressed in dB microvolts/m shall be below the type approval limits.	<u>4.7.1</u> 試驗方法：ESA(車上電機/電子裝置) 試驗代表件所產生的電磁輻射應以9.中所敘述的方法進行量測。 <u>4.7.2</u> ESA(車上電機/電子裝置)窄頻基準限制值 <u>4.7.2.1</u> 依9.中的方法量測，電磁輻射的基準限制值為：頻率範圍<u>三〇</u>至<u>七五兆赫</u>為<u>五二至四二dBμV/m</u>，在頻率<u>三〇兆赫</u>以上限制為對數(線性)遞減；頻率範圍<u>七五至四〇〇兆赫</u>為<u>四二至五三dBμV/m</u>，在頻率<u>七五兆赫</u>以上限制為對數(線性)遞增(如圖六)；頻率範圍<u>四〇〇至一〇〇〇兆赫</u>為<u>五三dBμV/m</u>。 <u>4.7.2.2</u> ESA(車上電機/電子裝置)認證時，以dBμV/m表示之量測值應低於規定值。	窄頻電磁擾動之相關規定 <u>4.6.1</u> 檢測方法：ESA(車上電機/電子裝置)型式代表零件所產生的電磁擾動應以9.中所敘述的方法進行量測。 <u>4.6.2</u> ESA(車上電機/電子裝置)所產生窄頻電磁擾動之基準限制值 <u>4.6.2.1</u> 依9.中的方法量測，電磁輻射的基準限制值為：頻率範圍<u>30</u>至<u>75 MHz</u>為<u>52-42dBμV/m</u>，在頻率<u>30MHz</u>以上限制為對數(線性)遞減；頻率範圍<u>75</u>至<u>400 MHz</u>為<u>42-53dBμV/m</u>，在頻率<u>75MHz</u>以上限制為對數(線性)遞增(如圖六)；頻率範圍<u>400</u>至<u>1000 MHz</u>為<u>53dBμV/m</u>。 <u>4.6.2.2</u> ESA(車上電機/電子裝置)認證時，以dBμV/m表示之量測值應低於規定值。
6.7. Specifications concerning the emission of transient conducted disturbances generated by ESAs on <u>12/24 V supply lines</u>. 6.7.1. Method of testing	6.9. Specifications concerning the emission of transient conducted disturbances generated by ESAs on <u>supply lines</u>. 6.9.1. Method of testing	<u>4.8</u>由各ESA於一二/二四伏特電源線所產生之關於<u>暫態傳導擾動</u>放射規定 <u>4.8.1</u> 試驗方法：ESA試驗代表件所	<u>4.9</u>由ESAs電源線所產生之關於<u>傳導之暫態干擾</u>放射規定 <u>4.9.1</u> 測試方法：ESA型式代表零件所

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
The emission of ESA representative of its type shall be tested by the method(s) according to ISO 7637-2 as described in Annex 10 for the levels given in Table 1. 【請參考頁末表格】	The emission of ESA representative of its type shall be tested by the method(s) according to ISO 7637-2 (second edition 2004) as described in Annex 10 for the levels given in table 2. 【請參考頁末表格】	產生之放射應依照12.所述之ISO 7637-2， <u>試驗</u> 標準如表 <u>一</u> 。 (請參考頁末表格)	產生之放射應依照12.所述之ISO 7637-2(second edition 2004)， <u>測試</u> 標準如表 <u>二</u> 。 (請參考頁末表格)
6.8. Specifications concerning immunity of ESAs to electromagnetic radiation 6.8.1. Method(s) of testing The immunity to electromagnetic radiation of the ESA representative of its type shall be tested by the method(s) chosen from those described in Annex 9. 6.8.2.1. If tests are made using the methods described in Annex 9, the immunity test levels shall be 60 volts/m root-mean-square (rms) for the 150 mm stripline testing method, 15 volts/ m rms for the 800 mm stripline testing method, 75 volts/m rms for the Transverse Electromagnetic Mode (TEM) cell testing method, 60 mA rms for the bulk current injection (BCI) testing method and 30 volts/m rms for the free field testing method in over 90 per cent of the 20 to 2,000 MHz frequency band, and to a minimum of 50 volts/ m rms for the 150 mm stripline testing method, 12.5 volts/m	6.7. Specifications concerning immunity of ESAs to electromagnetic radiation 6.7.1. Method(s) of testing The immunity to electromagnetic radiation of the ESA representative of its type shall be tested by the method(s) chosen from those described in Annex 9. 6.7.2.1. If tests are made using the methods described in Annex 9, the immunity test levels shall be 60 volts/m root-mean-square (rms) for the 150 mm stripline testing method, 15 volts/ m rms for the 800 mm stripline testing method, 75 volts/m rms for the Transverse Electromagnetic Mode (TEM) cell testing method, 60 mA rms for the bulk current injection (BCI) testing method and 30 volts/m rms for the free field testing method in over 90 per cent of the 20 to 2,000 MHz frequency band, and to a minimum of 50 volts/ m rms for the 150 mm stripline testing method, 12.5 volts/m	4.9 所有 ESA 電磁輻射免疫力規範 4.9.1 量測方法：ESA電磁輻射免疫力 <u>試驗代表件</u> ，應依據至11.所挑選之方法進行 <u>試驗</u> 。 4.9.2 ESA 免疫力之基準限制值。 4.9.2.1 依11.的方法量測，涵蓋 <u>二0</u> 至 <u>二000兆赫</u> 之百分之九0頻寬時，關於一五0公釐帶線 <u>試驗</u> 方法，其 <u>免疫力試驗標準</u> 應為 <u>六0</u> V/m rms (均方根)；關於八00公釐帶線 <u>試驗</u> 方法應為 <u>一五</u> V/m；關於橫向電磁波室(TEM) <u>試驗</u> 方法應為 <u>七五</u> V/m；關於大電流注入(BCI) <u>試驗</u> 方法應為 <u>六0</u> mA rms；關於自由磁場 <u>試驗</u> 方法應為 <u>三0</u> V/m rms。且 <u>二0</u> 至 <u>二000兆赫</u> 頻寬時，關於一五0公釐帶線 <u>試驗</u> 方法其耐受試驗標準最小值應為 <u>五0</u> V/m rms；關於八00公釐帶線 <u>試驗</u> 方法最小值應為 <u>一二·五</u>	4.7 關於 ESA 電磁輻射免疫力規範 4.7.1 量測方法：ESA電磁輻射免疫力 <u>代表測試件</u> ，應依據至11.所挑選之方法進行 <u>測試</u> 。 4.7.2 ESA 免疫力之基準限制值。 4.7.2.1 依11.的方法量測，涵蓋 <u>20</u> 至 <u>2,000 MHz</u> 之百分之九0頻寬時，關於一五0公釐帶線 <u>測試</u> 方法，其 <u>耐受測試標準</u> 應為 <u>60</u> V/m rms (均方根)；關於八00公釐帶線 <u>測試</u> 方法應為 <u>15</u> V/m；關於橫向電磁波室(TEM) <u>測試</u> 方法應為 <u>75</u> V/m；關於大電流注入 (BCI) <u>測試</u> 方法應為 <u>60</u> mA rms；關於自由磁場 <u>測試</u> 方法應為 <u>30</u> V/m rms。且 <u>20</u> 至 <u>2,000 MHz</u> 頻寬時，關於一五0公釐帶線 <u>測試</u> 方法其耐受 <u>測試</u> 標準最小值應為 <u>50</u> V/m rms；關於八00公釐帶線 <u>測試</u> 方法最小值應為 <u>12.5</u> V/m rms；關於橫向電磁波室(TEM) <u>測試</u> 方法

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
rms for the 800 mm stripline testing method, 62.5 volts/m rms, for the TEM cell testing method, 50 mA rms for the bulk current injection (BCI) testing method and 25 volts/m rms for the free field testing method over the whole 20 to 2,000 MHz frequency band. 6.8.2.2. The ESA representative of its type shall be considered as complying with immunity requirements if, during the tests performed in accordance with Annex 9, there shall be no degradation of performance of "immunity related functions"	method, 62.5 volts/m rms, for the TEM cell testing method, 50 mA rms for the bulk current injection (BCI) testing method and 25 volts/m rms for the free field testing method over the whole 20 to 2,000 MHz frequency band. 6.7.2.2. The ESA representative of its type shall be considered as complying with immunity requirements if, during the tests performed in accordance with Annex 9, there shall be no degradation of performance of "immunity related functions".	V/m rms;關於橫向電磁波室(TEM)試驗方法最小值應為六二·五V/m rms;關於大電流注入(BCI)試驗方法之最小值應為五〇mA rms;關於自由場試驗方法最小值應為二五V/m rms。 4.9.2.2 ESA試驗代表件應符合免疫力規範，且在11.試驗期間，「免疫力相關功能」之性能不能降低。	最小值應為62.5V/m rms;關於大電流注入(BCI)測試方法之最小值應為50mA rms;關於自由場測試方法最小值應為25V/m rms。 4.7.2.2 ESA型式代表零件應符合免疫力規範，且在 11.測試期間，"功能相關耐受"之性能不能降低。
6.9. Specifications concerning the immunity of ESAs to transient disturbances conducted along 12/24 V supply lines. 6.9.1. Method of testing The immunity of ESA representative of this type shall be tested by the method(s) according to ISO 7637-2 as described in Annex 10 with the test levels given in Table 2. 【請參考頁末表格】	6.8. Specifications concerning the immunity of ESAs to transient disturbances conducted along supply lines. 6.8.1. Method of testing The immunity of ESA representative of its type shall be tested by the method(s) according to ISO 7637-2 (second edition 2004) as described in Annex 10 with the test levels given in table 1. 【請參考頁末表格】	4.10 所有ESA沿一二/二四伏特電源線之暫態傳導擾動免疫力規範 4.10.1 試驗方法：此ESA試驗代表件所產生之免疫力應依照12.，ISO 7637-2，試驗標準如表二。 (請參考頁末表格) 【參考CNS 14299 耐受力就是缺乏免疫力故耐受力不等同免疫力】	4.8 關於沿電源線傳導之暫態干擾ESAs免疫力規範 4.8.1 測試方法：ESA型式代表零件所產生之耐受應依照12.，ISO 7637-2 (second edition 2004)，測試標準如表二。 (請參考頁末表格)
7.10. Specifications concerning broadband electromagnetic interference caused by ESAs 7.10.1. Method of measurement The electromagnetic radiation generated by	【從7.10~7.11.2.1皆為ESA故調整至4.11後】	4.11 所有ESA所造成寬頻電磁干擾之規定 4.11.1 試驗方法 ESA試驗代表件所產生的電磁輻	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
the ESA representative of its type shall be measured by the method described in Annex 7. 7.10.2. ESA broadband type approval limits 7.10.2.1. If measurements are made using the method described in Annex 7, the limits shall be 62 to 52 dB microvolts/m in the 30 to 75 MHz frequency band, this limit decreasing logarithmically with frequencies above 30 MHz, and 52 to 63 dB microvolts/m in the 75 to 400 MHz band, this limit increasing logarithmically with frequencies above 75 MHz as shown in Appendix 6. In the 400 to 1,000 MHz frequency band the limit remains constant at 63 dB microvolts/m. 7.10.2.2. On the ESA representative of its type, the measured values, expressed in dB microvolt/ m, shall be below the type approval limits. 7.11. Specifications concerning emission of harmonics on AC power lines from ESAs 7.11.1. Method of measurement The harmonics emission on AC power lines generated by the ESA representative of its type shall be measured using the method described in Annex 17. The method of measurement shall be defined by the manufacturer in accordance with the Technical Service.		<u>射，應以8.所敘述的方法進行量測。</u> <u>4.11.2 ESA寬頻基準限制值</u> <u>4.11.2.1 依8.的方法量測，基準限制值為：頻率範圍三〇至七五MHz為六二至五二dBμV/m，此限制值為自頻率三〇MHz以上以對數(線性)遞減；頻率範圍七五至四〇〇MHz為五二至六三dBμV/m，此限制值為自七五MHz以上以對數(線性)遞增；頻率範圍四〇〇至一〇〇〇MHz之限制值維持定值為六三dBμV/m。</u> <u>4.11.2.2 ESA試驗代表件之量測值 (dBμV/m)，其應低於基準限制值。</u> <u>4.12由各ESA於交流電源線所產生之關於諧波放射規定</u> <u>4.12.1試驗方法</u> <u>試驗代表件應依19.進行量測。量測方法應依據檢測機構及申請者共同選定。</u>	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
7.11.2. ESA type approval limit 7.11.2.1. If measurements are made using the method described in Annex 17, the limits for input current ≤ 16 A per phase are those defined in IEC 61000-3-2 and given in Table 10. 【請參考頁末表格】		<u>4.12.2 ESA基準限制值</u> <u>4.12.2.1 對於以每相限制輸入電流小於等於一六安培，其限制值為IEC 61000-3-2中所定義及表三規定之值。</u> (請參考頁末表格)	
7.11.2.2. If measurements are made using the method described in Annex 17, the limits for input current > 16 A and ≤ 75 A per phase are those defined in IEC 61000-3-12 and given in Table 11, Table 12 and Table 13. 【請參考頁末表格】 7.12. Specifications concerning emission of voltage changes, voltage fluctuations and flicker on AC power lines from ESAs 7.12.1. Method of measurement The emission of voltage changes, voltage fluctuations and flicker on AC power lines generated by the ESA representative of its type shall be measured using the method described in Annex 18. The method of measurement shall be defined by the ESA manufacturer in accordance with the Technical Service. 7.12.2. ESA type approval limit 7.12.2.1. If measurements are made using the method described in Annex 18, the limits		<u>4.12.2.2 對於以每相限制輸入電流大於一六安培且小於等於七五安培，其限制值為IEC 61000-3-12中所定義及表四、五及六規定之值。</u> (請參考頁末表格) <u>4.13 由各ESA於交流電源線所產生之關於電壓變化、電壓波動及閃爍放射規定</u> <u>4.13.1試驗方法：ESA試驗代表件應依20.方法量測。量測方法應依據檢測機構及申請者共同選定。</u> <u>4.13.2 ESA基準限制值</u> <u>4.13.2.1 對於以每相額定電流小於等於一六安培且不受有條件連接</u>	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
for rated current ≤ 16 A per phase and not subjected to conditional connection are those defined in IEC 61000-3-3, clause 5. 7.12.2.2. If measurements are made using the method described in Annex 18, the limits for rated current > 16 A and ≤ 75 A per phase and subjected to conditional connection are those defined in IEC 61000-3-11, clause 5. 7.13. Specifications concerning emission of radiofrequency conducted disturbances on AC or DC power lines from ESA 7.13.1. Method of measurement The emission of radiofrequency conducted disturbances on AC or DC power lines generated by the ESA representative of its type shall be measured using the method described in Annex 19. The method of measurement shall be defined by the ESA manufacturer in accordance with the Technical Service. 7.13.2. ESA type approval limit 7.13.2.1. If measurements are made using the method described in Annex 19, the limits on AC power lines are those defined in IEC 61000-6-3 and given in Table 14. 7.13.2.2. If measurements are made using the method described in Annex 19, the limits on DC power lines are those defined in IEC 61000-6-3 and given in Table 15.		<u>所支配進行充電之ESA，其限制值應依IEC 61000-3-3第5條款中所定義。</u> <u>4.13.2.2 對於以每相額定電流於一六安培且小於等於七五安培，並受有條件連接所支配進行充電之ESA，其限制值應依IEC 61000-3-11第5條款中所定義。</u> <u>4.14 由ESA於交流或直流電源線所產生之射頻放射傳導擾動規定</u> <u>4.14.1 試驗方法：ESA試驗代表件應依21.方法量測。量測方法應依據檢測機構及申請者共同選定。</u> <u>4.14.2 ESA基準限制值</u> <u>4.14.2.1 在交流電源線上之限制值為IEC 61000-6-3中所定義及表七所規定之值。</u> <u>4.14.2.2 在直流電源線上之限制值為IEC 61000-6-3中所定義及表八</u>	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
7.14. Specifications concerning emission of radiofrequency conducted disturbances on network and telecommunication access from ESA 7.14.1. Method of measurement The emission of radiofrequency conducted disturbances on network and telecommunication access generated by the ESA representative of its type shall be measured using the method described in Annex 20. The method of measurement shall be defined by the ESA manufacturer in accordance with the Technical Service. 7.14.2. ESA type approval limit 7.14.2.1. If measurements are made using the method described in Annex 20, the limits on network and telecommunication access (telecommunication access as defined in Clause 3.6 of CISPR22) are those defined in IEC 61000-6-3 and given in Table 16. 7.15. Specifications concerning the immunity of ESAs to electrical fast transient/burst disturbances conducted along AC and DC power lines. 7.15.1. Method of testing 7.15.1.1. The immunity to electrical fast transient/burst disturbances conducted along AC and DC power lines of the ESA representative of its type shall be tested by the method described in Annex 21.		<u>所規定之值。</u> <u>4.15 由ESA於網路及電信存取界面所產生之射頻放射傳導擾動規定</u> <u>4.15.1 試驗方法：試驗代表件應依22.方法量測。量測方法應依檢測機構及申請者共同選定。</u> <u>4.15.2 ESA基準限制值</u> <u>4.15.2.1 在網路及電信存取界面上之限制值(電信存取界面為CISPR22，第3.6條款所定義)為IEC 61000-6-3中所定義及表九所規定之值。</u> <u>4.16 沿交流及直流電源線之電性快速暫態脈衝 (Electrical fast transient) / 叢訊擾動 (Burst disturbance) 傳導之所有ESA免疫力規定</u> <u>4.16.1 試驗方法</u> <u>4.16.1.1 試驗代表件應依23.方法量</u>	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
7.15.2. ESA immunity type approval limits 7.15.2.1. If tests are made using the methods described in Annex 21, the immunity test levels, for AC or DC power lines, shall be: +/- 2 kV test voltage in open circuit, with a rise time (Tr) of 5 ns, and a hold time (Th) of 50 ns and a repetition rate of 5 kHz for at least 1 minute. 7.15.2.2. The ESA representative of its type shall be considered as complying with immunity requirements if, during the tests performed in accordance with Annex 21, there shall be no degradation of performance of "immunity related functions", according to paragraph 2.2. of Annex 9. 7.16. Specifications concerning the immunity of ESAs to surge conducted along AC or DC power lines 7.16.1. Method of testing 7.16.1.1. The immunity to surge conducted along AC / DC power lines of the ESA representative of its type shall be tested by the method described in Annex 22. 7.16.2. ESA immunity type approval limits 7.16.2.1. If tests are made using the methods described in Annex 22, the immunity test levels shall be: (a) For AC power lines: +/- 2 kV test voltage in open circuit between line and earth and		<u>測。</u> <u>4.16.2 ESA 免疫力基準限制值</u> <u>4.16.2.1 對於交流或直流電源線之免疫力試驗等級，於開迴路之試驗電壓應為正負二千伏特，上升時間(Tr)五奈秒，持續時間(Th)五〇奈秒以及至少一分鐘之重複率五千赫。</u> <u>4.16.2.2 各ESA試驗代表件應符合免疫力規範，11.2.2之相關免疫力功能之性能於23.規定試驗期間不應降低。</u> <u>4.17 沿交流或直流電源線之突波傳導之所有ESA免疫力規定</u> <u>4.17.1 試驗方法</u> <u>4.17.1.1 試驗代表件應依24.方法量測。</u> <u>4.17.2 ESA免疫力基準限制值</u>	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
+/- 1 kV between lines (pulse 1.2 microseconds / 50 microseconds), with a rise time (Tr) of 1.2 microseconds, and a hold time (Th) of 50 microseconds. Each surge shall be applied five times with a maximum delay of 1 minute between each pulse. This has to be applied for the following phases: 0, 90, 180 and 270 deg., (b) For DC power lines: +/- 0.5 kV test voltage in open circuit between line and earth and +/- 0.5 kV between lines (pulse 1.2 microseconds / 50 microseconds) with a rise time (Tr) of 1.2 microseconds, and a hold time (Th) of 50 microseconds. Each surge shall be applied five times with a maximum delay of 1 minute. 7.16.2.2. The ESA representative of its type shall be considered as complying with immunity requirements if, during the tests performed in accordance with Annex 22, there shall be no degradation of performance of "immunity related functions", according to paragraph 2.2. of Annex 9. 7.17. Specifications concerning the emission of transient conducted disturbances generated by ESAs on 12 / 24 V supply lines 7.17.1. Method of testing The emission of ESA representative of its		<u>4.17.2.1 免疫力試驗等級應為：</u> <u>(a) 交流電源線：開迴路試驗電壓於電源線及接地之間應為正負二千伏特，電源線間應為正負一千伏特（脈波一·二微秒/五〇微秒），上升時間(Tr) 一·二微秒，保持時間(Th)五〇微秒。每個突波應施予五次，每個脈波間隔在一分鐘內，於各相位〇、九〇、一八〇及二七〇度施予。</u> <u>(b) 直流電源線：開迴路試驗電壓於電源線及接地之間應為正負〇·五千伏特，電源線之間應為正負〇·五千伏特（脈波一·二秒/五〇微秒）。上升時間(Tr) 一·二微秒，保持時間(Th)五〇微秒，每個突波應施予五次，每個脈波間隔在一分鐘內。</u> <u>4.17.2.2 各ESA試驗代表件應符合免疫力規範，11.2.2之相關免疫力功能之性能於24.規定試驗期間不應降低。</u> <u>4.18 由各ESA於一二/二四伏特電源線所產生之暫態傳導擾動放射規定</u>	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
type shall be tested by the method(s) according to ISO 7637-2, as described in Annex 10 for the levels given in Table 17. 【內容與UN 6.7.1 Table 1(對應國內基準表一相同)】 7.18. Specifications concerning immunity of ESAs to electromagnetic radiation 7.18.1. Method(s) of testing The immunity to electromagnetic radiation of the ESA representative of its type shall be tested by the method(s) chosen from those described in Annex 9. 7.18.2. ESA immunity type approval limits 7.18.2.1. If tests are made using the methods described in Annex 9, the immunity test levels shall be 60 volts/m rms for the 150 mm stripline testing method, 15 volts/m rms for the 800 mm stripline testing method, 75 volts/m rms for the Transverse Electromagnetic Mode (TEM) cell testing method, 60 mA rms for the Bulk Current Injection (BCI) testing method and 30 volts/m rms for the free field testing method in over 90 per cent of the 20 to 2,000 MHz frequency band, and to a minimum of 50 volts/m rms for the 150 mm stripline testing method, 12.5 volts/m rms for the 800 mm stripline testing method, 62.5 volts/m rms, for the TEM cell testing method, 50 mA rms for the		<u>4.18.1 ESA試驗代表件所產生之放射，應如表一所示之各等級，依12.規定所述之ISO 7637-2進行試驗。</u> <u>4.19 關於電磁輻射之各ESA免疫力規範</u> <u>4.19.1 試驗方法：試驗代表件應依11.方法進行試驗。</u> <u>4.19.2 ESA免疫力基準限制值</u> <u>4.19.2.1依11.方法量測，於涵蓋二〇至二〇〇〇MHz之百分之九〇頻寬內，</u> <u>(a) 關於一五〇公釐帶線試驗方法，其免疫力試驗標準應為六〇V/m rms (均方根)；</u> <u>(b) 關於八〇〇公釐帶線試驗方法應為一五V/m；</u> <u>(c) 關於橫向電磁波室(TEM)試驗方法應為七五V/m；</u> <u>(d) 關於大電流注入(BCI)試驗方法應為六〇mA rms；</u> <u>(e) 關於自由磁場試驗方法應為三〇V/m rms。</u> <u>於二〇至二〇〇〇兆赫之所有頻寬</u>	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
bulk current injection (BCI) testing method and 25 volts/m rms for the free field testing method over the whole 20 to 2,000 MHz frequency band. 7.18.2.2. The ESA representative of its type shall be considered as complying with immunity requirements if, during the tests performed in accordance with Annex 9, there shall be no degradation of performance of "immunity related functions". 7.19. Specifications concerning the immunity of ESAs to transient disturbances conducted along 12 / 24 V supply lines. 7.19.1. Method of testing The immunity of ESA representative of its type shall be tested by the method(s) according to ISO 7637-2, as described in Annex 10 with the test levels given in Table 18. 【內容與UN 6.9.1 Table 2(對應國內基準表二相同)】		內， <u>(a) 關於一五〇公釐帶線試驗方法其免疫力試驗標準最小值應為五〇V/m rms；</u> <u>(b) 關於八〇〇公釐帶線試驗方法最小值應為一二・五V/m rms；</u> <u>(c) 關於橫向電磁波室(TEM)試驗方法最小值應為六二・五V/m rms；</u> <u>(d) 關於大電流注入(BCI)試驗方法之最小值應為五〇mA rms；</u> <u>(e) 關於自由場試驗方法最小值應為二五V/m rms。</u> <u>4.19.2.2各ESA試驗代表件應符合免疫力規範，相關免疫力功能之性能於11.規定試驗期間不應降低。</u> <u>4.20 沿一二/二四伏特電源線暫態傳導擾動之各ESA免疫力規定</u> <u>4.20.1試驗方法：ESA試驗代表件，應如表二所示之各等級，依12.規定所述之ISO 7637-2進行試驗。</u>	

增/修內容	原內容	修訂國內法規條文案草案	對應國內法規條文
6.10.1. Where a vehicle or electrical/electronic system or ESA does not include an electronic oscillator with an operating frequency greater than 9 kHz, it shall be deemed to comply with paragraph 6.3.2. or 6.6.2. and with Annexes 5 and 8.	6.10.1. Where a vehicle or electrical/electronic system or ESA does not include an electronic oscillator with an operating frequency greater than 9 kHz, it shall be deemed to comply with paragraph 6.3.2. or 6.6.2. and with Annexes 5 and 8.	<u>4.21</u> 例外情形 <u>4.21.1</u> 當車輛、電子/電機系統或ESA不包含作動頻率超過 <u>九千赫</u> 之振動器時，應被視為符合4.3、4.6、7.或9.之規定。 <u>4.21.2</u> 車輛若無”免疫力相關功能”之電子/電機系統則可免除輻射 <u>擾動</u> 免疫力 <u>試驗</u> 且應視為符合4.4及10.之規定。	<u>4.10</u> 例外情形 <u>4.10.1</u> 當車輛、電子/電機系統或ESA不包含作動頻率超過 <u>9kHz</u> 之振動器時，應被視為符合4.3、4.6、7.或9.之規定。 <u>4.10.2</u> 車輛若無”免疫力相關功能”之電子/電機系統則可免除輻射 <u>干擾</u> 免疫力 <u>測試</u> 且應視為符合4.4及10.之規定。
6.10.2. Vehicles which do not have electrical/electronic systems with "immunity related functions" need not be tested for immunity to radiated disturbances and shall be deemed to comply with paragraph 6.4. and with Annex 6 to this Regulation.	6.10.2. Vehicles which do not have electrical/electronic systems with "immunity related functions" need not be tested for immunity to radiated disturbances and shall be deemed to comply with paragraph 6.4. and with Annex 6 to this Regulation.		
6.10.3. ESAs with no immunity related functions need not be tested for immunity to radiated disturbances and shall be deemed to comply with paragraph 6.8. and with Annex 9 to this Regulation.	6.10.3. ESAs with no immunity related functions need not be tested for immunity to radiated disturbances and shall be deemed to comply with paragraph 6.7. and with Annex 9 to this Regulation.	<u>4.21.3</u> 各 <u>ESA</u> 若無免疫力相關功能，則可免除輻射 <u>擾動</u> 免疫力 <u>試驗</u> 且應視為符合 <u>4.8</u> 及11.之規定。	<u>4.10.3</u> <u>ESA</u> 若無免疫力相關功能，則可免除輻射 <u>干擾</u> 免疫力 <u>測試</u> 且應視為符合 <u>4.7</u> 及11.之規定。
6.10.4. Electrostatic discharge For vehicles fitted with tyres, the vehicle body/chassis can be considered to be an electrically isolated structure. Significant electrostatic forces in relation to the vehicle's external environment only occur at the moment of occupant entry into or exit from the vehicle. As the vehicle is stationary at these moments, no type approval test for electrostatic discharge is deemed necessary.	6.10.4. Electrostatic discharge For vehicles fitted with tyres, the vehicle body/chassis can be considered to be an electrically isolated structure. Significant electrostatic forces in relation to the vehicle's external environment only occur at the moment of occupant entry into or exit from the vehicle. As the vehicle is stationary at these moments, no type approval test for electrostatic discharge is deemed necessary.	<u>4.21.4</u> 靜電放電：當車輛裝上輪胎時，車輛車體/底盤可被考慮為電力絕緣結構，與車輛外部環境相關之顯著靜電力僅能發生在乘客進出車輛時。當車輛靜止不動時，可免除靜電放電 <u>試驗</u> 。	<u>4.10.4</u> 靜電放電：當車輛裝上輪胎時，車輛車體/底盤可被考慮為電力絕緣結構，與車輛外部環境相關之顯著靜電力僅能發生在乘客進出車輛時。當車輛靜止不動時，可免除靜電放電 <u>測試</u> 。
6.10.5. Emission of transient conducted	6.10.5. Emission of transient conducted	<u>4.21.5</u> 由各 <u>ESA一二/二四伏特</u> 電源線	<u>4.10.5</u> 由 <u>ESAs</u> 電源線所產生傳導之暫

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disturbances generated by ESAs on 12/24 V supply lines. ESAs that are not switched, contain no switches or do not include inductive load need not be tested for transient conducted emission and shall be deemed to comply with paragraph 6.7. 6.10.6. The loss of function of receivers during the immunity test, when the test signal is within the receiver bandwidth (RF exclusion band) as specified for the specific radio service/ product in the harmonized international EMC standard, does not necessarily lead to fail criteria. 6.10.7. RF transmitters shall be tested in the transmit mode. Wanted emissions (e.g. from RF transmitting systems) within the necessary bandwidth and out of band emissions are disregarded for the purpose of this Regulation. Spurious emissions are subject to this Regulation. 6.10.7.1. "Necessary Bandwidth": for a given class of emission, the width of the frequency band which is just sufficient to ensure the transmission of information at the rate and with the quality required under specified conditions (Article 1, No. 1.152 of the International Telecommunication Union (ITU) Radio Regulations). 6.10.7.2. "Out-of-band Emissions": Emission	disturbances generated by ESAs on supply lines. ESAs that are not switched, contain no switches or do not include inductive loads need not be tested for transient conducted emission and shall be deemed to comply with paragraph 6.9. 6.10.6. The loss of function of receivers during the immunity test, when the test signal is within the receiver bandwidth (RF exclusion band) as specified for the specific radio service/ product in the harmonized international EMC standard, does not necessarily lead to fail criteria. 6.10.7. RF transmitters shall be tested in the transmit mode. Wanted emissions (e.g. from RF transmitting systems) within the necessary bandwidth and out of band emissions are disregarded for the purpose of this Regulation. Spurious emissions are subject to this Regulation. 6.10.7.1. "Necessary Bandwidth": for a given class of emission, the width of the frequency band which is just sufficient to ensure the transmission of information at the rate and with the quality required under specified conditions (Article 1, No. 1.152 of the International Telecommunication Union (ITU) Radio Regulations). 6.10.7.2. "Out-of-band Emissions": Emission	所產生傳導之暫態擾動放射：所有 ESA未開啟、無切換功能或不包含感應負載者可不需試驗暫態傳導放射且應視為符合4.7規範。 4.21.6 當試驗訊號在國際EMC法規標準所制定無線電服務/產品頻寬之範圍內(射頻頻寬外)時，則免疫力試驗期間接收器之功能衰減可不視為失效。 4.21.7 RF放射機應在傳送模式下執行試驗。在必需頻寬及帶外放射所量得之放射值(例如來自RF放射系統者)，不適用於本法規。混附放射為本法規之目標。 4.21.7.1 必需頻寬 (Necessary bandwidth)：係指一指定放射等級，其頻寬剛好足以確保指定條件下之資訊傳輸速率與品質 (國際電信聯合會無線電規則第1條第1.152節)。 4.21.7.2 帶外放射 (Out-of-band	態干擾放射：ESA未開啟、無切換功能或不包含感應負載者可不需測試傳導放射且應視為符合4.9規範。 4.10.6 當測試訊號在國際EMC法規標準所制定無線電服務/產品頻寬之範圍內(射頻頻寬外)時，則免疫力測試期間接收器之功能衰減可不視為失效。 4.10.7 RF放射機應在傳送模式下執行測試。在必需頻寬及帶外放射所量得之放射值(例如來自RF放射系統者)，不適用於本法規。混附放射為本法規之目標。 4.10.7.1 必需頻寬 (Necessary bandwidth)：係指一指定放射等級，其頻寬剛好足以確保指定條件下之資訊傳輸速率與品質 (國際電信聯合會無線電規則第1條第1.152節)。 4.10.7.2 帶外放射 (Out-of-band

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
on a frequency or frequencies immediately outside the necessary bandwidth which results from the modulation process, but excluding spurious emissions (Article 1, No. 1.144 of the ITU Radio Regulations).	on a frequency or frequencies immediately outside the necessary bandwidth which results from the modulation process, but excluding spurious emissions (Article 1, No. 1.144 of the ITU Radio Regulations).	emissions): 由調變程序引起之必需頻寬外的某一或某些鄰近頻率之放射, 但不包含混附放射(國際電信聯合會無線電規則第1條第1.144節)。	emissions): 由調變程序引起之必需頻寬外的某一或某些鄰近頻率之放射, 但不包含混附放射(國際電信聯合會無線電規則第1條第1.144節)。
6.10.7.3. "Spurious Emission": In every modulation process additional undesired signals exist. They are summarized under the expression "spurious emissions". Spurious emissions are emissions on a frequency or frequencies, which are outside the necessary bandwidth and the level of which may be reduced without affecting the corresponding transmission of information. Spurious emissions include harmonic emissions, parasitic emissions, intermodulation products and frequency conversion products, but exclude out-of-band emissions (Article 1 No. 1.145 of the ITU Radio Regulations).	6.10.7.3. "Spurious Emission": In every modulation process additional undesired signals exist. They are summarized under the expression "spurious emissions". Spurious emissions are emissions on a frequency or frequencies, which are outside the necessary bandwidth and the level of which may be reduced without affecting the corresponding transmission of information. Spurious emissions include harmonic emissions, parasitic emissions, intermodulation products and frequency conversion products, but exclude out-of-band emissions (Article 1 No. 1.145 of the ITU Radio Regulations).	<u>4.21.7.3</u> 混 附 放 射 (Spurious emission): 在每個調變程序中存在之額外的非意圖信號, 統稱為"混附放射"。混附放射為必需頻寬外之單頻或多頻放射, 其位準可能降低以致不影響對應之資訊傳輸。混附放射包含諧波放射、寄生放射、互調產物及頻率轉換產物, 但帶外放射除外(國際電信聯合會無線電規則第1條第1.145節)。	<u>4.10.7.3</u> 混 附 放 射 (Spurious emission): 在每個調變程序中存在之額外的非意圖信號, 統稱為"混附放射"。混附放射為必需頻寬外之單頻或多頻放射, 其位準可能降低以致不影響對應之資訊傳輸。混附放射包含諧波放射、寄生放射、互調產物及頻率轉換產物, 但帶外放射除外(國際電信聯合會無線電規則第1條第1.145節)。
7. Additional specifications in the configuration " REESS charging mode coupled to the power grid" 7.1. General specifications 7.1.1. A vehicle and its electrical/electronic system(s) or ESA(s) shall be so designed, constructed and fitted as to enable the vehicle, in configuration " REESS charging mode coupled to the power grid", to	7. Additional specifications in the configuration " RESS charging mode coupled to the power grid" 7.1. General specifications 7.1.1. A vehicle and its electrical/electronic system(s) shall be so designed, constructed and fitted as to enable the vehicle, in configuration " RESS charging mode coupled to the power grid", to comply with	5. <u>「REESS</u> 連接至電網(Power grid)」於充電模式組態下之額外規定 5.1 一般規定 5.1.1 車輛的電機/電子系統或 <u>所有ESA</u> 其設計應符合本節「 <u>REESS</u> 充電模式連結電網(Power grid)」配置之規定。	5. <u>RESS</u> 連接至電網於充電模式組態下之額外規定 5.1 一般規定 5.1.1 車輛的電機/電子系統其設計應符合本節 <u>RESS</u> 充電模式 <u>下連結電源介面</u> 配置之規定。

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
comply with the requirements of this Regulation.	the requirements of this Regulation.		
7.1.1.1. A vehicle in configuration "REESS charging mode coupled to the power grid" shall be tested for radiated emissions, immunity to radiated disturbances, conducted emissions and immunity to conducted disturbances	7.1.2. A vehicle in configuration "REESS charging mode coupled to the power grid" shall be tested for radiated emissions, immunity to radiated disturbances, conducted emissions and immunity to conducted disturbances.	5.1.1.1 車輛的「REESS充電模式連結電網 (Power grid)」配置，應試驗輻射放射、輻射擾動免疫力、傳導放射及傳導擾動免疫力。	5.1.2 車輛的REESS充電模式下連結電源介面配置，應測試輻射放射、輻射干擾免疫力、傳導放射及傳導干擾免疫力。
7.1.1.2. ESAs in configuration "REESS charging mode coupled to the power grid" shall be tested for radiated and conducted emissions, for immunity to radiated and conducted disturbances.		5.1.1.2 具備「REESS充電模式連結電網 (Power grid)」配置的所有ESA，應執行電磁輻射擾動和傳導擾動之放射及電磁輻射擾動和傳導擾動之免疫力試驗。	
7.1.2. Before testing the Technical Service has to prepare a test plan in conjunction with the manufacturer, for the configuration "REESS charging mode coupled to the power grid" configuration which contains at least mode of operation, stimulated function(s), monitored function(s), pass/fail criterion (criteria) and intended emissions.	7.1.3. Before testing the Technical Service has to prepare a test plan in conjunction with the manufacturer, for the configuration "REESS charging mode coupled to the power grid" configuration which contains at least mode of operation, stimulated function(s), monitored function(s), pass/fail criterion (criteria) and intended emissions.	5.1.2 試驗之前，檢測機構必須與申請者共同準備試驗計畫，對於具備「REESS充電模式連結電網 (Power grid)」配置者，其內容應至少包含操作模式、增進功能、監控功能、合格/不合格標準及預設之放射規格條件。	5.1.3 測試之前檢測機構必須與申請者共同準備測試計畫，內容應至少包含操作模式、增進功能、監控功能、合格/不合格標準及意圖放射。
7.1.3. A vehicle in configuration "REESS charging mode coupled to the power grid" should be tested with the charging cable delivered by the manufacturer. In this case, the cable shall be type approved as part of the vehicle. 7.1.4. Artificial networks AC Power mains shall be applied to the		5.1.3 車輛的「REESS充電模式連結電網(Power grid)」之配置，應以申請者提供充電纜線進行試驗。該纜線應視為車輛型式認證之一部分。 5.1.4 模擬網路(Artificial network, AN) 交流電源應依CISPR 16-1-2 第4.3條	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
vehicle / ESA through 50 microhenry/50 ohm AN(s) as defined in CISPR 16-1-2 clause 4.3. DC Power mains shall be applied to the vehicle / ESA through 5 microhenry/50 ohm AN(s) as defined in CISPR 25. High voltage power line shall be applied to the ESA through a 5 microhenry/50 ohm HV-AN(s) as defined in Appendix 8.		款，透過<u>五〇微亨利/五〇歐姆</u>之模擬網路施加於車輛/ESA。 直流電源應依據CISPR 25，透過<u>五微亨利/五〇歐姆</u>之模擬網路施加於車輛/ESA。 高壓電線應依據5.11規定，透過<u>五微亨利/五〇歐姆</u>之高壓-模擬網路施加於ESA。	
7.2.2. Vehicle broadband type approval limits 7.2.2.1. If measurements are made using the method described in Annex 4 using a vehicle-toantenna spacing of 10.0 +/- 0.2 m, the limits shall be 32 dB microvolts/m in the 30 to 75 MHz frequency band and 32 to 43 dB microvolts/m in the 75 to 400 MHz frequency band, this limit increasing logarithmically with frequencies above 75 MHz as shown in Appendix 2. In the 400 to 1,000 MHz frequency band the limit remains constant at 43 dB microvolts/m. 7.2.2.2. If measurements are made using the method described in Annex 4 using a vehicle-toantenna spacing of 3.0 +/- 0.05 m, the limits shall be 42 dB microvolts/m in the 30 to 75 MHz frequency band and 42 to 53 dB microvolts/m in the 75 to 400 MHz frequency band, this limit	7.2.2. Vehicle broadband type approval limits 7.2.2.1. If measurements are made using the method described in Annex 4 using a vehicle-toantenna spacing of 10.0 +/- 0.2 m, the limits shall be 32 dB microvolts/m in the 30 to 75 MHz frequency band and 32 to 43 dB microvolts/m in the 75 to 400 MHz frequency band, this limit increasing logarithmically with frequencies above 75 MHz as shown in Appendix 2. In the 400 to 1,000 MHz frequency band the limit remains constant at 43 dB microvolts/m. 7.2.2.2. If measurements are made using the method described in Annex 4 using a vehicle-toantenna spacing of 3.0 +/- 0.05 m, the limits shall be 42 dB microvolts/m in the 30 to 75 MHz frequency band and 42 to 53 dB microvolts/m in the 75 to 400 MHz frequency band, this limit increasing	5.2.2 符合寬頻<u>基準</u>限制值 5.2.2.1 依6.中的方法量測，若選定車輛至天線的距離為<u>一〇正負〇・二公尺</u>時，限制值為：頻率範圍<u>三〇至七五兆赫</u>為<u>三二dBμV/m</u>；頻率範圍<u>七五至四〇〇兆赫</u>是由<u>三二至四三dBμV/m</u>對數(線性)遞增(如圖一)；頻率範圍<u>四〇〇至一〇〇〇兆赫</u>為<u>四三dBμV/m</u>。 5.2.2.2 依6.中的方法量測，若選定車輛至天線的距離為<u>三正負〇・〇五公尺</u>時，電磁輻射的基準限制值為：頻率範圍<u>三〇至七五兆赫</u>為<u>四二dBμV/m</u>；頻率範圍<u>七五至四〇〇兆赫</u>是由<u>四二至五三dBμV/m</u>	5.2.2 符合寬頻<u>型式認證之</u>限制值 5.2.2.1 依6.中的方法量測，若選定車輛至天線的距離為<u>10.0±0.2 m</u>時，限制值為：頻率範圍<u>30至75 MHz</u>為<u>32dBμV/m</u>；頻率範圍<u>75至400 MHz</u>是由<u>32-43dBμV/m</u>對數(線性)遞增(如圖一)；頻率範圍<u>400至1000 MHz</u>為<u>43dBμV/m</u>。 5.2.2.2 依6.中的方法量測，若選定車輛至天線的距離為<u>3.0±0.05 m</u>時，電磁輻射的基準限制值為：頻率範圍<u>30至75 MHz</u>為<u>42dBμV/m</u>；頻率範圍<u>75至400 MHz</u>是由<u>42-53dBμV/m</u>對數(線性)遞增(如

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
increasing logarithmically with frequencies above 75 MHz as shown in Appendix 3. In the 400 to 1,000 MHz frequency band the limit remains constant at 53 dB microvolts/m. On the vehicle representative of its type, the measured values, expressed in dB microvolts/m shall be below the type approval limits.	logarithmically with frequencies above 75 MHz as shown in Appendix 3. In the 400 to 1,000 MHz frequency band the limit remains constant at 53 dB microvolts/m. On the vehicle representative of its type, the measured values, expressed in dB microvolts/m shall be below the type approval limits.	對數(線性)遞增(如圖二);頻率範圍<u>四〇〇至一〇〇〇兆赫</u>為<u>五三dBμV/m</u>。 車輛認證時,以dBμV/m表示之量測值應低於規定值。	圖二);頻率範圍<u>400至1000 MHz</u>為<u>53dBμV/m</u>。 車輛認證時,以dBμV/m表示之量測值應低於規定值。
7.3.2. Vehicle type approval limit ...	7.3.2. Vehicle type approval limit ...	5.3.2 符合 <u>基準</u> 限制值 ...	5.3.2 符合 <u>型式認證之</u> 限制值 ...
7.3.2.1. If measurements are made using the method described in Annex 11, the limits for input current ≤ 16 A per phase are those defined in IEC 61000-3-2-and given in Table 3. 【請參考頁末表格】	7.3.2.1. If measurements are made using the method described in Annex 11, the limits for input current ≤ 16 A per phase are those defined in IEC 61000-3-2 (edition 3.2 - 2005 + Amd1: 2008 + Amd2: 2009) and given in Table 3. 【請參考頁末表格】	5.3.2.1 對於以每相輸入電流<u>小於等於一六</u>安培進行充電之車輛,其諧波電流限制值為如IEC 61000-3-2中所定義以及下表三所規定之值。(請參考頁末表格)	5.3.2.1 對於以每相輸入電流<u>≤ 16</u>安培進行充電之車輛,其諧波電流限制值為如IEC 61000-3-2(edition 3.2 - 2005 +Amd1:2008 + Amd2:2009)中所定義以及下表三所規定之值。(請參考頁末表格)
7.3.2.2. If measurements are made using the method described in Annex 11, the limits for input current > 16 A and ≤ 75 A per phase are those defined in IEC 61000-3-12, and given in given in Table 4, Table 5 and Table 6. 【刪除given in應屬JASIC誤植】 【請參考頁末表格】	7.3.2.2. If measurements are made using the method described in Annex 11, the limits for input current > 16 A and ≤ 75 A per phase are those defined in IEC 61000-3-12 (edition 1.0 - 2004) and given in Table 4, 5 and 6. 【請參考頁末表格】	5.3.2.2對於以每相輸入電流<u>大於一六</u>安培<u>且小於等於七五</u>安培進行充電之車輛,其諧波電流限制值為如IEC 61000-3-12中所定義以及下列表四、五及六所規定之值。(請參考頁末表格)	5.3.2.2對於以每相輸入電流<u>≥ 16</u>安培與<u>≤ 75</u>安培進行充電之車輛,其諧波電流限制值為如IEC 61000-3-12(Edition 1.0 -2004)中所定義以及下列表四、五及六所規定之值。(請參考頁末表格)
7.4.1. Method of measurement The emission of voltage changes, voltage fluctuations and flicker on AC power lines	7.4.1. Method of measurement The emission of voltage changes, voltage fluctuations and flicker on AC power lines	5.4.1 <u>試驗</u>方法：<u>試驗</u>代表車應依14.試驗方法量測。<u>試驗</u>方法應由<u>申請者</u>及檢測機構<u>共同</u>定義。	5.4.1 <u>測試</u>方法：檢測代表車應依14.車輛交流電源線的電壓變化、電壓波動及閃爍放射<u>測試</u>方法量測。<u>測</u>

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
generated by the vehicle representative of its type shall be measured using the method described in Annex 12. The method of measurement shall be defined by the vehicle manufacturer in accordance with the Technical Service. 7.4.2. Vehicle type approval limit	generated by the vehicle representative of its type shall be measured using the method described in Annex 12. The method of measurement shall be defined by the vehicle manufacturer in accordance with the Technical Service. 7.4.2. Vehicle type approval limit	5.4.2 符合 <u>基準</u> 限制值	<u>試</u> 方法應由 <u>製造廠</u> 及檢測機構 <u>一致</u> 定義。 5.4.2 符合 <u>型式認證之</u> 限制值
7.4.2.1. If measurements are made using the method described in Annex 12, the limits for rated current ≤ 16 A per phase and not subjected to conditional connection are those defined in IEC 61000-3-3, <u>clause 5</u> .	7.4.2.1. If measurements are made using the method described in Annex 12, the limits for rated current ≤ 16 A per phase and not subjected to conditional connection are those defined in IEC 61000-3-3 (<u>edition 2.0 - 2008</u>) and given in Table 7. 【請參考頁末表格】	5.4.2.1 對於以每相額定電流 <u>小於等於一六</u> 安培且不受有條件連接所支配進行充電之車輛，其限制值為 IEC 61000-3-3 <u>第5條款</u> 中所定義。	5.4.2.1 對於以每相額定電流 ≤ 16 安培且不受有條件連接所支配進行充電之車輛，其限制值為 IEC 61000-3-3(<u>edition 2.0 - 2008</u>)中所定義 <u>及下表七所規定之值</u> 。 (請參考頁末表格)
7.4.2.2. If measurements are made using the method described in Annex 12, the limits for rated current > 16 A and ≤ 75 A per phase and subjected to conditional connection are those defined in IEC 61000-3-11, <u>clause 5</u> .	7.4.2.2. If measurements are made using the method described in Annex 12, the limits for rated current > 16 A and ≤ 75 A per phase and subjected to conditional connection are those defined in IEC 61000-3-11 (<u>edition 1.0 - 2000</u>) and given in Table 8. 【請參考頁末表格】	5.4.2.2 對於以每相額定電流 <u>大於一六</u> 安培 <u>且小於等於七五</u> 安培， <u>並</u> 受有條件連接所支配進行充電之車輛，其限制值為 IEC 61000-3-11 <u>第5條款</u> 中所定義。	5.4.2.2 對於以每相額定電流 > 16 安培 <u>與≤ 75安培以及</u> 受有條件連接所支配進行充電之車輛，其限制值為 IEC 61000-3-11(<u>Edition 2.0 - 2008</u>)中所定義 <u>及下表八所規定之值</u> 。 (請參考頁末表格)
7.5.1. Method of measurement The emission of radiofrequency conducted disturbances on AC or DC power lines generated by the vehicle representative of its type shall be measured using the method described in Annex 13. The	7.5.1. Method of measurement The emission of radiofrequency conducted disturbances on AC or DC power lines generated by the vehicle representative of its type shall be measured using the method described in Annex 13. The method of	5.5.1 <u>試驗</u> 方法： <u>試驗</u> 代表車應依15. <u>方法進行</u> 量測。 <u>試驗</u> 方法應由 <u>申請者</u> 及檢測機構 <u>共同</u> 定義。	5.5.1 <u>測試</u> 方法： <u>檢測</u> 代表車應依15. <u>車輛交流及直流電源線的射頻傳導干擾放射測試方法</u> 量測。 <u>測試</u> 方法應由 <u>製造廠</u> 及檢測機構 <u>一致</u> 定義。

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
method of measurement shall be defined by the vehicle manufacturer in accordance with the Technical Service.	measurement shall be defined by the vehicle manufacturer in accordance with the Technical Service.		
7.5.2. Vehicle type approval limit 7.5.2.1. If measurements are made using the method described in Annex 13, the limits on AC power lines are those defined in IEC 61000-6-3 and given in Table 7. 【請參考頁末表格】	7.5.2. Vehicle type approval limit 7.5.2.1. If measurements are made using the method described in Annex 13, the limits on AC power lines are those defined in IEC 61000-6-3 (edition 2.0-2006) and given in Table 9. 【請參考頁末表格】	5.5.2 符合 <u>基準</u> 限制值 5.5.2.1 在交流電源線上之限制值為 IEC 61000-6-3中所定義及下表 <u>七</u> 所規定之值。 (請參考頁末表格)	5.5.2 符合 <u>型式認證之</u> 限制值 5.5.2.1 在交流電源線上之限制值為 IEC 61000-6-3(<u>Edition 2.0 - 2006</u>)中所定義及下表 <u>九</u> 所規定之值。 (請參考頁末表格)
7.5.2.2. If measurements are made using the method described in Annex 13, the limits on DC power lines are those defined in IEC 61000-6-3 and given in Table 8. 【請參考頁末表格】	7.5.2.2. If measurements are made using the method described in Annex 13, the limits on DC power lines are those defined in IEC 61000-6-3 (edition 2.0-2006) and given in Table 10. 【請參考頁末表格】	5.5.2.2 在直流電源線上之限制值為 IEC 61000-6-3中所定義及下表 <u>八</u> 所規定之值。 (請參考頁末表格)	5.5.2.2 在直流電源線上之限制值為 IEC 61000-6-3(<u>Edition 2.0 - 2006</u>)中所定義及下表 <u>一〇</u> 所規定之值。 (請參考頁末表格)
7.6.1. Method of measurement The emission of radiofrequency conducted disturbances on network and telecommunication access generated by the vehicle representative of its type shall be measured using the method described in Annex 14. The method of measurement shall be defined by the vehicle manufacturer in accordance with the Technical Service.	7.6.1. Method of measurement The emission of radiofrequency conducted disturbances on network and telecommunication access generated by the vehicle representative of its type shall be measured using the method described in Annex 14. The method of measurement shall be defined by the vehicle manufacturer in accordance with the Technical Service.	5.6.1 <u>試驗</u> 方法： <u>試驗</u> 代表車應依16.方法量測。 <u>試驗</u> 方法應由 <u>申請者</u> 及檢測機構 <u>共同</u> 定義。	5.6.1 <u>測試</u> 方法： <u>檢測</u> 代表車應依16.車輛網路及 <u>電信介面</u> 的射頻傳導 <u>干擾</u> 放射 <u>測試</u> 方法量測。 <u>測試</u> 方法應由 <u>製造廠</u> 及檢測機構 <u>一致</u> 定義。
7.6.2. Vehicle type approval limit	7.6.2. Vehicle type approval limit	5.6.2 符合 <u>基準</u> 限制值	5.6.2 符合 <u>型式認證之</u> 限制值
7.6.2.1. If measurements are made using the method described in Annex 14, the limits on network and telecommunication access	7.6.2.1. If measurements are made using the method described in Annex 14, the limits on network and telecommunication access	5.6.2.1 在網路及電信存取界面上之限制值(<u>電信存取界面為CISPR 22第3.6條款定義</u>)為IEC 61000-6-3中	5.6.2.1 在網路及電信存取界面上之限制值為IEC 61000-6-3 (<u>Edition 2.0- 2006</u>)中所定義及下表 <u>一一</u> 所規

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
(telecommunication access as defined in clause 3.6. of CISPR22) are those defined in IEC 61000-6-3 and given in Table 9 【請參考頁末表格】.	are those defined in IEC 61000-6-3 (edition 2.0 - 2006) and given in Table 11. 【請參考頁末表格】	所定義及下表九所規定之值。 (請參考頁末表格)	定之值。 (請參考頁末表格)
7.7.2. Vehicle immunity type approval limits 7.7.2.1. If tests are made using the method described in Annex 6, the field strength shall be 30 volts/m rms (root mean squared) in over 90 per cent of the 20 to 2,000 MHz frequency band and a minimum of 25 volts/m rms over the whole 20 to 2,000 MHz frequency band.	7.7.2. Vehicle immunity type approval limits 7.7.2.1. If tests are made using the method described in Annex 6, the field strength shall be 30 volts/m rms (root mean squared) in over 90 per cent of the 20 to 2,000 MHz frequency band and a minimum of 25 volts/m rms over the whole 20 to 2,000 MHz frequency band.	5.7.2 符合 <u>免疫力基準</u> 限制值 5.7.2.1 當依10.的方法量測時，其場強在大於 <u>二〇</u> 至 <u>二〇〇〇</u> <u>兆赫</u> 頻寬之百分之九〇時應為 <u>三〇</u> V/m rms，且在 <u>二〇</u> 至 <u>二〇〇〇</u> <u>兆赫</u> 頻寬時至少應為 <u>二五</u> V/m rms。	5.7.2 符合 <u>型式認證之</u> 限制值 5.7.2.1 當依10.的方法量測時，其場強在大於 <u>20</u> 至 <u>2,000</u> <u>MHz</u> 頻寬之百分之九〇時應為 <u>30</u> V/m rms，且在 <u>20</u> 至 <u>2,000</u> <u>MHz</u> 頻寬時至少應為 <u>25</u> V/m rms。
7.8. Specifications concerning the immunity of vehicles to electrical fast transient/burst disturbances conducted along AC and DC power lines. 7.8.1. Method of testing 7.8.1.1. The immunity to electrical fast transient/burst disturbances conducted along AC and DC power lines of the vehicle representative of its type shall be tested by the method described in Annex 15.	7.8. Specifications concerning the immunity of vehicles to electrical fast transient/burst disturbances conducted along AC and DC power lines. 7.8.1. Method of testing 7.8.1.1. The immunity to electrical fast transient/burst disturbances conducted along AC and DC power lines of the vehicle representative of its type shall be tested by the method described in Annex 15.	5.8 關於沿交流及直流電源線進行電性快速 <u>暫態脈波 (Electrical fast transient) / 叢訊擾動 (Burst disturbance)</u> 傳導免疫力之規定 5.8.1 <u>試驗</u> 方法： <u>試驗代表車</u> 應依17. <u>方法進行</u> 量測。	5.8 關於沿車輛交流及直流電源線 <u>上</u> 進行電性快速 <u>暫態脈衝/叢訊擾動</u> 免疫力之規定 5.8.1 <u>測試</u> 方法：應依17. <u>沿車輛交流及直流電源線上的電氣快速暫態脈衝傳導干擾免疫力測試方法</u> 量測。
7.8.2. Vehicle immunity type approval limits 7.8.2.1. If tests are made using the methods described in Annex 15, the immunity test levels, for AC or DC power lines, shall be: +/-2 kV test voltage in open circuit, with a rise time (Tr) of 5 ns, and a hold time (Th)	7.8.2. Vehicle immunity type approval limits 7.8.2.1. If tests are made using the methods described in Annex 15, the immunity test levels, for AC or DC power lines, shall be: +/-2 kV test voltage in open circuit, with a rise time (Tr) of 5 ns, and a hold time (Th)	5.8.2 符合 <u>免疫力基準</u> 限制值 5.8.2.1 對於交流或直流電源線上之耐受性試驗位準，應為：開路試驗電壓 <u>正負二千伏特</u> ，上升時間(Tr) <u>五奈秒</u> ，持續時間(Th) <u>五〇奈秒</u> 以及至少持續一分鐘 <u>五千赫</u> 的重複	5.8.2 符合 <u>型式認證之</u> 限制值 5.8.2.1 對於交流或直流電源線上之耐受性試驗位準，應為：開路試驗電壓 <u>±2kV</u> ，上升時間(Tr) <u>5ns</u> ，持續時間(Th) <u>50ns</u> 以及至少持續一分鐘 <u>5kHz</u> 的重複率。

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
of 50 ns and a repetition rate of 5 kHz for at least 1 minute.	of 50 ns and a repetition rate of 5 kHz for at least 1 minute.	率。	
7.9.2. Vehicle immunity type approval limits 7.9.2.1. If tests are made using the methods described in Annex 16, the immunity test levels shall be: (a) For AC power lines: +/- 2 kV test voltage in open circuit between line and earth and +/-1 KV between lines (pulse 1.2 microseconds / 50 microseconds), with a rise time (Tr) of 1.2 microseconds, and a hold time (Th) of 50 microseconds. Each surge shall be applied five times with a maximum delay of 1 minute between each pulse. This has to be applied for the following phases: 0, 90, 180 and 270 deg., (b) For DC power lines: +/- 0.5 kV test voltage in open circuit between line and earth and +/- 0.5 kV between lines (pulse 1.2 microseconds / 50 microseconds) with a rise time (Tr) of 1.2 microseconds, and a hold time (Th) of 50 microseconds. Each surge shall be applied five times with a maximum delay of 1 minute.	7.9.2.1. If tests are made using the methods described in Annex 16, the immunity test levels shall be: (a) For AC power lines: +/-2 kV test voltage in open circuit between line and earth and +/-1 kV between lines, with a rise time (Tr) of 1,2 microseconds, and a hold time (Th) of 50 microseconds. Each surge shall be applied 5 times at 1 minute delay for each of following phases: 0, 90, 180 and 270 deg.; (b) For DC power lines: +/-0,5 kV test voltage in open circuit between line and earth and +/-0,5 kV between lines, with a rise time (Tr) of 1,2 microseconds, and a hold time (Th) of 50 microseconds. Each surge shall be applied 5 times at 1 minute delay.	5.9.2 符合<u>免疫力基準</u>限制值 5.9.2.1 依上開<u>試驗</u>方法量測，免疫力等級應為： (a) 交流電源線：開迴路<u>試驗</u>電壓於電源線及接地之間為<u>正負二千伏特</u>，電源線間為<u>正負一千伏特（脈波一·二微秒/五〇微秒）</u>，上升時間(Tr) <u>一·二微秒</u>，持續時間(Th) <u>五〇微秒</u>。<u>每個突波應施予五次，每個脈波間隔在一分鐘內，於各相位〇、九〇、一八〇及二七〇度施予。</u> (b) 直流電源線：開迴路<u>試驗</u>電壓於電源線及接地之間為<u>正負〇·五千伏特</u>，電源線之間為<u>正負〇·五千伏特（脈波一·二微秒/五〇微秒）</u>。上升時間(Tr) <u>一·二微秒</u>，保持時間(Th) <u>五〇微秒</u>，每個突波應施予<u>五次，每個脈波間隔在一分鐘內。</u>	5.9.2 符合<u>型式認證之</u>限制值 5.9.2.1 依上開<u>測試</u>方法量測，免疫力等級應為： (a) 交流電源線：開迴路<u>測試</u>電壓於電源線及接地之間為<u>±2kV</u>，電源線間為<u>±1kV</u>，上升時間(Tr)<u>1.2微秒</u>，持續時間(Th)<u>50微秒</u>。<u>每個突波應以一分鐘的延遲於以下各個相位〇度、九〇度、一八〇度及二七〇度分別作用五次。</u> (b) 直流電源線：開迴路<u>測試</u>電壓於電源線及接地之間為<u>±0.5kV</u>，電源線之間為<u>±0.5kV</u>。上升時間(Tr)<u>1.2微秒</u>，保持時間(Th) <u>50微秒</u>，每個突波應<u>以間隔一分鐘的方式作用五次</u>。
7.20. Exceptions 7.20.1. When there is no direct connection to a telecommunication network which includes telecommunication service additional to the charging communication service, Annex 14 and Annex 20 shall not	7.10. Exceptions 7.10.1. When network and telecommunication access of the vehicle uses power line Transmission (PLT) on its AC/DC power lines, Annex 14 shall not be applied.	5.10 例外情形 5.10.1 若無法直接連結到電信網路，包含附加計費通信服務之電信服務，則不適用16.及22.之規範。	5.10 例外情形

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
apply. 7.20.2. When network and telecommunication access of the vehicle uses power line Transmission (PLT) on its AC/DC power lines, Annex 14 shall not be applied.		5.10.2 若車輛之網路及電信存取界面於其交流/直流電源線上使用電力線通信(PLT)技術，則不適用16.之規範。	5.10.1 當車輛之網路及電信存取界面於其交流/直流電源線上使用電力線通信(PLT)技術時，則不適用5.6車輛網路及電信介面的射頻傳導干擾放射之規範。
7.20.3. When network and telecommunication access of the ESA uses Power Line Transmission (PLT) on its AC/DC power lines, Annex 20 shall not apply. 7.20.4. Vehicles and / or ESA which are intended to be used in "REESS charging mode coupled to the power grid" in the configuration connected to a DC-charging station with a length of a DC network cable shorter than 30 m do not have to fulfil the requirements of Annex 13, Annex 15, Annex 16, Annex 19, Annex 21 and Annex 22. In this case, the manufacturer shall provide a statement that the vehicle and/or ESA can be used in "REESS charging mode coupled to the power grid" only with cables shorter than 30 m. This information shall be made publicly available following the type approval. 7.20.5. Vehicles and / or ESA which are intended to be used in "REESS charging		5.10.3 若ESA之網路及電信存取界面，於交流/直流電源線上使用電力線通信(Power Line Transmission, PLT)技術，則不適用22.之規範。 5.10.4 車輛及/或ESA具備「REESS充電模式連結至電網(Power grid)」配置者，對於其組成中連接到直流充電站之直流網路線長度小於三0公尺者，可不需符合本項15、17、18、21、23及24規範。 於此情況下，申請者應提供該車輛及/或ESA於「REESS連接至電網(Power grid)」限定使用長度在三0公尺以下電纜線之聲明。前述資訊應參照本基準規定並予以公開。 5.10.5 若車輛及/或ESA具備REESS充電模式連結至電網(Power grid)	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
mode coupled to the power grid" in the configuration connected to a local / private DC-charging station without additional participants do not have to fulfil requirements of Annexes 13, 15, 16, 19, 21 and 22. In this case, the manufacturer shall provide a statement that the vehicle and / or ESA can be used in "REESS charging mode coupled to the power grid" only with a local/private DC charging station without additional participants. This information shall be made publicly available following the type approval.		<u>配置者，在連接至本地/私人直流充電站且無其他使用者使用，可不需符合本項15、17、18、21、23及24規範。</u> <u>於此情況下，申請者應提供該車輛及/或ESA「REESS連接至電網（Power grid）」限定只連接到本地/私人直流充電站且無其他使用者使用之聲明。前述資訊應參照本基準規定並予以公開。</u>	
8. Amendment or extension of a vehicle type approval following electrical/electronic sub-assembly (ESA) addition or substitution ... 8.2. Where the additional or substitution part(s) has (have) not received approval pursuant to this Regulation, and if testing is considered necessary, the whole vehicle shall be deemed to conform if the new or revised part(s) can be shown to conform to the relevant requirements of paragraph 6. and, if applicable, of paragraph 7. or if, in a comparative test, the new part can be shown not to be likely to adversely affect	8. Amendment or extension of a vehicle type approval following electrical/electronic sub-assembly (ESA) addition or substitution ... 8.2. Where the additional or substitutional part(s) has (have) not received approval pursuant to this Regulation, and if testing is considered necessary, the whole vehicle shall be deemed to conform if the new or revised part(s) can be shown to conform to the relevant requirements of paragraph 6 or if, in a comparative test, the new part can be shown not to be likely to adversely affect the conformity of the vehicle type.	新增或延伸車輛型式認證的下列ESA的補充或替代，不影響國內檢測基準	無

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
the conformity of the vehicle type.			
9. Conformity of production 9.1. Vehicles or components or ESAs approved under this Regulation shall be so manufactured as to conform to the type approved by meeting the requirements set forth in paragraph 6. and, if applicable, in paragraph 7. above	9. Conformity of production 9.1. Vehicles or components or ESAs approved under this Regulation shall be so manufactured as to conform to the type approved by meeting the requirements set forth in paragraph 6 above.	品質一致性不影響國內檢測基準	無
9.3. If the Competent Authority is not satisfied with the checking procedure of the manufacturer, then paragraphs 9.3.1., 9.3.2. and 9.3.3. below shall apply. 9.3.1. When the conformity of a vehicle, component or ESA taken from the series is being verified, production shall be deemed to conform to the requirements of this Regulation in relation to broadband electromagnetic disturbances and narrowband electromagnetic disturbances if the levels measured do not exceed by more than 4 dB (60 per cent) the reference limits prescribed in paragraphs 6.2.2.1., 6.2.2.2., 6.3.2.1., 6.3.2.2. and, if applicable, paragraphs 7.2.2.1. and 7.2.2.2. for vehicles and paragraphs 6.5.2.1., 6.6.2.1., and, if applicable, paragraph 7.10.2.1. for ESAs (as appropriate).	9.3. If the Competent Authority is not satisfied with the checking procedure of the manufacturer, then paragraphs 8.3.1. and 8.3.2. below shall apply. 9.3.1. When the conformity of a vehicle, component or ESA taken from the series is being verified, production shall be deemed to conform to the requirements of this Regulation in relation to broadband electromagnetic disturbances and narrowband electromagnetic disturbances if the levels measured do not exceed by more the 2 dB (25 per cent) the reference limits prescribed in paragraphs 6.2.2.1., 6.2.2.2., 6.3.2.1. and 6.3.2.2, 7.2.2.1. and 7.2.2.2. (as appropriate).	品質一致性不影響國內檢測基準	無

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
9.3.2. When the conformity of a vehicle, component or ESA taken from the series is being verified, production shall be deemed to conform to the requirements of this Regulation in relation to immunity to electromagnetic radiation if the vehicle ESA does not exhibit any degradation relating to the direct control of the vehicle which could be observed by the driver or other road user when the vehicle is in the state defined in Annex 6, paragraph 4., and is subjected to a field strength, expressed in Volts/m, up to 80 per cent of the reference limits prescribed in paragraph 6.4.2.1., and, if applicable, paragraph 7.7.2.1. for vehicles and paragraph 6.8.2.1. and, if applicable, paragraph 7.18.2.1. for ESAs above. 9.3.3. If the conformity of a component, or Separate Technical Unit (STU) taken from the series is being verified, production shall be deemed to conform to the requirements of this Regulation in relation to immunity to conducted disturbances and emission if the component or STU shows no degradation of performance of "immunity related functions" up to levels given in paragraph 6.9.1. and, if applicable, paragraph 7.19.1., and does	9.3.2. When the conformity of a vehicle, component or ESA taken from the series is being verified, production shall be deemed to conform to the requirements of this Regulation in relation to immunity to electromagnetic radiation if the vehicle ESA does not exhibit any degradation relating to the direct control of the vehicle which could be observed by the driver or other road user when the vehicle is in the state defined in Annex 6, para. 4, and is subjected to a field strength, expressed in Volts/m, up to 80 per cent of the reference limits prescribed in paragraph 6.4.2.1. and 7.7.2.1. above. 9.3.3. If the conformity of a component, or Separate Technical Unit (STU) taken from the series is being verified, production shall be deemed to conform to the requirements of this Regulation in relation to immunity to conducted disturbances and emission if the component or STU shows no degradation of performance of "immunity related functions" up to levels given in paragraph 6.8.1. and does not exceed the levels given in paragraph 6.9.1.		

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
not exceed the levels given in paragraph 6.7.1. and, if applicable, paragraph 7.17.1.			
10. Penalties for non-conformity of production 10.1. The approval granted in respect of a type of vehicle, component or separate technical unit pursuant to this Regulation may be withdrawn if the requirements laid down in paragraph 6. and, if applicable, paragraph 7. above are not complied with or if the selected vehicles fail to pass the tests provided for in paragraph 6. and, if applicable, paragraph 7. above."	10. Penalties for non-conformity of production 10.1. The approval granted in respect of a type of vehicle, component or separate technical unit pursuant to this Regulation may be withdrawn if the requirements laid down in paragraph 6 above are not complied with or if the selected vehicles fail to pass the tests provided for in paragraph 6 above.	品質一致性不影響國內檢測基準	無
Appendix 8 HV artificial network 【請參考頁末表格】		5.11 高壓模擬網路 高壓模擬網路，如圖七、圖八及圖九所示。	
Annex 1 Examples of approval marks Model A 【請參考頁末表格】 The above approval mark affixed to a vehicle or ESA shows that the vehicle type concerned has, with regard to electromagnetic compatibility, been approved in the Netherlands (E 4) pursuant to Regulation No. 10 under approval No. 05 2439. The approval number indicates that the approval was granted according to	Annex 1 Examples of approval marks Model A 【請參考頁末表格】 The above approval mark affixed to a vehicle or ESA shows that the vehicle type concerned has, with regard to electromagnetic compatibility, been approved in the Netherlands (E4) pursuant to Regulation No. 10 under approval No. 042439. The approval number indicates that the approval was granted according to	認證標誌範例不影響國內檢測基準	無

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
the requirements of Regulation No. 10 as amended by the 05 series of amendments. Model B 【請參考頁末表格】 The above approval mark affixed to a vehicle or ESA shows that the vehicle type concerned has, with regard to electromagnetic compatibility, been approved in the Netherlands (E 4) pursuant to Regulations Nos. 10 and 33.*The approval numbers indicate that, at the date when the respective approvals were given, Regulation No. 10 included the 05 series of amendments and Regulation No. 33 was still in its original form.	the requirements of Regulation No. 10 as amended by the 04 series of amendments. Model B 【請參考頁末表格】 The above approval mark affixed to a vehicle or ESA shows that the vehicle type concerned has, with regard to electromagnetic compatibility, been approved in the Netherlands (E4) pursuant to Regulations Nos. 10 and 33*. The approval numbers indicate that, at the date when the respective approvals were given, Regulation No. 10 included the 04 series of amendments and Regulation No. 33 was still in its original form.		
Annex 4 Method of measurement of radiated broadband electromagnetic emissions from vehicles 1. General 1.1. The test method described in this Annex shall only be applied to vehicles. This method concerns both configurations of the vehicle: (a) Other than "REESS charging mode coupled to the power grid". (b) "REESS charging mode coupled to the power grid"	Annex 4 Method of measurement of radiated broadband electromagnetic emissions from vehicles 1. General 1.1. The test method described in this annex shall only be applied to vehicles. This method concerns both configurations of the vehicle: (a) Other than "RESS in charging mode coupled to the power grid". (b) "RESS in charging mode coupled to the power grid".	6. 車輛所產生之寬頻電磁放射輻射試驗方法 6.1 一般規定 6.1.1 本章節敘述之試驗方法僅適用於車輛。此方法應考量車輛的兩個配置模式： (a) 非「REESS 充電模式連結電網 (Power grid)」。 (b) 「REESS 充電模式連結電網 (Power grid)」。 6.1.2 試驗方法：此試驗主要係測量由車上電子或電機系統所產生之寬頻放射(如點火系統或電動馬	6. 車輛所產生之寬頻電磁輻射測試方法 6.1 一般規定 6.1.1 本章節敘述之測試方法僅適用於車輛。此方法應考量車輛的兩個配置模式： (a) 非RESS 充電模式下連結電源介面。 (b) RESS 充電模式下連結電源介面。 6.1.2 測試方法：此測試主要係測量由車上電子或電機系統所產生之寬頻擾動(如點火系統或電動馬達)。 若在此章節未有所指定時，則應依據 CISPR 12(Amendment 1, fifth

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
1.2. Test method This test is intended to measure the broadband emissions generated by electrical or electronic systems fitted to the vehicle (e.g. ignition system or electric motors). If not otherwise stated in this Annex the test shall be performed according to CISPR 12	1.2. Test method This test is intended to measure the broadband emissions generated by electrical or electronic systems fitted to the vehicle (e.g. ignition system or electric motors). If not otherwise stated in this annex the test shall be performed according to CISPR 12 (fifth edition 2001 and Amd1: 2005).	達)。 若在此章節未有所指定時，則應依據 CISPR 12執行。	<u>edition 2005</u>)執行。
2. Vehicle state during tests 2.1. Vehicle in configuration other than "REESS charging mode coupled to the power grid". 2.1.1. Engine The engine shall be in operation according to CISPR 12. 2.1.2. Other vehicle systems All equipment capable of generating broadband emissions which can be switched on permanently by the driver or passenger should be in operation in maximum load, e.g. wiper motors or fans. The horn and electric window motors are excluded because they are not used continuously.	2. Vehicle state during tests 2.1. Vehicle in configuration other than "RESS in charging mode coupled to the power grid." 2.1.1. Engine The engine shall be in operation according to CISPR 12 (fifth edition 2001 and Amd1: 2005) 2.1.2. Other vehicle systems All equipment capable of generating broadband emissions which can be switched on permanently by the driver or passenger should be in operation in maximum load, e.g. wiper motors or fans. The horn and electric window motors are excluded because they are not used continuously.	6.2 車輛於試驗期間的狀態。 6.2.1 車輛處於非「<u>REESS</u>充電模式連結<u>電網 (Power grid)</u>」之配置。 6.2.1.1 引擎：引擎應根據CISPR 12操作。 6.2.1.2 其他車輛系統：所有能被駕駛或乘客啟動並產生<u>寬頻放射</u>之設備應於最大負載操作，例如雨刷馬達或風扇。不包含喇叭及電動窗戶馬達，因為其並無連續使用。	6.2 車輛於試驗期間的狀態。 6.2.1 車輛處於非<u>RESS</u>充電模式<u>下</u>連結<u>電源介面</u>之配置。 6.2.1.1 引擎：引擎應根據CISPR 12(<u>Amendment 1, fifth edition 2005</u>)<u>條款6.3.2</u>操作。 6.2.1.2 其他車輛系統：所有能被駕駛或乘客啟動並產生<u>寬頻擾動</u>之設備應於最大負載操作，例如雨刷馬達或風扇。不包含喇叭及電動窗戶馬達，因為其並無連續使用。
2.2. Vehicle in configuration "REESS charging mode coupled to the power grid". The state of charge (SOC) of the traction battery shall be kept between 20 per cent and 80 per cent of the maximum SOC	2.2. Vehicle in configuration "RESS in charging mode coupled to the power grid". This vehicle shall be in battery charging mode at rated power until the AC or DC current reached at least 80 per cent of its	6.2.2 車輛處於「<u>REESS</u>充電模式連結<u>電網 (Power grid)</u>」之組態 <u>主電池 (Traction battery) 之電量 (SOC)，於量測時整個頻率範圍內應保持在最大電量之百分之二〇</u>	6.2.2 車輛處於"<u>RESS</u>連接到<u>電網充電模式</u>"下之組態 <u>車輛應於電池充電模式下，以額定功率進行充電，直到交流或直流電流達到至少為其初始值的百分之八〇。</u>

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
during the whole frequency range measurement (this may lead to split the measurement into different sub-bands with the need to discharge the vehicle's traction battery before starting the next sub-bands). If the current consumption can be adjusted, then the current shall be set to at least 80 per cent of its nominal value. The test set-up for the connection of the vehicle in configuration "REESS charging mode coupled to the power grid" is shown in Figures 3a to 3h (depending of AC or DC power charging mode, location of charging plug and charging with or without communication) of Appendix 1 to this Annex. 【請參考頁末表格】 【Figures 3a to 3b對應基準圖一〇之一，其餘以此類推】	initial value. The test set-up for the connection of the vehicle in configuration "RESS in charging mode coupled to the power grid" is shown in figure 3 of Appendix 1 to this annex. 【請參考頁末表格】	<u>至百分之八〇之間(其可能導致應分別量測不同的副頻(sub-bands)與開始下一個副頻之前需要對車輛主電池進行放電)。若電流消耗可被調整，則電流應至少為標稱值之百分之八〇。</u> <u>該試驗裝置用於車輛處於「REESS 充電模式連結電網 (Power grid)」之組態，如圖一〇之一、圖一〇之二、圖一〇之三及圖一〇之四所示(取決於交流或直流電源之充電模式、充電插頭位置及具有通訊設施之充電或不具有通訊設施之充電)。</u> (請參考頁末表格)	其圖示如圖七所示。 (請參考頁末表格)
2.3. Charging station / Power mains The charging station may be placed either in the test location or outside the test location. Note 1: If the communication between the vehicle and the charging station could be simulated, the charging station may be replaced by the supply from power mains. In both case, duplicated power mains and		<u>6.2.3 充電站/電源 (Power mains)</u> <u>充電站可設於試驗區內或試驗區外。</u> <u>註一：若能模擬車輛和充電站間之通訊，則可以電源替代充電站。</u> <u>在此兩種情況下，重複的電源和通訊線路插座，應置放於試驗區域並符合下列條件：</u> <u>(a) 應放置在接地平面 (Ground</u>	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
communication lines socket(s) shall be placed in the test location with the following conditions: (a) It shall be placed on the ground plane. (b) The length of the harness between the power mains/communication lines socket and the AN(s)/IS(s) shall be kept as short as possible. (c) The harness between the power mains/communication lines socket and the AN(s)/IS(s) shall be placed as close as possible to the ground plane. Note 2: The power mains and communication lines socket(s) should be filtered. If the charging station is placed inside the test location then the harness between charging station and the power mains / communication lines socket shall be placed with the following conditions: (a) The harness on charging station side shall hang vertically down to the ground plane. (b) The extraneous length shall be placed as close as possible to the ground plane and "Z-folded" if necessary. Note 3: the charging station should be placed outside the beam width of the receiving antenna.		<u>plane</u>) 。 <u>(b) 電源/通訊線路插座和模擬網路(AN)/阻抗穩定器(IS)之間的導線(Harness)長度應儘可能的縮短。</u> <u>(c) 電源/通訊線路插座和模擬網路(AN)/阻抗穩定器(IS)之間的導線應儘可能放置靠近接地平面。</u> <u>註二：電源和通訊線路插座應經由濾波器濾波。</u> <u>如充電站設置於試驗區域內，則充電站和電源/通訊線路插座之間的導線應於下列條件下置放：</u> <u>(a) 充電站側面之導線應向下垂掛至接地平面。</u> <u>(b) 多餘長度應儘可能放置靠近接地平面，及必要之“Z型折疊”。</u> <u>註三：充電站應該放置在接收天線的波束寬度(Beam width)以外。</u>	
2.4. Artificial networks		<u>6.2.4 模擬網路(Artificial network</u> ,	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
The AN(s) shall be mounted directly on the ground plane. The cases of the AN(s) shall be bonded to the ground plane. The measuring port of each AN shall be terminated with a 50 ohm load. The AN shall be placed as defined in Figures 3a to 3h. 【Figures 3a to 3b對應基準圖一0之一，其餘以此類推】		<u>AN)</u> <u>模擬網路應直接安裝在接地平面上。模擬網路之外殼應與接地平面接合。</u> <u>每一個模擬網路之量測接頭(Port)應給予五0歐姆負載。</u> <u>模擬網路之置放，應依圖一0之一、圖一0之二、圖一0之三及圖一0之四之定義。</u>	
2.5.Impedance Stabilization Communication lines shall be applied to the vehicle through IS(s). The impedance stabilization (IS) to be connected in the network and communication cables is defined in CISPR 22, paragraph 9.6.2. The IS(s) shall be mounted directly on the ground plane. The case of the IS(s) shall be bonded to the ground plane. The measuring port of each IS shall be terminated with a 50 ohm load. The IS shall be placed as defined in Figures 3e to 3h.		<u>6.2.5 阻抗穩定器 (Impedance Stabilization, IS)</u> <u>通訊線路應經由阻抗穩定器連接於車輛。</u> <u>連結至網路及通訊電纜之阻抗穩定器，應依CISPR 22第9.6.2條之定義。</u> <u>阻抗穩定器應直接安裝於接地平面。阻抗穩定器之外殼應與接地平面接合。</u> <u>每一個阻抗穩定器之量測接頭應給予五0歐姆負載。</u> <u>應依圖一0之三及圖一0之四的定義置放阻抗穩定器。</u>	
2.6. Power charging / communication cable The power charging / communication cable shall be placed in a straight line between the AN(s) / IS(s) and the vehicle charging plug. The projected cable length shall be		<u>6.2.6 電源充電/通訊電纜</u> <u>電源充電/通訊電纜應以直線方式放置在模擬網路/阻抗穩定器和車輛充電插頭之間。電纜長度應為0·八公尺(正0·二/負0公尺)。</u>	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
0.8 m (+0.2/-0 m). If the length of the cable is longer than 1 m, the extraneous length shall be "Z-folded" in less than 0.5 m width. The charging / communication cable at vehicle side shall hang vertically at a distance of 100 mm (+200/-0 mm) from the vehicle body. The whole cable shall be placed on a non-conductive, low relative permittivity (dielectric-constant) material ($\epsilon_r \leq 1.4$), at 100 mm (+/- 25 mm) above the ground plane.		若電纜長度大於一公尺，則其多餘長度應以“Z型折疊”且其寬度應小於0.5公尺。 在車輛側面的充電/通訊電纜應垂直地懸掛距離車體100公釐（正200/負0公釐）。 所有電纜應放置在非導電性且具有相對低的介電常數(Dielectric-constant)的材料(ϵ_r 小於等於一.四)上，且在接地平面上方100公釐（正/負二五公釐）處。	
3. Measuring location 3.1. As an alternative to the requirements of CISPR 12 for vehicles of category L, the test surface may be any location that fulfils the conditions shown in the Figure of the appendix to this annex. In this case the measuring equipment shall lie outside the part shown in Figure 1 of the appendix to this annex. 【請參考頁末表格】	3. Measuring location 3.1. As an alternative to the requirements of CISPR 12 (fifth edition 2001 and Amd1: 2005) for vehicles of category L the test surface may be any location that fulfils the conditions shown in the figure 1 in the appendix to this annex. In this case the measuring equipment must lie outside the part shown in the figure 1 of Appendix 1 to this annex. 【請參考頁末表格】	6.3 量測位置 6.3.1 L類車輛可選用CISPR 12，試驗場地應符合圖一一所示之情況。在此例試驗設備應處在圖一一及圖一二指示的試驗場地區域之外。 (請參考頁末表格)	6.3 量測位置 6.3.1 L類車輛可選用CISPR 12(Fifth edition 2001 and Amd1:2005)，試驗場地應符合圖八所示之情況。在此例測試設備必須處在圖八及圖九指示的試驗場地區域之外。 (請參考頁末表格)
4. Test requirements 4.1. The limits apply throughout the frequency range 30 to 1,000 MHz for measurements performed in a semi anechoic chamber or an outdoor test site. 4.2. Measurements can be performed with	4. Test requirements 4.1. The limits apply throughout the frequency range 30 to 1,000 MHz for measurements performed in a semi anechoic chamber or an outdoor test site. 4.2. Measurements can be performed with	6.4 試驗規範 6.4.1 在半回聲室或外部試驗場地，應對30至1000兆赫整個頻率範圍限制進行量測。 6.4.2 量測應使用準峰值或峰值檢波器。4.2及4.5所列限制值為以準峰	6.4 測試規範 6.4.1 在半回聲室或外部試驗場地，應對30至1000 MHz整個頻率範圍限制進行量測。 6.4.2 量測應使用準峰值或峰值檢波器。4.2及4.5所列限制值為以準峰值

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
either quasi-peak or peak detectors. The limits given in paragraphs 6.2. and 6.5. of this Regulation are for quasi-peak detectors. If peak detectors are used a correction factor of 20 dB as defined in CISPR 12 shall be applied.	either quasi-peak or peak detectors. The limits given in paragraphs 6.2. and 6.5. of this Regulation are for quasi-peak detectors. If peak detectors are used a correction factor of 20 dB as defined in CISPR 12 (fifth edition 2001 and Amd1: 2005) shall be applied.	值檢波器量測。而若峰值檢波器依據CISPR 12採用了 <u>二0</u> 分貝之校正係數，也應得以適用。	檢波器量測。而若峰值檢波器依據CISPR 12(<u>Fifth edition 2001 and Amd1:2005</u>)採用了 <u>20</u> 分貝之校正係數，也應得以適用。
4.3. The measurements shall be performed with a spectrum analyser or a scanning receiver. The parameters to be used are defined in Table 1 and Table 2. 【請參考頁末表格】		6.4.3 應使用頻譜分析儀或掃描接收機執行試驗。所使用參數應參照表一0和表一中所定義。 (請參考頁末表格)	
4.4. Measurements The Technical Service shall perform the test at the intervals specified in the CISPR 12 standard throughout the frequency range 30 to 1,000 MHz. Alternatively, if the manufacturer provides measurement data for the whole frequency band from a test laboratory accredited to the applicable parts of ISO 17025 and recognized by the Type Approval Authority, the Technical Service may divide the frequency range in 14 frequency bands 30-34, 34-45, 45-60, 60-80,80-100, 100-130, 130-170, 170-225, 225-300, 300-400, 400-525, 525-700, 700-850 and 850-1,000 MHz and perform tests at the 14 frequencies giving the highest emission levels within each band to confirm that the	4.3. Measurements The Technical Service shall perform the test at the intervals specified in the CISPR 12 (second edition 2005 and Corrigendum: 2006) standard throughout the frequency range 30 to 1,000 MHz. Alternatively, if the manufacturer provides measurement data for the whole frequency band from a test laboratory accredited to the applicable parts of ISO 17025(fifth edition 2001 and Amd1: 2005) and recognized by the Approval Authority, the Technical Service may divide the frequency range in 14 frequency bands 30-34, 34-45, 45-60, 60-80, 80-100, 100-130, 130-170, 170-225, 225-300, 300-400, 400-525, 525- 700, 700-850, 850-1,000 MHz and perform tests at the 14 frequencies giving the	6.4.4 量測：檢測機構應根據CISPR 12標準對 <u>三0</u> 至 <u>一000兆赫</u> 整個頻率範圍進行量測。 或者， <u>申請者</u> 提供由符合ISO 17025型式認證及審驗機構認可之實驗室試驗的全頻域量試驗資料，檢測機構可在下列 <u>一四</u> 個頻帶中選取各該頻帶內最高電磁輻射點共 <u>一四</u> 個頻率點進行試驗： <u>三0至三四、三四至四五、四五至六0、六0至八0、八0至一00、一00至一二五、一二五至一五0、一五0至二二五、二二五至三00、三00至四00、四00至五二五、五二五至七00、七00至八五0及八五0至一000兆赫</u> ，可對每個頻帶取一個頻率點進行試驗以證明其符合規定的限制值。	6.4.3 量測：檢測機構應根據CISPR 12(<u>Fifth edition 2001 and Amd1:2005</u>)標準對 <u>30</u> 至 <u>1000MHz</u> 整個頻率範圍進行量測。 或者， <u>製造廠</u> 提供由符合ISO 17025(<u>Second edition 2005 and Corrigendum:2006</u>)認證及審驗機構認可之實驗室 <u>測試</u> 的全頻域量 <u>測</u> 試資料，檢測機構可在下列 <u>14</u> 個頻帶中選取各該頻帶內最高電磁輻射點共 <u>14</u> 個頻率點進行試驗： <u>30-34，34-45，45-60，60-80，80-100，100-130，130-170，170-225，225-300，300-400，400-525，525-700，700-850，850-1000 MHz</u> ，可對每個頻帶取一個頻率點進行試驗以證明其符合規定的限制值。 試驗中若量測值超過限制值時，應確

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
vehicle meets the requirements of this annex. In the event that the limit is exceeded during the test, investigations shall be made to ensure that this is due to the vehicle and not to background radiation.	highest emission levels within each band to confirm that the vehicle meets the requirements of this annex. In the event that the limit is exceeded during the test, investigations shall be made to ensure that this is due to the vehicle and not to background radiation.	試驗中若量測值超過限制值時，應確認是由車輛所造成而非背景雜訊所造成。	認是由車輛所造成而非背景雜訊所造成。
4.5. Readings The maximum of the readings relative to the limit (horizontal and vertical polarization and antenna location on the left and right-hand sides of the vehicle) in each of the 14 frequency bands shall be taken as the characteristic reading at the frequency at which the measurements were made.	4.4. Readings The maximum of the readings relative to the limit (horizontal and vertical polarization and antenna location on the left and right-hand sides of the vehicle) in each of the 14 frequency bands shall be taken as the characteristic reading at the frequency at which the measurements were made.	6.4.5 數據讀取：相對於<u>一四</u>頻帶的每一量測點限制值之數據讀取最大值(水平及垂直極化及車輛之左右手側)應視為該頻率的特徵量測值。	6.4.4 數據讀取：相對於<u>14</u>頻帶的每一量測點限制值之數據讀取最大值(水平及垂直極化及車輛之左右手側)應視為該頻率的特徵量測值。
Annex 5 Method of measurement of radiated narrowband electromagnetic emissions from vehicles 1. General 1.1. The test method described in this annex shall only be applied to vehicles. This method concerns only the configuration of the vehicle other than "REESS charging mode coupled to the power grid". 1.2. Test method This test is intended to measure the narrowband electromagnetic emissions that may emanate from microprocessor-based systems or other narrowband source. If not otherwise stated	Annex 5 Method of measurement of radiated narrowband electromagnetic emissions from vehicles 1. General 1.1. The test method described in this annex shall only be applied to vehicles. This method concerns only the configuration of the vehicle other than "RESS in charging mode coupled to the power grid". 1.2. Test method This test is intended to measure the narrowband electromagnetic emissions such as might emanate from microprocessor-based systems or other narrowband source. If not otherwise stated	7. 車輛所產生之窄頻電磁<u>放射</u>幅射試驗方法 7.1 一般規定 7.1.1 本章節所敘述之<u>試驗</u>方法僅適用於非「<u>REESS</u>充電模式下連結<u>電網 (Power grid)</u>」配置之車輛。 7.1.2 <u>試驗</u>方法：本試驗適用於量測由微處理器系統或其他窄頻放射源所產生的窄頻電磁<u>放射</u>幅射。若在此章節未有所指定時，則應依據 CISPR 12或CISPR 25執行。	7. 車輛所產生之窄頻電磁<u>擾動</u>測試方法 7.1 一般規定 7.1.1 本章節所敘述之<u>測試</u>方法僅適用於非<u>RESS</u>充電模式下連結<u>電源介面</u>配置之車輛。 7.1.2 <u>測試</u>方法：本試驗適用於量測由微處理器系統或其他窄頻放射源所產生的窄頻電磁<u>擾動</u>。若在此章節未有所指定時，則應依據 CISPR 12(<u>Fifth edition 2001 and Amd1:2005</u>) 或 CISPR 25(<u>及</u>

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
in this annex the test shall be performed according to CISPR 12 or CISPR 25." 1.3. As an initial step the levels of emissions in the Frequency Modulation (FM) band (76 to 108 MHz) shall be measured at the vehicle broadcast radio antenna with an average detector. If the level specified in paragraph 6.3.2.4. of this Regulation is not exceeded, then the vehicle shall be deemed to comply with the requirements of this annex in respect of that frequency band and the full test shall not be carried out.	in this annex the test shall be performed according to CISPR 12 (fifth edition 2001 and Amd1: 2005) or to CISPR 25 (and Corrigendum: 2004). 1.3. As an initial step the levels of emissions in the Frequency Modulation (FM) band (76 to 108 MHz) shall be measured at the vehicle broadcast radio antenna with an average detector. If the level specified in paragraph 6.3.2.4. of this Regulation is not exceeded, then the vehicle shall be deemed to comply with the requirements of this annex in respect of that frequency band and the full test shall not be carried out.	7.1.3 首先，以均值檢波器量測車輛收音機天線FM頻帶(七六至一〇八兆赫)內的放射位準。若沒有超過4.4.2.4標準，則車輛可視為符合電磁放射幅射限制值，不必再進行完整試驗。	<u>Corrigendum 2004</u>)執行。 7.1.3 首先，以均值檢波器量測車輛收音機天線FM頻帶(76至108MHz)內的放射位準。若沒有超過4.3.2.4標準，則車輛可視為符合電磁擾動限制值，不必再進行完整試驗。
3. Test requirements 3.1. The limits apply throughout the frequency range 30 to 1,000 MHz for measurements performed in a semi anechoic chamber or an outdoor test site. 3.2. Measurements shall be performed with an average detector. 3.3. The measurements shall be performed with a spectrum analyser or a scanning receiver. The parameters to be used are defined in Table 1 and Table 2. 【請參考頁末表格】	3. Test requirements 3.1. The limits apply throughout the frequency range 30 to 1,000 MHz for measurements performed in a semi anechoic chamber or an outdoor test site. 3.2. Measurements shall be performed with an average detector.	7.3 測試規範 7.3.1 在半電波暗室(Semi anechoic chamber)或外部試驗場地，應對三〇至一〇〇〇兆赫整個頻率範圍限制進行量測。 7.3.2 量測應使用均值檢波器。 7.3.3應使用頻譜分析儀或掃描接收機執行量測。 所使用參數應參照表一〇和表一一中所定義。 (請參考頁末表格)	7.3 測試規範 7.3.1 在半回聲室或外部試驗場地，應對30至1000 MHz整個頻率範圍限制進行量測。 7.3.2 量測應使用均值檢波器。
3.4. Measurements The Technical Service shall perform the test at the intervals specified in the CISPR	3.3. Measurements The Technical Service shall perform the test at the intervals specified in the CISPR	7.3.4 量測：檢測機構應根據CISPR 12標準對三〇至一〇〇〇兆赫整個頻率範圍進行量測。	7.3.3 量測：檢測機構應根據CISPR 12(Fifth edition 2001 and Amd1:2005)標準對30至1000MHz

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
12 standard throughout the frequency range 30 to 1,000 MHz. Alternatively, if the manufacturer provides measurement data for the whole frequency band from a test laboratory accredited to the applicable parts of ISO 17025 and recognized by the Type Approval Authority, the Technical Service may divide the frequency range in 14 frequency bands 30-34, 34-45, 45-60, 60-80, 80-100, 100-130, 130-170, 170-225, 225-300, 300-400, 400-525, 525-700, 700-850 and 850-1,000 MHz and perform tests at the 14 frequencies giving the highest emission levels within each band to confirm that the vehicle meets the requirements of this Annex. In the event that the limit is exceeded during the test, investigations shall be made to ensure that this is due to the vehicle and not to background radiation including broadband radiation from any ESA.	12 (fifth edition 2001 and Amd1: 2005) standard throughout the frequency range 30 to 1,000 MHz. Alternatively, if the manufacturer provides measurement data for the whole frequency band from a test laboratory accredited to the applicable parts of ISO 17025 (second edition 2005 and Corrigendum: 2006) and recognized by the Approval Authority, the Technical Service may divide the frequency range in 14 frequency bands 30-34, 34-45, 45-60, 60-80, 80-100, 100-130, 130-170, 170-225, 225-300, 300-400, 400-525, 525- - 52 - 700, 700-850, 850-1,000 MHz and perform tests at the 14 frequencies giving the highest emission levels within each band to confirm that the vehicle meets the requirements of this annex. In the event that the limit is exceeded during the test, investigations shall be made to ensure that this is due to the vehicle and not to background radiation including broadband radiation from any ESA.	或者，<u>申請者</u>提供由符合ISO 17025 認證及審驗機構認可之實驗室<u>試驗</u>的全頻域量<u>試驗</u>資料，檢測機構可在下列<u>一四</u>個頻帶中選取各該頻帶內最高電磁輻射點共<u>一四</u>個頻率點進行試驗：<u>三〇至三四、三四至四五、四五至六〇、六〇至八〇、八〇至一〇〇、一〇〇至一三〇、一三〇至一七〇、一七〇至二二五、二二五至三〇〇、三〇〇至四〇〇、四〇〇至五二五、五二五至七〇〇、七〇〇至八五〇及八五〇至一〇〇〇 兆赫</u>。 試驗中若量測值超過限制值時，應確認是由車輛所造成而非背景雜訊所造成(包含來自任何ESA之寬頻輻射)。	整個頻率範圍進行量測。 或者，製造廠提供由符合ISO 17025(<u>Second edition 2005 and corrigendum:2006</u>)認證及審驗機構認可之實驗室<u>測試</u>的全頻域量<u>測試</u>資料，檢測機構可在下列<u>14</u>個頻帶中選取各該頻帶內最高電磁輻射點共<u>14</u>個頻率點進行試驗：<u>30-34，34-45，45-60，60-80，80-100，100-130，130-170，170-225，225-300，300-400，400-525，525-700，700-850，850-1000 MHz</u>。 試驗中若量測值超過限制值時，應確認是由車輛所造成而非背景雜訊所造成(包含來自任何ESA之寬頻輻射)。
3.5. Readings The maximum of the readings relative to the limit (horizontal and vertical polarization and antenna location on the left and right-hand sides of the vehicle) in	3.4. Readings The maximum of the readings relative to the limit (horizontal and vertical polarization and antenna location on the left and right-hand sides of the vehicle) in	7.3.5 數據讀取：相對於<u>一四</u>頻帶的每一量測點限制值之數據讀取最大值(水平及垂直極化及車輛之左右手側) 應視為該頻率的特徵量測	7.3.4 數據讀取：相對於<u>14</u>頻帶的每一量測點限制值之數據讀取最大值(水平及垂直極化及車輛之左右手側) 應視為該頻率的特徵量測值。

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
each of the 14 frequency bands shall be taken as the characteristic reading at the frequency at which the measurements were made.	each of the 14 frequency bands shall be taken as the characteristic reading at the frequency at which the measurements were made.	值。	
Annex 7 Method of measurement of radiated broadband electromagnetic emissions from electrical/electronic sub-assemblies (ESAs) 1. General 1.1. The test method described in this annex may be applied to ESAs, which may be subsequently fitted to vehicles, which comply with Annex 4. This method concerns both kinds of ESA: (a) Other ESAs than involved in "REESS charging mode coupled to the power grid". (b) ESAs involved in "REESS charging mode coupled to the power grid". 1.2. Test method This test is intended to measure broadband electromagnetic emissions from ESAs (e.g. ignition systems, electric motor, onboard battery charging unit, etc.) If not otherwise stated in this annex the test shall be performed according CISPR 25.	Annex 7 Method of measurement of radiated broadband electromagnetic emissions from electrical/electronic sub-assemblies 1. General 1.1. The test method described in this annex may be applied to ESAs, which may be subsequently fitted to vehicles, which comply with Annex 4. 1.2. Test method This test is intended to measure broadband electromagnetic emissions from ESAs (e.g. ignition systems, electric motor, etc.). If not otherwise stated in this annex the test shall be performed according CISPR 25 (second edition 2002 and Corrigendum 2004).	8. <u>各 ESA 所產生之寬頻電磁放射輻射試驗方法</u> 8.1 一般規定 8.1.1 <u>試驗方法</u>是遵照 6.應用在<u>所有 ESA</u>。 <u>此方法涉及到兩種 ESA：</u> (a)未於「REESS 充電模式連結至電網 (Power grid)」之所有 ESA。 (b) 於「REESS 充電模式連結至電網 (Power grid)」之所有 ESA。 8.1.2 <u>試驗方法</u>：此<u>試驗</u>目的係測量<u>所有 ESA</u>所發出之寬頻電磁放射輻射(如點火系統、電動馬達及車載電池充電組件，等)。 若在此章節未有所指定，則應依據 CISPR 25執行。	8. <u>電機/電子裝置(ESA)</u>所產生之寬頻電磁擾動測試方法 8.1 一般規定 8.1.1 <u>檢測法</u>是遵照 6.應用在 <u>ESA</u>。 8.1.2 <u>測試</u>方法：此<u>測試</u>目的係測量 <u>ESA</u> 所發出之寬頻電磁(如點火系統，電動馬達等)。 若在此章節未有所指定時，則應依據 CISPR 25(<u>Second edition 2002 and corrigendum 2004</u>)執行。

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
2. ESA state during tests 2.1. The ESA under test shall be in normal operation mode, preferably in maximum load. ESAs involved in "REESS charging mode coupled to the power grid" shall be in charging mode. The state of charge (SOC) of the traction battery shall be kept between 20 per cent and 80 per cent of the maximum SOC during the whole frequency range measurement (this may lead to split the measurement in different sub-bands with the need to discharge the vehicle's traction battery before starting the next sub-bands) If the test is not performed with a REESS the ESA should be tested at rated current. If the current consumption can be adjusted, then the current shall be set to at least 80 per cent of its nominal value.	2. ESA state during tests 2.1. The ESA under test shall be in normal operation mode, preferably in maximum load.	8.2 ESA 於試驗期間的狀態 8.2.1 ESA在<u>試驗</u>下應於最大負載<u>仍</u>能正常操作。 <u>於「REESS充電模式連結至電網（Power grid）」之所有ESA應在充電模式下。</u> <u>主電池（Traction battery）之電量（SOC），於量測時整個頻率範圍內應保持在最大電量之百分之二〇至百分之八〇之間（其可能導致應分別量測不同的副頻(sub-bands)與開始下一個副頻之前需要對車輛主電池進行放電）。</u> <u>若係未與REESS一起執行試驗之ESA，則應在額定電流進行試驗。如電流消耗可被調整，則電流應至少為標稱值之百分之八〇。</u>	8.2 ESA 於試驗期間的狀態 8.2.1 ESA 在<u>測試</u>下<u>最好</u>於最大負載<u>時</u>能正常操作。
3. Test arrangements 3.1. For ESA other than involved in "REESS charging mode coupled to the power grid" the test shall be performed according to the ALSE method <u>described in</u> clause 6.4. of CISPR 25. 3.2. For ESAs in configuration "REESS charging mode coupled to the power grid" the test arrangement shall be according to Figure 2 of the appendix to Annex 7.	3. Test arrangements 3.1. The test shall be performed according to CISPR 25 (second edition 2002 and Corrigendum 2004) clause 6.4. - ALSE method.	8.3 <u>試驗</u>準備 8.3.1 <u>對未於「REESS充電模式連結至電網（Power grid）」之ESA，其試驗應依據CISPR 25 6.4-ALSE條款方法執行。</u> 8.3.2 <u>對於在「REESS充電模式連結至電網（Power grid）」配置的所有ESA，試驗準備如圖一三所示。</u>	8.3 <u>測試</u>準備 8.3.1 <u>測試</u>應依據 CISPR 25(Second edition 2002 and corrigendum 2004)6.4-ALSE 條款方法執行。

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
【請參考頁末表格】 3.2.1. The shielding configuration shall be according to the vehicle series configuration. Generally all shielded HV parts shall be properly connected with low impedance to ground (e. g. AN, cables, connectors etc.). ESAs and loads shall be connected to ground. The external HV power supply shall be connected via feed-through-filtering.		(請參考頁末表格) 8.3.2.1 屏蔽的配置應依據車輛系列的配置。通常所有被屏蔽的高壓部件應被適當的以低阻抗連接到地面（如模擬網路、電纜及連接器等）。所有ESA與負載應連接到地面。外部高壓電源應連接饋通濾波器（Feed-through-filtering）。	
3.2.2. Unless otherwise specified the length of the LV harness and the HV harness parallel to the front edge of the ground plane shall be 1,500 mm (+/- 75 mm). The total length of the test harness including the connector shall be 1,700 mm (+300/-0 mm). The distance between the LV harness and the HV harness shall be 100 mm (+100/-0 mm).		8.3.2.2 除非另有規定，平行於接地平面前緣之低壓導線和高壓導線之長度應為一五〇〇公釐（正/負七五公釐）。試驗導線總長度，包括連接器，應為一七〇〇公釐（正三〇〇/負〇公釐）。低壓導線和高壓導線之間的距離應為一〇〇公釐（正一〇〇/負〇公釐）。	
3.2.3. All of the harnesses shall be placed on a non-conductive, low relative permittivity material ($\epsilon_r \leq 1.4$), at 50 mm (+/- 5 mm) above the ground plane.		8.3.2.3 所有導線應放置於非導電性且具有相對低的介電常數(ϵ_r 小於等於一·四)的材料上，且在接地平面上方五〇公釐（正/負五公釐）處。	
3.2.4. Shielded supply lines for HV+ and HV- line and three phase lines may be coaxial cables or in a common shield depending on the used plug system. The original HV-harness from the vehicle may		8.3.2.4 高壓正線和高壓負線之屏蔽電源線（Shielded supply line）及三相線可能是同軸電纜或於公共屏蔽內（取決於所使用的插頭系統）。可選擇使用車輛原有之高壓負導	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
be used optionally.		<u>線。</u>	
3.2.5. Unless otherwise specified, the ESA case shall be connected to the ground plane either directly or via defined impedance.		<u>8.3.2.5 除非另有規定，ESA之外殼應直接或是經由定義阻抗連接到接地平面。</u>	
3.2.6. For onboard chargers, the AC/DC power lines shall be placed the furthest from the antenna (behind LV and HV harness). The distance between the AC/DC power lines and the closest harness (LV or HV) shall be 100 mm (+100/-0 mm).		<u>8.3.2.6 對於車載充電器，交流/直流電源線應放置在離天線最遠處（低壓和高壓導線之後方）。交流/直流電源線和最接近的導線（低壓或高壓）之間的距離應為一〇〇公釐（正一〇〇公釐/負〇公釐）。</u>	
3.3. Alternative measuring location As an alternative to an absorber lined shielded enclosure (ALSE) an open area test site (OATS), which complies with the requirements of CISPR 16-1-4 may be used (see appendix to this annex). 【請參考頁末表格】	3.2. Alternative measuring location As an alternative to an absorber lined shielded enclosure (ALSE) an open area test site (OATS), which complies with the requirements of CISPR 16-1-4 (third edition 2010) may be used (see appendix of this annex). 【請參考頁末表格】	<u>8.3.3 可選擇試驗環境：可使用符合 CISPR 16-1-4之內襯吸波材料屏蔽圍體(ALSE)與開放式試驗場地(OATS)，如圖一四。</u> (請參考頁末表格)	<u>8.3.2 可選擇測試環境：可使用符合 CISPR 16-1-4(Third edition 2010)之內襯吸波材料屏蔽圍體(ALSE)與開放式測試場地(OATS)，如圖一〇。</u> (請參考頁末表格)
3.4. Ambient To ensure that there is no extraneous noise or signal of a magnitude sufficient to affect materially the measurement, measurements shall be taken before or after the main test. In this measurement, the extraneous noise or signal shall be at least 6 dB below the limits of interference given in paragraph 6.5.2.1. of this Regulation, except for intentional narrowband ambient	3.3. Ambient To ensure that there is no extraneous noise or signal of a magnitude sufficient to affect materially the measurement, measurements shall be taken before or after the main test. In this measurement, the extraneous noise or signal shall be at least 6 dB below the limits of interference given in paragraph 6.5.2.1. of this Regulation, except for intentional narrowband ambient transmissions.	<u>8.3.4 環境：為確保無其他外來雜訊或充分影響設備材料之訊號，在主試驗前設備應被移走。</u> 除了意圖的窄頻環境放射外，在此試驗中，外來雜訊或訊號應至少低於4.6.2.1所規定的干擾限制值六dB。	<u>8.3.3 環境：為確保無其他外來雜訊或充分影響設備材料之訊號，在主測試前設備應被移走。</u> 除了意圖的窄頻環境放射外，在此測試中，外來雜訊或訊號應至少為4.5.2.1所規定的6dB。

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
transmissions.			
4.2. Measurements can be performed with either quasi-peak or peak detectors. The limits given in paragraphs 6.2. and 6.5. of this Regulation are for quasi-peak detectors. If peak detectors are used a correction factor of 20 dB as defined in CISPR 12 shall be applied.	4.2. Measurements can be performed with either quasi-peak or peak detectors. The limits given in paragraphs 6.2. and 6.5. of this Regulation are for quasi-peak detectors. If peak detectors are used a correction factor of 20 dB as defined in CISPR 12 (fifth edition 2001 and Amd1: 2005) shall be applied.	8.4 <u>試驗</u> 要求 8.4.2 量測應使用準峰值或峰值檢波器。 <u>4.3及4.6</u> 所列限制值為以準峰值檢波器量測。而若峰值檢波器依據CISPR 12採用了 <u>二0</u> 分貝之校正係數，也應得以適用。	8.4.2 量測應使用準峰值或峰值檢波器。 <u>4.2 及 4.5</u> 所列限制值為以準峰值檢波器量測。而若峰值檢波器依據CISPR 12(<u>Fifth edition 2001 and Amd1:2005</u>)採用了 <u>20</u> 分貝之校正係數，也應得以適用。
4.3. The measurements shall be performed with a spectrum analyser or a scanning receiver. The parameters to be used are defined in Table 1 and Table 2. 【請參考頁末表格】		8.4.3 應使用頻譜分析儀或掃描接收機執行量測。所使用參數應參照表一0和表一—中所定義。 (請參考頁末表格)	
4.4. Measurements Unless otherwise specified the configuration with the LV harness closer to the antenna shall be tested. The phase centre of the antenna shall be in line with the centre of the longitudinal part of the wiring harnesses for frequencies up to 1,000 MHz. The Technical Service shall perform the test at the intervals specified in the CISPR 12 standard throughout the frequency range 30 to 1,000 MHz. Alternatively, if the manufacturer provides measurement to data*/ for the	4.3. Measurements The Technical Service shall perform the test at the intervals specified in the CISPR 12 (fifth edition 2001 and Amd1: 2005) standard throughout the frequency range 30 to 1,000 MHz. Alternatively, if the manufacturer provides measurement to data for the whole	8.4.4 量測： 除非另有規定，否則應對在配置上較接近天線之低壓導線進行試驗。 在頻率達到 <u>一000 兆赫</u> 前之範圍內，天線的相位中心(Phase centre)應位於導線線束縱向部分的中心線內。 檢測機構應根據CISPR 12標準對 <u>三0至一000 兆赫</u> 整個頻率範圍進行量測。 或者， <u>申請者</u> 提供由符合ISO 17025認證及 <u>主管機構</u> 認可之實驗室 <u>試驗</u> 的全頻域 <u>量測資料</u> ，檢測機構可在下列 <u>一四</u> 個頻帶中 <u>選取各頻帶</u>	8.4.3 量測： 檢測機構應根據 <u>12 (Fifth edition 2001 and Amd1:2005)</u> 標準對 <u>30至1000MHz</u> 整個頻率範圍進行量測。 或者， <u>製造廠</u> 提供由符合ISO 17025(<u>Second edition 2005 and Corrigendum:2006</u>)認證及 <u>審驗機構</u> 認可之實驗室 <u>測試</u> 的全頻域 <u>量測</u>

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
whole frequency band from a test laboratory accredited to the applicable parts of ISO 17025 and recognized by the Type Approval Authority, the Technical Service may divide the frequency range in 14 frequency bands 30-34, 34-45, 45-60, 60-80, 80-100, 100-130, 130-170, 170-225, 225-300, 300-400, 400-525, 525-700, 700-850 and 850- 1,000 MHz and perform tests at the 14 frequencies giving the highest emission levels within each band to confirm that the ESA meets the requirements of this annex. In the event that the limit is exceeded during the test, investigations shall be made to ensure that this is due to the ESA and not to background radiation.	frequency band from a test laboratory accredited to the applicable parts of ISO 17025 (second edition 2005 and Corrigendum: 2006) and recognized by the Approval Authority, the Technical Service may divide the frequency range in 14 frequency bands 30 - 34, 34 - 45, 45 - 60, 60 - 80, 80 - 100, 100 - 130, 130 - 170, 170 - 225, 225 - 300, 300- 400, 400 - 525, 525 - 700, 700 - 850, 850 - 1,000 MHz and perform tests at the 14 frequencies giving the highest emission levels within each band to confirm that the ESA meets the requirements of this annex. In the event that the limit is exceeded during the test, investigations shall be made to ensure that this is due to the ESA and not to background radiation.	<u>內產生最高放射值之頻率點</u>進行試驗：<u>三〇至三四、三四至四五、四五至六〇、六〇至八〇、八〇至一〇〇、一〇〇至一三〇、一三〇至一七〇、一七〇至二二五、二二五至三〇〇、三〇〇至四〇〇、四〇〇至五二五、五二五至七〇〇、七〇〇至八五〇及八五〇至一〇〇〇兆赫。</u> 試驗中若量測值超過限制值時，應確認是由<u>ESA</u>所造成而非背景雜訊所造成。	<u>試資料</u>，檢測機構可在下列<u>14</u>個頻帶中<u>選取頻率點</u>進行試驗：<u>30-34, 34-45, 45-60, 60-80, 80-100, 100-130, 130-170, 170-225, 225-300, 300-400, 400-525, 525-700, 700-850 及 850-1,000 MHz。</u> 試驗中若量測值超過限制值時，應確認是由<u>車輛</u>所造成而非背景雜訊所造成。
4.5. Readings The maximum of the readings relative to the limit (horizontal/vertical polarization) in each of the 14 frequency bands shall be taken as the characteristic reading at the frequency at which the measurements were made.	4.4. Readings The maximum of the readings relative to the limit (horizontal/vertical polarization) in each of the 14 frequency bands shall be taken as the characteristic reading at the frequency at which the measurements were made.	8.4.5 數據讀取 相對於<u>一四</u>頻帶的每一量測點限制值之數據讀取最大值(水平及垂直極化) 應視為該頻率的特徵量測值。	8.4.4 數據讀取 相對於 <u>14</u> 頻帶的每一量測點限制值之數據讀取最大值(水平及垂直極化<u>及車輛之左右手側</u>) 應視為該頻率的特徵量測值。
Annex 8 Method of measurement of radiated narrowband electromagnetic emissions from electrical/electronic sub-assemblies	Annex 8 Method of measurement of radiated narrowband electromagnetic emissions from electrical/electronic sub-assemblies 1. General	9. 電機/電子裝置所產生之窄頻電磁<u>放射幅射試驗</u>方法	9. 電機/電子裝置所產生之窄頻電磁<u>擾動測試</u>方法

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
1. General 1.1. The test method described in this annex may be applied to ESAs, which may be subsequently fitted to vehicles, which comply, with Annex 5. This method concerns only ESA other than those involved in "REESS charging mode coupled to the power grid". 1.2. Test method This test is intended to measure the narrowband electromagnetic emissions such as might emanate from a microprocessor-based system. If not otherwise stated in this annex the test shall be performed according to CISPR 25.	1.1. The test method described in this annex may be applied to ESAs, which may be subsequently fitted to vehicles, which comply, with Annex 4. 1.2. Test method This test is intended to measure the narrowband electromagnetic emissions such as might emanate from a microprocessor-based system. If not otherwise stated in this annex the test shall be performed according to CISPR 25 (second edition 2002 and Corrigendum: 2004).	9.1 一般規定 9.1.1 對於符合7.規定之車輛，其所裝設之所有ESA，可以此試驗方法進行試驗。 此方法僅與未涉及「REESS充電模式連結至電網（Power grid）」之所有ESA有關。 9.1.2 試驗方法： 此試驗目的係量測可能由微處理系統所發出之窄頻電磁放射。若在此章節未有所指定，則應依據CISPR 25執行。	9.1 一般規定 9.1.1 檢測法是遵照7.應用在ESA。 9.1.2 測試方法： 此測試目的係測量可能由微處理系統所發出之窄頻電磁。若在此章節未有所指定時，則應依據CISPR 25(Second edition 2002 and corrigendum 2004)執行。
2. ESA state during tests The ESA under test shall be in normal operation mode, preferably in maximum load.	2. Esa state during tests The ESA under test shall be in normal operation mode.	9.2 ESA於試驗期間的狀態：ESA須在正常功能操作下試驗，且以最大負載進行。	9.2 ESA於試驗期間的狀態：ESA須在正常功能操作下測試。
3. Test arrangements 3.1. The test shall be performed according to ALSE method described in clause 6.4. of CISPR 25.	3. Test arrangements 3.1. The test shall be performed according to CISPR 25 (second edition 2002 and Corrigendum: 2004) clause 6.4. - ALSE method.	9.3 試驗準備 9.3.1 試驗應依據CISPR 25 章節6.4-ALSE方法執行。	9.3 測試準備 9.3.1 測試應依據CISPR 25(Second edition 2002 and corrigendum 2004) 章節6.4-ALSE條款方法執行。
3.2. Alternative measuring location As an	3.2. Alternative measuring location As an	9.3.2 可選擇試驗環境：可使用開放	9.3.2 可選擇測試環境：可使用符合

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
alternative to an absorber lined shielded enclosure (ALSE) an open area test site (OATS) which complies with the requirements of CISPR 16-1-4 may be used (see Figure 1 of the appendix to Annex 7).	alternative to an absorber lined shielded enclosure (ALSE) an open area test site (OATS) which complies with the requirements of CISPR 16-1-4 (third edition 2010) may be used (see Appendix to Annex 7).	式 試驗 場地(OATS)，如圖 一四 ，以 替代 符合CISPR 16-1-4之內襯吸波材料屏蔽圍體(ALSE)。	CISPR 16-1-4 (Third edition 2010)之內襯吸波材料屏蔽圍體(ALSE)與開放式 測試 場地(OATS)，如圖 一〇 。
3.3. Ambient To ensure that there is no extraneous noise or signal of a magnitude sufficient to affect materially the measurement, measurements shall be taken before or after the main test. In this measurement, the extraneous noise or signal shall be at least 6 dB below the limits of interference given in paragraph 6.6.2.1. of this Regulation, except for intentional narrowband ambient transmissions.	3.3. Ambient To ensure that there is no extraneous noise or signal of a magnitude sufficient to affect materially the measurement, measurements shall be taken before or after the main test. In this measurement, the extraneous noise or signal shall be at least 6 dB below the limits of interference given in paragraph 6.6.2.1. of this Regulation, except for intentional narrowband ambient transmissions.	9.3.3 環境：為確保沒有其他外來雜訊或信號振幅足以明顯地影響量測，環境量測應在主 試驗 前或後進行。除了意圖的窄頻環境放射外，在此 試驗 中，外來雜訊或訊號應至少較本 4.7.2.1 所規定的 電磁干擾限制值低六 dB 。	9.3.3 環境：為確保沒有其他外來雜訊或信號振幅足以明顯地影響量測，環境量測應在主 測試 前或後進行。除了意圖的窄頻環境放射外，在此 測試 中，外來雜訊或訊號應至少 為 本 4.6.2.1 所規定的 6dB 。
4. Test requirements 4.1. The limits apply throughout the frequency range 30 to 1,000 MHz for measurements performed in semi anechoic chambers or outdoor test sites. ... 4.3. The measurements shall be performed with a spectrum analyser or a scanning receiver. The parameters to be used are defined in Tables 1 and 2. 【請參考頁末表格】	4. Test requirements 4.1. The limits apply throughout the frequency range 30 to 1,000 MHz for measurements performed in semi anechoic chambers or outdoor test sites. ...	9.4 試驗 要求 9.4.1 在 半電暗波室(semi anechoic chamber) 或外部試驗場地，應對 三〇至一〇〇〇兆赫 整個頻率範圍限制進行量測。 ... 9.4.3 應使用頻譜分析儀或掃描接收機執行量測。所使用參數應參照表一二和表一三中所定義。 (請參考頁末表格)	9.4 測試 要求 9.4.1 在 半回聲室 或外部試驗場地，應對 30至1000 MHz 整個頻率範圍限制進行量測。 ...

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
4.4. Measurements The Technical Service shall perform the test at the intervals specified in the CISPR 12 standard throughout the frequency range 30 to 1,000 MHz. Alternatively, if the manufacturer provides measurement to data*/ for the whole frequency band from a test laboratory accredited to the applicable parts of ISO 17025 and recognized by the Type Approval Authority, the Technical Service may divide the frequency range in 14 frequency bands 30-34, 34-45, 45-60, 60-80, 80-100, 100-130, 130-170, 170-225, 225-300, 300-400, 400-525, 525-700, 700-850 and 850-1,000 MHz and perform tests at the 14 frequencies giving the highest emission levels within each band to confirm that the ESA meets the requirements of this annex. In the event that the limit is exceeded during the test, investigations shall be made to ensure that this is due to the ESA and not to background radiation including broadband radiation from the ESA.	4.3. Measurements The Technical Service shall perform the test at the intervals specified in the CISPR 12 (fifth edition 2001 and Amd1: 2005) standard throughout the frequency range 30 to 1,000 MHz. Alternatively, if the manufacturer provides measurement to data for the whole frequency band from a test laboratory accredited to the applicable parts of ISO 17025 (second edition 2005 and corrigendum: 2006) and recognized by the Approval Authority, the Technical Service may divide the frequency range in 14 frequency bands 30-34, 34-45, 45-60, 60-80, 80-100, 100-130, 130-170, 170-225, 225-300, 300-400, 400-525, 525- 700, 700-850, 850-1,000 MHz and perform tests at the 14 frequencies giving the highest emission levels within each band to confirm that the ESA meets the requirements of this annex. In the event that the limit is exceeded during the test, investigations shall be made to ensure that this is due to the ESA and not to background radiation including broadband radiation from the ESA.	9.4.4 量測：檢測機構應根據CISPR 12標準對<u>三〇至一〇〇〇兆赫</u>整個頻率範圍進行量測。或者，<u>申請者</u>提供由符合ISO 17025認證及<u>主管機構</u>認可之實驗室<u>試驗</u>的全頻域<u>量測資料</u>，檢測機構可在下列<u>一四</u>個頻帶中<u>選取各頻帶內產生最高放射值之頻率點</u>進行試驗：<u>三〇至三四、三四至四五、四五至六〇、六〇至八〇、八〇至一〇〇、一〇〇至一三〇、一三〇至一七〇、一七〇至二二五、二二五至三〇〇、三〇〇至四〇〇、四〇〇至五二五、五二五至七〇〇、七〇〇至八五〇及八五〇至一〇〇〇兆赫</u>。試驗中若量測值超過限制值時，應確認是由<u>ESA</u>所造成而非背景雜訊所造成(包含來自任何ESA之寬頻輻射)。	9.4.3 量測：檢測機構應根據CISPR 12(Fifth edition 2001 and Amd1:2005)標準對<u>30至1000MHz</u>整個頻率範圍進行量測。或者，<u>製造廠</u>提供由符合ISO 17025 (Second edition 2005 and corrigendum:2006)之實驗室<u>測試</u>的全頻域量<u>測試</u>資料，檢測機構可在下列<u>14</u>個頻帶中<u>選取頻率點</u>進行試驗：<u>30-34、34-45、45-60、60-80、80-100、100-130、130-170、170-225、225-300、300-400、400-525、525-700、700-850及850-1,000 MHz</u>。試驗中若量測值超過限制值時，應確認是由<u>車輛</u>所造成而非背景雜訊所造成(包含來自任何ESA之寬頻輻射)。
4.5. Readings The maximum of the readings relative to the limit (horizontal/vertical polarisation)	4.4. Readings The maximum of the readings relative to the limit (horizontal/vertical polarisation)	9.4.5 數據讀取：相對於<u>一四</u>頻帶的每一量測點限制值之數據讀取最大值(水平及垂直極化) 應視為該	9.4.4 數據讀取：相對於<u>14</u>頻帶的每一量測點限制值之數據讀取最大值(水平及垂直極化) 應視為該頻率的

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
in each of the 14 frequency bands shall be taken as the characteristic reading at the frequency at which the measurements were made.	in each of the 14 frequency bands shall be taken as the characteristic reading at the frequency at which the measurements were made.	頻率的特徵量測值。	特徵量測值。
Annex6 Method of testing for immunity of vehicles to electromagnetic radiation 1. General 1.1. The test method described in this annex shall only be applied to vehicles. This method concerns both configurations of vehicle: (a) Other than "REESS charging mode coupled to the power grid". (b) "REESS charging mode coupled to the power grid" 1.2. Test method This test is intended to demonstrate the immunity of the vehicle electronic systems. The vehicle shall be subject to electromagnetic fields as described in this annex. The vehicle shall be monitored during the tests. If not otherwise stated in this annex the test shall be performed according to ISO 11451- 2. 1.3. Alternative test methods The test may be alternatively performed in	Annex6 Method of testing for immunity of vehicles to electromagnetic radiation 1. General 1.1. The test method described in this annex shall only be applied to vehicles. This method concerns both configurations of vehicle: (a) Other than "REESS in charging mode coupled to the power grid". (b) "REESS in charging mode coupled to the power grid". 1.2. Test method This test is intended to demonstrate the immunity of the vehicle electronic systems. The vehicle shall be subject to electromagnetic fields as described in this annex. The vehicle shall be monitored during the tests. If not otherwise stated in this annex the test shall be performed according to ISO 11451- 2, third edition 2005 . 1.3. Alternative test methods The test may be alternatively performed in an	10. 車輛電磁輻射免疫力 <u>試驗</u> 方法 10.1 一般規定 10.1.1 本節規範之 <u>試驗</u> 方法僅適用於車輛。此方法應考量車輛的兩個配置模式： (a) 非「 <u>REESS</u> 充電模式連結 <u>電網 (Power grid)</u> 」。 (b) 「 <u>REESS</u> 充電模式連結 <u>電網 (Power grid)</u> 」。 10.1.2 <u>試驗</u> 方法： <u>目的</u> 是證明車輛電 <u>子</u> 系統之免疫力。在本節中車輛應置於電磁場中。 <u>試驗</u> 期間車輛應被監控。 在本節無其它規定下，本 <u>試驗</u> 應依據 ISO 11451-2。 10.1.3 替代 <u>試驗</u> 方法 對所有車輛， <u>試驗</u> 可選擇在室外 <u>試驗</u>	10. 車輛電磁輻射免疫力 <u>測試</u> 方法 10.1 一般規定 10.1.1 本節規範之 <u>測試</u> 方法僅適用於車輛。此方法應考量車輛的兩個配置模式： (a) 非 <u>REESS</u> 充電模式 <u>下</u> 連結 <u>電源介面</u> 。 (b) <u>REESS</u> 充電模式 <u>下</u> 連結 <u>電源介面</u> 。 10.1.2 <u>量測</u> 方法： <u>此測試主要</u> 是證明車輛電 <u>機</u> 系統之免疫力。在本節中車輛應置於電磁場中。 <u>測試</u> 期間車輛應被監控。 在本節無其它規定下，本 <u>測試</u> 應依據 ISO 11451-2， <u>2005 第三版之方法執行</u> 。 10.1.3 替代 <u>測試</u> 方法 對所有車輛 <u>而言測試</u> 可選擇在室外

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
an outdoor test site for all vehicles. The test facility shall comply with (national) legal requirements regarding the emission of electromagnetic fields. If a vehicle is longer than 12 m and/or wider than 2.60 m and/or higher than 4.00 m, BCI (bulk current injection) method according to ISO 11451-4 shall be used in the frequency range 20 to 2,000 MHz with levels defined in paragraph 6.8.2.1. of this Regulation.	outdoor test site for all vehicles. The test facility shall comply with (national) legal requirements regarding the emission of electromagnetic fields. If a vehicle is longer than 12 m and/or wider than 2.60 m and/or higher than 4.00 m, BCI (bulk current injection) method according to ISO 11451-4 (first edition 1995) can be used in the frequency range 20 to 2,000 MHz with levels defined in paragraph 6.7.2.1. of this Regulation.	場地進行。<u>試驗</u>設備應符合(國家)電磁場合法放射規範。 若車輛長度超過一二公尺及/或寬度超過二・六公尺且/或高度超過四公尺，<u>應</u>使用4.9.2.1所定義頻率範圍<u>二〇至二〇〇〇</u> MHz之大電流注入(BCI)標準，此標準是依據ISO 11451-4。	<u>測試</u>場地進行。<u>測試</u>設備應符合(國家)電磁場合法放射規範。 若車輛長度超過一二公尺及/或寬度超過二・六公尺且/或高超過四公尺<u>時</u>，<u>可</u>使用4.7.2.1所定義頻率範圍<u>20至2,000</u> MHz之大電流注入(BCI)標準，此標準是依據ISO 11451-4 (<u>1995第一版</u>)。
2.1. Vehicle in configuration other than "REESS charging mode coupled to the power grid	2.1. Vehicle in configuration other than "RESS in charging mode coupled to the power grid"	10.2 車輛於 <u>試驗</u> 時之狀態 10.2.1 車輛處於非「 <u>REESS</u> 充電模式連結 <u>電網 (Power grid)</u> 」之配置。	10.2 車輛於 <u>測試</u> 時之狀態 10.2.1 車輛處於非 <u>RESS</u> 充電模式 <u>下</u> 連結 <u>電源介面</u> 之配置。
2.2. Vehicle in configuration "REESS charging mode coupled to the power grid	2.2. Vehicle in configuration "RESS in charging mode coupled to the power grid	10.2.2 車輛處於「 <u>REESS</u> 充電模式連結 <u>電網 (Power grid)</u> 」之配置，如 <u>圖一五之一、圖一五之二、圖一五之三及圖一五之四</u> 所示。	10.2.2 車輛處於RESS充電模式 <u>下</u> 連結 <u>電源介面</u> 之配置，如圖 <u>一一</u> 所示。
2.2.1.2. Basic vehicle conditions The paragraph defines minimum test conditions (as far as applicable) and failures criteria for vehicle immunity tests. Other vehicle systems, which can affect immunity related functions, <u>shall</u> be tested in a way to be agreed between manufacturer and Technical Service.	2.2.1.2. Basic vehicle conditions The paragraph defines minimum test conditions (as far as applicable) and failures criteria for vehicle immunity tests. Other vehicle systems, which can affect immunity related functions, <u>must</u> be tested in a way to be agreed between manufacturer and Technical Service.	10.2.2.1.2 車輛基本狀態 此段規範最小之 <u>試驗</u> 狀態及車輛免疫力 <u>試驗</u> 失效準則。其他會影響相關功能免疫力之車輛系統， <u>應</u> 採用申請者及檢測機構間皆認同之方法 <u>試驗</u> 。 (請參考頁末表格)	10.2.2.1.2 車輛基本狀態 此段規範最小之 <u>測試</u> 狀態及車輛免疫力 <u>測試</u> 失效準則。其他會影響相關功能免疫力之車輛系統， <u>需</u> 採用申請者及檢測機構間皆認同之方法 <u>測試</u> 。 (請參考頁末表格)

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
【請參考頁末表格】	【請參考頁末表格】		
2.2.3. The test set-up for the connection of the vehicle in configuration "REESS charging mode coupled to the power grid" is shown in Figures 4a to 4h (depending of AC or DC power charging mode, location of charging plug and charging with or without communication) of the appendix to this annex.		<u>10.2.2.3車輛處於「REESS充電模式連結電網 (Power grid)」之配置，其於試驗之連接組立如圖一五之一、圖一五之二、圖一五之三及圖一五之四所示(取決於交流或直流電源的充電模式、充電插頭位置、及具有通訊設施之充電或不具有通訊設施之充電)。</u>	
2.3. Charging station / Power mains The charging station may be placed either in the test location or outside the test location. Note 1: If the communication between the vehicle and the charging station could be simulated, the charging station may be replaced by the supply from power mains. In both case duplicated power mains and communication lines socket(s) shall be placed in the test location with the following conditions: (a) It shall be placed on the ground plane. (b) The length of the harness between the power mains / communication lines socket and the AN(s) / IS(s) shall be kept as short as possible. (c) The harness between the power mains / communication lines socket and the AN(s) / IS(s) shall be placed as close		<u>10.2.6充電站/電源 (Power mains)</u> <u>充電站可設於試驗區內或試驗區外。</u> <u>註一：若能模擬車輛和充電站間之通訊，則可以電源替代充電站。</u> <u>在此兩種情況下，重複的電源和通訊線路插座，應置放於試驗區域並符合下列條件：</u> <u>(a) 應放置在接地平面 (Ground plane)。</u> <u>(b) 電源/通訊線路插座和模擬網路 (AN)/阻抗穩定器 (IS)之間的導線 (Harness)長度應儘可能的縮短。</u> <u>(c) 電源/通訊線路插座和模擬網路 (AN)/阻抗穩定器 (IS)之間的導線</u>	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
as possible of the ground plane. Note 2: The power mains and communication lines socket(s) should be filtered. If the charging station is placed inside the test location then harness between charging station and the power mains / communication lines socket shall be placed with the following conditions: (a) The harness at charging station side shall hang vertically down to the ground plane. (b) The extraneous length shall be placed as close as possible of the ground plane and "Z-folded" if necessary. Note 3: the charging station should be placed outside the beam width of the emitting antenna.		<u>應儘可能放置靠近接地平面。</u> <u>註二：電源和通訊線路插座應經由濾波器濾波。</u> <u>如充電站設置於試驗區域內，則充電站和電源/通訊線路插座之間的導線應於下列條件下置放：</u> <u>(a) 充電站側面之導線應向下垂掛至接地平面。</u> <u>(b) 多餘長度應儘可能放置靠近接地平面，及必要之“Z型折疊”。</u> <u>註三：充電站應該放置在接收天線的波束寬度(Beam width)以外。</u>	
2.4. Artificial networks The AN(s) shall be mounted directly on the ground plane. The cases of the AN(s) shall be bonded to the ground plane. The measuring port of each AN shall be terminated with a 50 ohm load. The AN shall be placed as defined in Figures 4a to 4h. 【Figures 4a to 4b對應基準圖一五之一，其餘以此類推】		<u>10.2.7 模擬網路 (Artificial network, AN)</u> <u>模擬網路應直接安裝在接地平面上。模擬網路之外殼應與接地平面接合。</u> <u>每一個模擬網路的量測接頭(Port)應給予五〇歐姆負載。</u> <u>模擬網路之置放，應依圖一五之一、圖一五之二、圖一五之三及圖一五之四之定義。</u>	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
2.5.Impedance Stabilization Communication lines shall be applied to the vehicle through IS(s). The impedance stabilization (IS) to be connected in the network and communication cables is defined in CISPR 22 paragraph 9.6.2. The IS(s) shall be mounted directly on the ground plane. The case of the IS(s) shall be bonded to the ground plane. The measuring port of each IS shall be terminated with a 50 ohm load. The IS shall be placed as defined in Figures 4e to 4h.		<u>10.2.8 阻抗穩定器 (Impedance Stabilization, IS)</u> <u>通訊線路應經由阻抗穩定器連接於車輛。</u> <u>連接至網路及通訊電纜之阻抗穩定器，應依CISPR 22第9.6.2條之定義。</u> <u>阻抗穩定器應直接安裝於接地平面上。阻抗穩定器之外殼應與接地平面接合。</u> <u>每一個阻抗穩定器的量測接頭應給予五〇歐姆負載。</u> <u>應依圖一五之三及圖一五之四的定義置放阻抗穩定器。</u>	
2.6. Power charging / communication cable The power charging / communication cable shall be placed in a straight line between the AN(s) / IS(s) and the vehicle charging plug. The projected cable length shall be 0.8 m (+0.2/-0 m). If the length of the cable is longer than 1 m, the extraneous length shall be "Z-folded" in less than 0.5 m width. The charging / communication cable at vehicle side shall hang vertically at a distance of 100 mm (+200/-0 mm) from the vehicle body. The whole cable shall be placed on a non-conductive, low relative		<u>10.2.9 電源充電/通訊電纜</u> <u>電源充電/通訊電纜應以直線方式放置在模擬網路/阻抗穩定器和車輛充電插頭之間。電纜長度應為〇・八公尺（正〇・二/負〇公尺）。</u> <u>若電纜長度大於一公尺，則其多餘長度應以“Z型折疊”且其寬度應小於〇・五公尺。</u> <u>在車輛側面的充電/通訊電纜應垂直地懸掛距離車體一〇〇公釐（正二〇〇/負〇公釐）。</u> <u>所有電纜應放置在非導電性且具有相對低的介電常數 (Dielectric-constant) 的材料(epsilon_r 小於等於一・四)上，且在接地平面</u>	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
permittivity (dielectric-constant) material (epsilon _r ≤ 1.4), at 100 mm (+/- 25 mm) above the ground plane.		<u>上方一〇〇公釐(正/負二五公釐)處。</u>	
3.2. For category M, N, O vehicles according to ISO 11451-2.	3.2. For category M, N, O vehicles according to ISO 11451-2, third edition 2005.	10.3.2 M、N、O類車輛依據ISO 11451-2。	10.3.2 M、N、O類車輛依據ISO 11451-2, 2005 第三版。
3.3.4. Either at 1.0 +/- 0.2 m behind the vertical centerline of the vehicle's front wheel (point C in figure 1 of appendix to this annex) in the case of three-wheeled vehicles, Or at 0.2 +/- 0.2 m behind the vertical centerline of the vehicle's front wheel (point D in figure 2 of appendix to this annex) in the case of two-wheeled vehicles.	3.3.4. Either at 1.0 +/- 0.2 m behind the vertical centerline of the vehicle's front wheel (point C in figure 1 of appendix to this annex) in the case of three-wheeled vehicles, Or at 0.2 +/- 0.2 m behind the vertical centerline of the vehicle's front wheel (point D in figure 2 of appendix to this annex) in the case of two-wheeled vehicles.	10.3.3.4在L2及L5類車輛前輪(圖一六點C)垂直中線下方一・〇正負〇・二公尺。或可在二輪車輛前輪(圖一六之一點D)垂直中線後方〇・二正負〇・二公尺。 10.3.3.5 若從車輛後方放射，則參考點應依10.3.3.1至10.3.3.4建立。若車輛已從該中心點被水平旋轉一八〇度，其車輛應背對天線配置，換言之從天線至車身最近之距離應為相同。如圖一七所示。	10.3.3.4在L2及L5類車輛前輪(圖一二點C)垂直中線下方一・〇正負〇・二公尺。或可在二輪車輛前輪(圖一二之一點D)垂直中線後方〇・二正負〇・二公尺。 10.3.3.5 若從車輛後方放射，則參考點應依10.3.3.1至10.3.3.4建立。若車輛已從該中心點被水平旋轉一八〇度，其車輛應背對天線配置，換言之從天線至車身最近之距離應為相同。如圖一三所示。
3.3.5. If it is decided to radiate the rear of the vehicle, the reference point shall be established as in paragraphs 3.3.1. to 3.3.4. The vehicle shall then be installed facing away from the antenna and positioned as if it had been horizontally rotated 180 around its centre point, i.e. such that the distance from the antenna to the nearest part of the outer body of the vehicle remains the same. This is illustrated in figure 3 of Appendix to this annex.	3.3.5. If it is decided to radiate the rear of the vehicle, the reference point shall be established as in paragraphs 3.3.1. to 3.3.4. The vehicle shall then be installed facing away from the antenna and positioned as if it had been horizontally rotated 180 around its centre point, i.e. such that the distance from the antenna to the nearest part of the outer body of the vehicle remains the same. This is illustrated in figure 3 of Appendix to this annex.		
4.1. Frequency range, dwell times, polarization The vehicle shall be exposed to electromagnetic radiation in the 20 to	4.1. Frequency range, dwell times, polarization The vehicle shall be exposed to electromagnetic radiation in the 20 to 2,000	10.4 <u>試驗</u> 要求 10.4.1 頻率範圍、駐留時間及極化。車輛在垂直極化時應暴露在電磁輻射頻率 <u>二〇至二〇〇〇兆赫</u> 。 <u>試</u>	10.4 <u>測試</u> 要求 10.4.1 頻率範圍、駐留時間及極化。車輛在垂直極化時應暴露在電磁頻率 <u>20至2,000MHz下</u> 。 <u>測試信號之調</u>

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
2,000 MHz frequency ranges in vertical polarization. The test signal modulation shall be: (a) AM (amplitude modulation), with 1 kHz modulation and 80 per cent modulation depth in the 20 to 800 MHz frequency range, and (b) PM (pulse modulation), Ton 577 microseconds, period 4,600 microseconds in the 800 to 2,000 MHz frequency range, if not otherwise agreed between Technical Service and vehicle manufacturer. Frequency step size and dwell time shall be chosen according to ISO 11451-1.	MHz frequency ranges in vertical polarization. The test signal modulation shall be: (a) AM (amplitude modulation), with 1 kHz modulation and 80 per cent modulation depth in the 20 to 800 MHz frequency range, and (b) PM (pulse modulation), ton 577 microseconds, period 4,600 microseconds in the 800 to 2,000 MHz frequency range, If not otherwise agreed between Technical Service and vehicle manufacturer. Frequency step size and dwell time shall be chosen according to ISO 11451-1, third edition 2005 and Amd1: 2008.	<u>驗訊號之調變 (Modulation)</u> 應為： (a) AM(調幅，<u>Amplitude modulation</u>)，在<u>二〇至八〇〇兆赫</u>頻率範圍以<u>一千赫</u>正弦波百分之八〇調變深度，及 (b) PM(<u>脈波調變，Pulse modulation</u>)，除非檢測機構與申請者另有協議，在<u>八〇〇至二〇〇〇兆赫</u>頻率範圍內週期為<u>四六〇〇</u>微秒，導通時間為<u>五七七</u>微秒。 頻率步階及駐留時間應依據 ISO 11451-1 選擇。 【脈波(pulse):一個物理量在短暫之時間中突然變化，緊接著立刻回到變化前的初始值；脈衝(impulse)對某一個特定的應用而言，一個趨近於一個單位脈波或一個Dirac函數的脈波】	<u>幅</u>應為： (a) AM(調幅)，在<u>20至800MHz</u>頻率範圍以<u>1 kHz</u>正弦波百分之八〇調變深度，及 (b) PM(<u>脈衝調變</u>)，除非檢測機構與申請者<u>無</u>另有協議，在<u>800至2,000MHz</u>頻率範圍內週期為<u>4,600</u>微秒，導通時間為<u>577</u>微秒，頻率步階及駐留時間應依據 ISO 11451-1(<u>Third edition 2005 and amd1:2008</u>)來選擇。
4.1.1. The Technical Service shall perform the test at the intervals specified in ISO 11451-1 throughout the frequency range 20 to 2,000 MHz. Alternatively, if the manufacturer provides measurement to data*/ for the whole frequency band from a test laboratory accredited to the applicable parts of ISO 17025 and recognized by the Type Approval Authority, the Technical	4.1.1. The Technical Service shall perform the test at the intervals specified in ISO 11451-1, third edition 2005 and Amd1: 2008 throughout the frequency range 20 to 2,000 MHz. Alternatively, if the manufacturer provides measurement to data for the whole frequency band from a test laboratory accredited to the applicable parts of ISO 17025 (second edition 2005 and Corridendum: 2006) and recognized by the	10.4.1.1 檢測機構應依照 ISO 11451-1 規範間隔，從<u>二〇至二〇〇〇兆赫</u>全部頻寬範圍內執行<u>試驗</u>。<u>或者</u>，申請者提供符合 ISO 17025 <u>認證</u>且經<u>主管機構認可</u>之實驗室所出具之全頻<u>域量測資料</u>，檢測機構可在範圍內選擇<u>精簡之</u>頻率點數，如<u>二七、四五、六五、九〇、一二〇、一五〇、一九〇、二三〇、二八〇、三八〇、四五〇、六〇〇、七五〇、九〇〇、一三〇〇及一八</u>	10.4.1.1 檢測機構應依照 ISO 11451-1(<u>Third edition 2005 and Amd1:2008</u>) 規範間隔從 <u>20 至 2,000MHz</u> 全部頻寬範圍內執行<u>測試</u>。 <u>替代作法為</u>，若申請者提供<u>由</u>符合 ISO 17025(<u>Second edition 2005 and corrigendum:2006</u>)且經<u>評鑑合格</u>之實驗室所出具之全頻<u>寬測試數據</u>，檢測機構可<u>選擇</u>在範圍內選擇減少頻率點數，如<u>27, 45, 65, 90, 120,</u>

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
Service may choose a reduced number of spot frequencies in the range, e.g. 27, 45, 65, 90, 120, 150, 190, 230, 280, 380, 450, 600, 750, 900, 1,300 and 1,800 MHz to confirm that the vehicle meets the requirements of this annex. If a vehicle fails the test defined in this annex, it shall be verified as having failed under the relevant test conditions and not as a result of the generation of uncontrolled fields.	Approval Authority, the Technical Service may choose a reduced number of spot frequencies in the range, e.g. 27, 45, 65, 90, 120, 150, 190, 230, 280, 380, 450, 600, 750, 900, 1,300, and 1,800 MHz to confirm that the vehicle meets the requirements of this annex. If a vehicle fails the test defined in this annex, it must be verified as having failed under the relevant test conditions and not as a result of the generation of uncontrolled fields.	<u>0 0 兆赫</u>，以確認車輛符合本節規範。 若車輛未通過本節之<u>試驗</u>，必須<u>確認</u>是在相關<u>試驗</u>狀態下未通過<u>試驗</u>，<u>且</u>非由於不可<u>控制</u>因素所導致。	<u>150, 190, 230, 280, 380, 450, 600, 750, 900, 1,300, 及 1,800 MHz</u>，以確認車輛符合本節規範。 若車輛未通過本節之<u>測試</u>，必須<u>證明</u>是在相關<u>測試</u>狀態下未通過<u>測試</u>而非由於不可<u>抗力</u>因素所導致。
5.1.1. The substitution method according to ISO 11451-1, shall be used to establish the test field conditions. ... 5.1.3. Test phase The vehicle shall be positioned with the centre line of the vehicle on the facilityreference point or line. The vehicle shall normally face a fixed antenna. However, where the electronic control units and the associated wiring harness are predominantly in the rear of the vehicle, the test should normally be carried out with the vehicle facing away from the antenna. In the case of long vehicles (i.e. excluding vehicles of categories L, M1 and N1), which have electronic control units	5.1.1. The substitution method according to ISO 11451-1, <u>third edition 2005 and Amd1: 2008</u> shall be used to establish the test field conditions. ... 5.1.3. Test phase The vehicle shall be positioned with the centre line of the vehicle on the facilityreference point or line. The vehicle shall normally face a fixed antenna. However, where the electronic control units and the associated wiring harness are predominantly in the rear of the vehicle, the test should normally be carried out with the vehicle facing away from the antenna. In the case of long vehicles (i.e. excluding vehicles of categories L, M1 and N1), which have electronic control units and associated	10.5 所需場強之產生 10.5.1 <u>試驗</u>依據 10.5.1.1 應依據ISO 11451-1之替代方法來建立<u>試驗</u>場之狀態。 ... 10.5.1.3 <u>試驗</u>程序 車輛應擺設於場地參考點中線上，正面朝向固定天線。然而，當電子控制元件及其相關電纜大多位在車輛後方時，則<u>試驗</u>應在車輛背對天線下執行。對於所配備電子控制元件及其相關電纜大多位於車輛中段之長型車輛(即不包含L、M1及N1類車輛)，參考點應建立在車輛右側或左側表面。參考點應位於車長之中點或可由申請者與檢測機構共同在考量電子系統配置及任	10.5 所需場強之產生 10.5.1 <u>測試</u>依據 10.5.1.1 應依據ISO 11451-1,<u>(Third edition 2005 and amd1:2008)</u>之替代方法來建立<u>測試</u>場之狀態。 ... 10.5.1.3 <u>測試</u>程序 車輛應擺設於場地參考點中線上，正面朝向固定天線。然而，當電子控制元件及其相關電纜大多位在車輛後方時，則<u>測試</u>應在車輛背對天線下執行。對於所配備電子控制元件及其相關電纜大多位於車輛中段之長型車輛(即不包含L、M1及N1類車輛)，參考點應建立在車輛右側或左側表面。參考點應位於車長之中點或可由申請者與檢測機構共同在考量電子系統配置及任何電纜設備

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
and associated wiring harness predominantly towards the middle of the vehicle, a reference point may be established based on either the right side surface or the left side surface of the vehicle. This reference point shall be at the midpoint of the vehicle's length or at one point along the side of the vehicle chosen by the manufacturer in conjunction with the Competent Authority after considering the distribution of electronic systems and the layout of any wiring harness. Such testing may only take place if the physical construction of the chamber permits. The antenna location must be noted in the test report.	wiring harness predominantly towards the middle of the vehicle, a reference point may be established based on either the right side surface or the left side surface of the vehicle. This reference point shall be at the midpoint of the vehicle's length or at one point along the side of the vehicle chosen by the manufacturer in conjunction with the Competent Authority after considering the distribution of electronic systems and the layout of any wiring harness. Such testing may only take place if the physical construction of the chamber permits. The antenna location must be noted in the test report.	何電纜設備分佈後，沿車側選擇其中一點。 在試驗室實體結構允許之下，此等<u>試驗</u>可僅在測試實驗室內執行。 天線位置必須記錄在<u>試驗</u>報告內。	分佈後，沿車側選擇其中一點。 在試驗室實體結構允許之下，此等<u>測試</u>可僅在測試實驗室內執行。 天線位置必須記錄在<u>測試</u>報告內。
Annex 9 ... 1.2. Test methods This method concerns both kinds of ESA: (a) Other ESAs than involved in "REESS charging mode coupled to the power grid". (b) ESAs involved in "REESS charging mode coupled to the power grid". 1.2.1. ESAs may comply with the requirements of any combination of the following test methods at the	Annex 9 ... 1.2. Test methods 1.2.1. ESAs may comply with the requirements of any combination of the	11. 車上電機/電子裝置電磁輻射免疫力<u>試驗</u>方法 ... <u>11.1.2 試驗方法:</u> <u>此方法涉及到兩種ESA:</u> <u>(a)未於「REESS充電模式連結至電網 (Power grid)」之所有ESA。</u> <u>(b) 於「REESS充電模式連結至電網 (Power grid)」之所有ESA。</u> <u>11.1.2.1</u> 在申請者考量之下且已涵蓋11.3.1.規範之全頻率範圍，ESA<u>試驗</u>可以下述之<u>試驗</u>方法任何組合進行。	11. 車上電機/電子裝置電磁輻射免疫力<u>測試</u>方法 ... <u>11.1.2</u>在申請者考量之下且已涵蓋11.3.1.規範之全頻率範圍，ESA<u>測試</u>可以下述之<u>測試</u>方法任何組合進行。

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
manufacturer's discretion provided that these results in the full frequency range specified in paragraph 3.1. of this annex being covered: (a) Absorber chamber test according to ISO 11452-2; (b) TEM cell testing according to ISO 11452-3; (c) Bulk current injection testing according to ISO 11452-4; (d) Stripline testing according to ISO 11452-5; (e) 800 mm stripline according to paragraph 5. of this annex. ESAs in configuration "REESS charging mode coupled to the power grid" shall comply with the requirements of the combination of the Absorber chamber test according to ISO 11452-2 and Bulk current injection testing according to ISO 11452-4 at the manufacturer's discretion provided that these results in the full frequency range specified in paragraph 3.1. of this annex being covered. (Frequency range and general test conditions shall be based on ISO 11452-1).	following test methods at the manufacturer's discretion provided that this results in the full frequency range specified in paragraph 3.1. of this annex being covered: (a) Absorber chamber test according ISO 11452-2, second edition 2004; (b) TEM cell testing according ISO 11452-3, third edition 2001; (c) Bulk current injection testing according ISO 11452-4, third edition 2005 and Corrigendum 1: 2009; (d) Stripline testing according ISO 11452-5, second edition 2002; (e) 800 mm stripline according paragraph 5. of this annex. (Frequency range and general test conditions shall be based on ISO 11452-1, third edition 2005 and Amd1: 2008).	(a) 依據 ISO 11452-2 電波暗室 <u>試驗 (Absorber chamber test)</u> ； (b) 依據 ISO 11452-3 之 <u>橫向電磁波室試驗 (TEM cell testing)</u> ； (c) 依據 ISO 11452-4 之大電流注入 <u>(BCI) 試驗</u> ； (d) 依據 ISO 11452-5 帶線 <u>試驗 (Stripline testing)</u> ； (e) 依據 10.4.5 之 800 公釐帶線 <u>試驗</u> 具備「REESS 充電模式連結至電網 (Power grid)」配置之所有 ESA，於規範之全頻率範圍內且經申請者考量，應符合 ISO 11452-2 之電波暗室試驗及 ISO 11452-4 之大電流注入 (BCI) 試驗。(頻率範圍及一般試驗狀態應依據 ISO 11452-1)。	(a) 依據 ISO 11452-2, 2004 第二版之吸波材料 電波暗室 測試 ； (b) 依據 ISO 11452-3, 2001 第三版之 TEM 測試 ； (c) 依據 ISO 11452-4, 2005 第三版及 Corrigendum 1:2009 之大電流注入 (BCI) 測試 ； (d) 依據 ISO 11452-5, 2002 第二版之帶線測試 ； (e) 依據 10.4.5 之 800 公釐帶線 測試 (頻率範圍及一般 測試 狀態應在 ISO 11452-1, 2005 第三版及 Amd1:2008 之基礎上)。
2. State of ESA during tests 2.1. The test conditions shall be according ISO 11452-1.	2. State of ESA during tests 2.1. The test conditions shall be according ISO 11452-1, third edition 2005 and Amd1:	11.2 <u>試驗</u> 期間 ESA 之狀態 11.2.1 <u>試驗</u> 條件應依據 ISO 11452-1。	11.2 <u>測試</u> 期間 ESA 之狀態 11.2.1 <u>測試</u> 條件應依據 ISO 11452-1, (Third edition 2005 and

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	2008.		Amd1:2008)。
2.2. The ESA under test shall be switched on and shall be stimulated to be in normal operation condition. It shall be arranged as defined in this annex unless individual test methods dictate otherwise. ESAs involved in "REESS charging mode coupled to the power grid" shall be in charging mode. The state of charge (SOC) of the traction battery shall be kept between 20 per cent and 80 per cent of the maximum SOC during the whole frequency range measurement (this may lead to split the measurement in different sub-bands with the need to discharge the vehicle's traction battery before starting the next sub-bands). If the test is not performed with a REESS the ESA should be tested at rated current. If the current consumption can be adjusted, then the current shall be set to at least 20 per cent of its nominal value.	2.2. The ESA under test shall be switched on and must be stimulated to be in normal operation condition. It shall be arranged as defined in this annex unless individual test methods dictate otherwise.	11.2.2 <u>試驗</u>時，ESA應打開且其必須在正常運轉狀態。除非有要求特別之<u>試驗</u>方法，否則其必須依據本節整備。 <u>於「REESS充電模式連結至電網（Power grid）」之所有ESA，應在充電模式下。</u> <u>主電池（Traction battery）之電量（SOC），於量測時整個頻率範圍內應保持在最大電量之百分之二〇至百分之八〇之間（其可能導致應分別量測不同的副頻(sub-bands)與開始下一個副頻之前需要對車輛主電池進行放電）。</u> <u>若係未於REESS一起執行試驗之ESA，則應在額定電流進行試驗。如電流消耗可被調整，則電流應至少為標稱值之百分之二〇。</u>	11.2.2 <u>測試</u>時 ESA 應打開且其必須在正常運轉狀態。除非有要求特別之<u>測試</u>方法，否則其必須依據本節整備。
3. General test requirements 3.1. Frequency range, dwell times Measurements shall be made in the 20 to 2,000 MHz frequency range with frequency steps according to ISO 11452-1.	3. General test requirements 3.1. Frequency range, dwell times Measurements shall be made in the 20 to 2,000 MHz frequency range with frequency steps according to ISO 11452-1, <u>third edition 2005 and Amd1: 2008.</u>	11.3 一般<u>試驗</u>規範 11.3.1 頻率範圍、駐留時間及極化。應暴露在依據ISO 11452-1規範之電磁頻率<u>二〇至二〇〇〇兆赫</u>下。<u>試驗訊號之調變（Modulation）</u>應為：	11.3 一般<u>測試</u>規範 11.3.1 頻率範圍、駐留時間及極化。<u>車輛在垂直極化時</u>應暴露在依據ISO 11452-1 (<u>Third edition 2005 and amd1:2008</u>)規範之電磁頻率<u>20至2,000MHz</u>下。調變<u>程序測試</u>應為：

增/修內容	原內容	修訂國內法規條文案草案	對應國內法規條文
The test signal modulation shall be: (a) AM (amplitude modulation), with 1 kHz modulation and 80 per cent modulation depth in the 20 to 800 MHz frequency range, and (b) PM (pulse modulation), Ton 577 microseconds, period 4,600 microseconds in the 800 to 2,000 MHz frequency range, If not otherwise agreed between Technical Service and ESA manufacturer. Frequency step size and dwell time shall be chosen according to ISO 11452-1.	The test signal modulation shall be: (a) AM (amplitude modulation), with 1 kHz modulation and 80 per cent modulation depth in the 20 to 800 MHz frequency range; (b) PM (pulse modulation), t on 577 microseconds, period 4,600 microseconds in the 800 to 2,000 MHz frequency range; If not otherwise agreed between Technical Service and ESA manufacturer. Frequency step size and dwell time shall be chosen according to ISO 11452-1, <u>third edition 2005 and Amd1: 2008.</u>	(a) AM(調幅, <u>Amplitude modulation</u>), 在<u>二〇至八〇〇兆赫</u>頻率範圍以<u>二 千赫</u>正弦波百分之八〇調變深度, 及 (b)PM(<u>脈波調變, Pulse modulation</u>), 除非檢測機構與申請者另有協議, 在<u>八〇〇至二〇〇〇兆赫</u>頻率範圍內週期為<u>四六〇〇</u>微秒, 導通時間為<u>五七七</u>微秒。 頻率步階及駐留時間應依據 ISO 11452-1選擇。	(a) AM(調幅), 在<u>20至800MHz</u>頻率範圍以<u>1 kHz</u>正弦波百分之八〇調變深度, 及 (b)PM(<u>脈衝調變</u>), 除非檢測機構與申請者<u>無</u>另有協議, 在<u>800至2,000MHz</u>頻率範圍內週期為<u>4,600</u>微秒, 導通時間為<u>577</u>微秒, 頻率步階及駐留時間應依據 ISO 11452-1 (<u>Third edition 2005 and amd1:2008</u>)來選擇。
3.2. The Technical Service shall perform the test at the intervals specified in ISO 11452-1, throughout the frequency range 20 to 2,000 MHz. Alternatively, if the manufacturer provides measurement to data*/ for the whole frequency band from a test laboratory accredited to the applicable parts of ISO 17025, and recognized by the Type Approval Authority, the Technical Service may choose a reduced number of spot frequencies in the range, e.g. 27, 45, 65, 90, 120, 150, 190, 230, 280, 380, 450, 600, 750, 900, 1,300, and 1,800 MHz to confirm that the ESA meets the requirements of this annex.	3.2. The Technical Service shall perform the test at the intervals specified in ISO 11452-1, <u>third edition 2005 and Amd1: 2008</u> throughout the frequency range 20 to 2,000 MHz. Alternatively, if the manufacturer provides measurement to data for the whole frequency band from a test laboratory accredited to the applicable parts of ISO 17025, (<u>seconde edition 2005 and Corrigendum: 2006</u>) and recognized by the Approval Authority, the Technical Service may choose a reduced number of spot frequencies in the range, e.g. 27, 45, 65, 90, 120, 150, 190, 230, 280, 380, 450, 600, 750, 900, 1,300, and 1,800 MHz to confirm that the ESA meets the requirements of this	11.3.2 檢測機構應依照ISO 11452-1規範之間隔, 從<u>二〇至二〇〇〇兆赫</u>全部頻寬範圍內執行<u>試驗</u>。 <u>或者</u>, 申請者提供符合ISO 17025<u>認證</u>且經<u>主管機構認可</u>之實驗室所出具之全頻<u>域量測資料</u>, 檢測機構可在<u>範圍內</u>選擇<u>精簡之</u>頻率點數, 如<u>二七、四五、六五、九〇、一二〇、一五〇、一九〇、二三〇、二八〇、三八〇、四五〇、六〇〇、七五〇、九〇〇、一三〇〇及一八〇〇兆赫</u>, 以確認ESA符合本節規範。	11.3.2 檢測機構應依照ISO 11452-1 (Third edition 2005 and amd1:2008) 規範之間隔從<u>20至2,000MHz</u>全部頻寬範圍內執行<u>測試</u>。 替代作法為, 若申請者提供<u>由</u>符合ISO 17025(<u>Second edition 2005 and corrigendum:2006</u>)且經<u>評鑑合格</u>之實驗室所出具之全頻<u>寬測試數據</u>, 檢測機構可<u>選擇在範圍內</u>選擇<u>減少</u>頻率點數, 如<u>27, 45, 65, 90, 120, 150, 190, 230, 280, 380, 450, 600, 750, 900, 1,300, 及 1,800 MHz</u>, 以確認ESA符合本節規範。

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
	annex.		
4.1.2. Test methodology The "substitution method" shall be used to establish the test field conditions according ISO 11452-2. The test shall be performed with vertical polarization.	4.1.2. Test methodology The "substitution method" shall be used to establish the test field conditions according ISO 11452-2, second edition 2004. The test shall be performed with vertical polarization.	11.4.1.2 <u>試驗</u> 依據：應使用 ISO 11452-2之"替代方法"建立<u>試驗</u>場地之狀態。<u>試驗</u>應以垂直極化之方式執行。	11.4.1.2 <u>測試</u> 依據：應使用 ISO 11452-2, 2004 第二版之"替代方法"建立<u>測試</u>場地之狀態。<u>測試</u>應以垂直極化之方式執行。
4.1.2.1. For ESAs in configuration "REESS charging mode coupled to the power grid" the test arrangement shall be according to Appendix 3 to this annex.		11.4.1.2.1 對於在「REESS充電模式<u>連結至電網 (Power grid)</u>」配置之所有ESA，試驗整備應依據11.5之規範。	8
4.1.2.1.1. The shielding configuration shall be according to the vehicle series configuration. Generally all shielded HV parts shall be properly connected with low impedance to ground (e. g. AN, cables, connectors etc.). ESAs and loads shall be connected to ground. The external HV power supply shall be connected via feed-through-filtering.		11.4.1.2.1.1 屏蔽之配置應依據車輛系列的組態。通常所有被屏蔽之高壓部件應被適當地以低阻抗連接到地面（如模擬網路、電纜及連接器等）。所有ESA與負載應連接到地面。外部高壓電源應連接饋通濾波器（Feed-through-filtering）。	
4.1.2.1.2. Unless otherwise specified the length of the LV harness and the HV harness parallel to the front edge of the ground plane shall be 1.500 mm (+/- 75 mm). The total length of the test harness including the connector shall be 1,700 mm (+300/-0 mm). The distance between the LV harness and the H V harness shall be 100 mm (+100/-0 mm).		11.4.1.2.1.2 除非另有規定，平行於接地平面前緣之低壓導線和高壓導線之長度應為一五〇〇公釐（正/負七五公釐）。試驗導線總長度，包括連接器，應為一七〇〇公釐（正三〇〇/負〇公釐）。低壓導線和高壓導線之間的距離應為一〇〇公釐（正一〇〇/負〇公釐）。	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
4.1.2.1.3. All of the harnesses shall be placed on a non-conductive, low relative permittivity material ($\epsilon_r \leq 1.4$), at 50 mm (+/- 5 mm) above the ground plane.		11.4.1.2.1.3 所有導線應放置於非導電性且具有相對低的介電常數(ϵ_r 小於等於一·四)的材料上,且在接地平面上方五〇公釐(正/負五公釐)處。	
4.1.2.1.4. Shielded supply lines for HV+ and HV- line and three phase lines may be coaxial cables or in a common shield depending on the used plug system. The original HV-harness from the vehicle may be used optionally.		11.4.1.2.1.4 高壓正線和高壓負線之屏蔽電源線(Shielded supply line)及三相線可能是同軸電纜或於公共屏蔽內(取決於所使用的插頭系統)。可選擇使用車輛原有之高壓負導線。	
4.1.2.1.5. Unless otherwise specified, the ESA case shall be connected to the ground plane either directly or via defined impedance.		11.4.1.2.1.5 除非另有規定,ESA之外殼應直接或是經由要求之阻抗連接到接地平面。	
4.1.2.1.6. For onboard chargers, the AC/DC power lines shall be placed the furthest from the antenna (behind LV and HV harness). The distance between the AC/DC power lines and the closest harness (LV or HV) shall be 100 mm (+100/-0 mm).		11.4.1.2.1.6 對於車載充電器,交流/直流電源線應放置在離天線最遠處(低壓和高壓導線之後方)。交流/直流電源線和最接近的導線(低壓或高壓)之間的距離應為一〇〇公釐(正一〇〇公釐/負〇公釐)。	
4.1.2.1.7. Unless otherwise specified, the configuration with the LV harness closer to the antenna shall be tested.		11.4.1.2.1.7 除非另有規定,應以低壓導線較接近天線之配置進行試驗。	
4.2. TEM cell testing (see Appendix 2 to this annex) 【請參考頁末表格】 4.2.2. Test methodology The test shall be performed according ISO	4.2. (see Appendix 2 to this annex) 【請參考頁末表格】 ... 4.2.2. Test methodology The test shall be performed according ISO 11452-3, third edition 2001.	11.4.2 橫向電磁波室試驗(TEM cell testing, 參考表一二) (請參考頁末表格) ... 11.4.2.2 試驗依據:試驗應依照ISO 11452-3執行。檢測機構應視ESA	11.4.2 橫向電磁波室測試(參考表一二) (請參考頁末表格) ... 11.4.2.2 測試依據:測試應依照 ISO 11452-3, 2001 第三版執行。檢測機

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
11452-3. Depending on the ESA to be tested the Technical Service shall chose the method of maximum field coupling to the ESA or to the wiring harness inside the TEM-cell.	Depending on the ESA to be tested the Technical Service shall chose the method of maximum field coupling to the ESA or to the wiring harness inside the TEM-cell.	<u>試驗</u> 而定，選擇能連接ESA或橫向電磁波室內部纜線設備之最大場方法。	構應視 ESA <u>測試</u> 而定，選擇能連接ESA 或橫向電磁波室內部纜線設備之最大場方法。
4.3.2. Test methodology The test shall be performed according to ISO 11452-4 on a test bench. As an alternative the ESA may be tested while installed in the vehicle according to ISO 11451-4 with the following characteristics: (a) The injection probe shall be positioned in 150 mm distance to the ESA to be tested; (b) The reference method shall be used to calculate injected currents from forward power; (c) The frequency range of the method is limited by the injection probe specification.	4.3.2. Test methodology The test shall be performed according to ISO 11452-4, third edition 2005 and Corrigendum 1:2009 on a test bench. As an alternative the ESA may be tested while installed in the vehicle according to ISO 11451-4 (first edition 1995) with the following characteristics: (a) The injection probe shall be positioned in 150 mm distance to the ESA to be tested; (b) The reference method shall be used to calculate injected currents from forward power; (c) The frequency range of the method is limited by the injection probe specification.	11.4.3.2 <u>試驗</u> 依據： <u>試驗</u> 在 <u>試驗</u> 平台上應依據 ISO 11452-4 執行。ESA 可依據 ISO 11451-4 所述下列特性擇其一裝設在車輛上。 (a)注入探針應置放於距離 ESA 一五〇公釐處待測。 (b)參考方法應用順向功率來計算被注入之電流。 (c)此方法之頻率範圍被注入探針規範所限制。	11.4.3.2 <u>測試</u> 依據： <u>測試</u> 在 <u>測試</u> 平台上應依據 ISO 11452-4 (<u>Third edition 2005 and corrigendum 1:2009</u>) 執行。ESA 可依據 ISO 11451-4 (<u>1995 第一版</u>)所述下列特性擇其一裝設在車輛上。 (a)注入探針應置放於距離 ESA 一五〇公釐處待測。 (b)參考方法應用順向功率來計算被注入之電流。 (c)此方法之頻率範圍被注入探針規範所限制。
4.3.2.1.1. The shielding configuration shall be according to the vehicle series configuration. Generally all shielded HV parts shall be properly connected with low impedance to ground (e. g. AN, cables, connectors, etc.). ESAs and loads shall be connected to ground. The external HV power supply shall be connected via feed-through-filtering.		11.4.3.2.1 <u>屏蔽之配置應依據車輛系列之組態。通常所有被屏蔽的高壓部件應被適當的以低阻抗連接到地面（如模擬網路、電纜及連接器等）。所有 ESA 與負載應連接到地面。外部高壓電源應連接饋通濾波器（Feed-through-filtering）。</u>	
4.3.2.1.2. Unless otherwise specified the		11.4.3.2.2 <u>除非另有規定，低壓導線</u>	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
length of the LV harness and the HV harness shall be 1,700 mm (+300/-0 mm). The distance between the LV harness and the HV harness shall be 100 mm (+100/-0 mm).		<u>和高壓導線之長度應為一七〇〇公釐（正三〇〇/負〇公釐）。低壓導線和高壓導線之間的距離應為一〇〇公釐（正一〇〇/負〇公釐）。</u>	
4.3.2.1.3. All of the harnesses shall be placed on a non-conductive, low relative permittivity material ($\epsilon_r \leq 1.4$), at (50 +/-5) mm above the ground plane.		<u>11.4.3.2.3 所有導線應放置於非導電性且具有相對低的介電常數（ϵ_r 小於等於一·四）的材料上，且在接地平面上方五〇公釐（正/負五公釐）處。</u>	
4.3.2.1.4. Shielded supply lines for HV+ and HV- line and three phase lines may be coaxial cables or in a common shield depending on the used plug system. The original HV-harness from the vehicle may be used optionally.		<u>11.4.3.2.4 高壓正線和高壓負線之屏蔽電源線（Shielded supply line）及三相線可能是同軸電纜或於公共屏蔽內（取決於所使用的插頭系統）。可選擇使用車輛原有之高壓負導線。</u>	
4.3.2.1.5. Unless otherwise specified, the ESA case shall be connected to the ground plane either directly or via defined impedance.		<u>11.4.3.2.5 除非另有規定，ESA之外殼應直接或是經由要求之阻抗連接到接地平面。</u>	
4.3.2.1.6. Unless otherwise specified the test shall be performed with the injection probe placed around each of the following harnesses: (a) Low voltage harness; (b) High voltage harness; (c) AC power lines if applicable; (d) DC power lines if applicable.		<u>11.4.3.2.6 除非另有規定，應以探針位於下述導線周圍時進行試驗：</u> <u>(a)低壓導線；</u> <u>(b)高壓導線；</u> <u>(c)交流電源線(若有配備)；</u> <u>(d)直流電源線(若有配備)。</u>	
4.4. Stripline testing 4.4.1. Test method	4.4. Stripline testing 4.4.1. Test method	11.4.4 帶線試驗（Stripline testing） 11.4.4.1 試驗方法：此試驗方法是由	11.4.4 帶線測試 11.4.4.1 測試方法：此測試方法是由

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
This test method consists of subjecting the wiring harness connecting the components in an ESA to specified field strengths. 4.4.2. Test methodology The test shall be performed according to ISO 11452-5.	This test method consists of subjecting the wiring harness connecting the components in an ESA to specified field strengths. 4.4.2. Test methodology The test shall be performed according ISO 11452-5, second edition 2002.	<u>導線</u>裝備結合ESA之元件至規定場強所構成。 11.4.4.2 <u>試驗</u>依據：此<u>試驗</u>依據ISO 11452-5。	<u>纜線</u>裝備結合ESA之元件至規定場強所構成。 11.4.4.2 <u>測試</u>依據：此<u>測試</u>依據ISO 11452-5, <u>2002 第二版執行</u>。
4.5. 800 mm stripling testing 4.5.1. Test method The stripline consists of two parallel metallic plates separated by 800 mm. Equipment under test is positioned centrally between the plates and subjected to an electromagnetic field (see Appendix 1 to this annex). This method can test complete electronic systems including sensors and actuators as well as the controller and wiring loom. It is suitable for apparatus whose largest dimension is less than one-third of the plate separation.	4.5. 800 mm stripline testing 4.5.1. Test method The stripline consists of two parallel metallic plates separated by 800 mm. Equipment under test is positioned centrally between the plates and subjected to an electromagnetic field (see Appendix 1 to this annex). This method can test complete electronic systems including sensors and actuators as well as the controller and wiring loom. It is suitable for apparatus whose largest dimension is less than one - third of the plate separation.	11.4.5 八〇〇公釐帶線<u>試驗</u> 11.4.5.1 <u>試驗</u>方法：帶線是由二個間隔八〇〇公釐之平行金屬板所構成。<u>試驗</u>時裝備被放在平板中間且視為一電磁場。(參考圖一八、圖一九)。 此方法能<u>試驗</u>完整之電子系統包含與控制器和線路設備相同之感應器及作動器，也可適用在最大尺寸小於平板三分之一之儀器上。	11.4.5 八〇〇公釐帶線<u>測試</u> 11.4.5.1 <u>測試</u>方法：帶線是由二個間隔八〇〇公釐之平行金屬板所構成。<u>測試</u>時裝備被放在平板中間且視為一電磁場。(參考圖一四、圖一五) 此方法能<u>測試</u>完整之電子系統包含與控制器和線路設備相同之感應器及作動器，也可適用在最大尺寸小於平板三分之一之儀器上。
Annex 9 Appendix 3 Absorber chamber test Test configuration for ESA's involved in "REESS charging mode coupled to the power grid". The test shall be performed according to ISO 11452-2. 【請參考頁末表格】		11.5 電波暗室試驗 (Absorber chamber test)：對於在「REESS充電模式連結至電網 (Power grid)」之ESA，試驗配置應依據ISO 11452-2執行，如圖二〇所示。 (請參考頁末表格)	
Annex 9 Appendix 4 BCI test		11.6 大電流注入試驗：對於在「REESS充電模式連結至電網	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
Test configuration for ESAs involved in "REESS charging mode coupled to the power grid". The test shall be performed according to ISO 11452-4. 【請參考頁末表格】		<u>(Power grid)</u> 上之所有ESA，試驗配置應依據ISO 11452-4執行，如圖二一所示。 (請參考頁末表格)	
Annex 10 Method(s) of testing for immunity to and emission of transients of electrical/electronic sub-assemblies ... 2.Immunity against transient disturbances conducted along 12/24 V supply lines. Apply the test pulses 1, 2a, 2b, 3a, 3b and 4 according to the International Standard ISO 7637-2 to the supply lines as well as to other connections of ESAs which may be operationally connected to supply lines. 3.Emission of transient conducted disturbances generated by ESAs on 12/24 V supply lines Measurement according to the International Standard ISO 7637-2 on supply lines as well as to other connections of ESAs which may be operationally connected to supply lines.	Annex 10 Method(s) of testing for immunity to and emission of transients of electrical/electronic sub-assemblies ...□ 2.Immunity against transient disturbances conducted along supply lines Apply the test pulses 1, 2a, 2b, 3a 3b and 4 according to the International Standard ISO 7637-2, (second edition 2004 and Amd1: 2008) to the supply lines as well as to other connections of ESAs which may be operationally connected to supply lines. 3.Emission of transient conducted disturbances generated by esas on supply lines Measurement according to the International Standard ISO 7637-2 (second edition 2004 and Amd1: 2008) on supply lines as well as to other connections of ESAs which may be operationally connected to supply lines.	12. ESA(車上電機/電子裝置)之暫態放射及免疫力試驗方法 ... 12.2 沿一二/二四伏特電源線暫態傳導擾動之免疫力：依據國際標準ISO 7637-2對電源線及其他連接至電源線之ESA接點施加1, 2a, 2b, 3a 3b 及 4之試驗脈波。 12.3 由所有ESA於一二/二四伏特電源線所產生暫態傳導擾動放射：依據國際標準ISO 7637-2量測電源線及其他連接至電源線所有ESA之接點。	12. ESA(車上電機/電子裝置)之暫態放射及免疫力測試方法 ... 12.2 防止沿電源線傳導之暫態干擾之免疫力：依據國際標準ISO 7637-2 (Second edition 2004 and amd1:2008)對電源線及其他連接至電源線之ESA接點施加1, 2a, 2b, 3a 3b 及 4之試驗脈波。 12.3 沿電源線產生傳導之暫態干擾放射：依據國際標準ISO 7637-2(Second edition 2004 and amd1:2008)量測電源線及其他連接至電源線ESA之接點。
Annex 11 Method(s) of testing for emission of	Annex 11 Method(s) of testing for emission of	13. 車輛交流電源線諧波放射之試驗方法	13. 車輛交流電源線諧波輻射之測試方法

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
harmonics generated on AC power lines from vehicle 1. General 1.1. The test method described in this annex shall be applied to vehicles in configuration "REESS charging mode coupled to the power grid" 1.2. Test method This test is intended to measure the level of harmonics generated by vehicle in configuration "REESS charging mode coupled to the power grid" through its AC power lines in order to ensure it is compatible with residential, commercial and light industrial environments. If not otherwise stated in this annex the test shall be performed according to: (a) IEC 61000-3-2 for input current in charging mode ≤ 16 A per phase for class A equipment, (b) IEC 61000-3-12 for input current in charging mode > 16 A and ≤ 75 A per phase.	harmonics generated on AC power lines from vehicle 1. General 1.1. The test method described in this annex shall be applied to vehicles in configuration "RESS charging mode coupled to the power grid" 1.2. Test method This test is intended to measure the level of harmonics generated by vehicle in configuration "RESS charging mode coupled to the power grid" through its AC power lines in order to ensure it is compatible with residential, commercial and light industrial environments. If not otherwise stated in this annex the test shall be performed according to: (a) IEC 61000-3-2 (edition 3.2 - 2005 + Amd1: 2008 + Amd2: 2009) for input current in charging mode < 16 A per phase for class A equipment; (b) IEC 61000-3-12 (edition 1.0 - 2004) for input current in charging mode > 16 A and ≤ 75 A per phase.	13.1 一般規定 13.1.1 本節規範之<u>試驗</u>方法應適用於「<u>REESS</u>充電模式連結至電網 (Power grid)」配置之車輛。 13.1.2 <u>試驗</u>方法：此<u>試驗</u>主要為測量交流電源線「<u>REESS</u>充電模式連結至電網 (Power grid)」配置之車輛，產生諧波<u>放射</u>之等級，確保與住宅區、商業區和輕工業週邊環境相容。若此章節未有所指定，則應依據以下<u>試驗</u>： (a) 依據IEC 61000-3-2，類型A設備在充電模式下每相電流輸入<u>小於等於一六</u>安培， (b) 依據IEC 61000-3-12，在充電模式下每相電流輸入<u>大於一六</u>安培<u>且小於等於七五</u>安培。	13.1 一般規定 13.1.1 本節規範之<u>測試</u>方法應適用於<u>RESS</u>充電模式<u>下</u>連結<u>電源介面</u>配置之車輛。 13.1.2 <u>測試</u>方法：此<u>測試</u>主要為測量交流電源線<u>RESS</u>充電模式<u>下</u>連結<u>電源介面</u>配置之車輛，產生諧波<u>輻射</u>之等級，確保與住宅區、商業區和輕工業週邊環境相容。若此章節未有所指定，則應依據以下<u>測試</u>： (a) 依據IEC 61000-3-2 (<u>Edition 3.2 -2005+amd1:2008+amd2:2009</u>)，類型A設備在充電模式下每相電流輸入<u>≤16</u>安培， (b) 依據IEC 61000-3-12 (<u>Edition 1.0 - 2004</u>)，在充電模式下每相電流輸入<u>>16</u>安培<u>及≤75</u>安培。
2. Vehicle state during tests 2.1. The vehicle shall be in configuration "REESS charging mode coupled to the power grid". The state of charge (SOC) of the traction battery shall be kept between 20 per cent	2. Vehicle State during Tests 2.1. The vehicle shall be in configuration "RESS charging mode coupled to the power grid" at rated power until the AC current reached at least 80 per cent of its initial value.	13.2 車輛於試驗期間的狀態 13.2.1 車輛應處於「<u>REESS</u>充電模式連結至電網 (Power grid)」組態下。 <u>主電池 (Traction battery) 之電量</u>	13.2 車輛於試驗期間的狀態 13.2.1 車輛應處於"<u>RESS</u>連接至電網充電模式"組態下，<u>以額定功率進行充電，直到交流電流達到至少為其初始值之百分之八〇。</u>

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
and 80 per cent of the maximum SOC during the whole time duration of the measurement (this may lead to the measurement being split into different time slots with the need to discharge the vehicle's traction battery before starting the next time slot). If the current consumption can be adjusted, then the current shall be set to at least 80 per cent of its nominal value. The vehicle shall be immobilized, engine OFF. And all other equipment which can be switched on permanently by the driver or passenger should be OFF.		<u>(SOC)，於量測時整個持續時間內應保持在最大電量之百分之二〇至百分之八〇之間(其可能導致被分成在不同時段(Time slot)中進行測量與開始下一個時段之前需要對車輛主電池進行放電)。若電流消耗可被調整，則電流應至少為標稱值之百分之八〇。</u> <u>車輛必須被固定且關閉引擎。所有其他可由駕駛或乘客開啟並維持於開啟狀態之配備應予以關閉。</u>	
3. Test arrangements 3.1. The observation time to be used for the measurements shall be as for quasi-stationary equipment as defined in IEC 61000-3-2, Table 4. 3.2. The test set-up for single phase vehicle in configuration "REESS charging mode coupled to the power grid" is shown in Figure 1 of the appendix to this annex. 【請參考頁末表格】 3.3. The test set-up for three-phase vehicle in configuration "REESS charging mode coupled to the power grid" is shown in Figure 2 of the appendix to this annex.	3. Test Arrangements 3.1. The observation time to be used for the measurements shall be as for quasi-stationary equipment as defined in IEC 61000-3-2 (edition 3.2 - 2005 + Amd1: 2008 + Amd2: 2009) Table 4. 3.2. The test set-up for single phase vehicle in configuration "RESS charging mode coupled to the power grid" is shown in figure 1 of Appendix 1 to this annex. 【請參考頁末表格】 3.3. The test set-up for three-phase vehicle in configuration "RESS charging mode coupled to the power grid" is shown in figure 2 of Appendix 1 to this annex.	13.3 <u>試驗</u>準備 13.3.1 依據IEC 61000-3-2表四，使用擬穩態設備量測觀察時間。 13.3.2 車輛處於「<u>REESS</u>充電模式連結至<u>電網 (Power grid)</u>」配置之狀態，單相充電之試驗配置如<u>圖二</u>所示。 (請參考頁末表格) 13.3.3 車輛處於「<u>REESS</u>充電模式連結至<u>電網 (Power grid)</u>」配置之狀態，三相充電之試驗配置如<u>圖二</u>所示。 (請參考頁末表格)	13.3 <u>測試</u>準備 13.3.1 依據IEC 61000-3-2(<u>Edition 3.2 - 2005 +amd1:2008+amd2:2009</u>)表四，使用擬穩態設備量測觀察時間。 13.3.2 車輛處於<u>RESS</u>充電模式<u>下</u>連結<u>電源介面</u>配置之狀態，單相充電之試驗配置如<u>圖一六</u>所示。 (請參考頁末表格) 13.3.3 車輛處於<u>RESS</u>充電模式<u>下</u>連結<u>電源介面</u>配置之狀態，三相充電之試驗配置如<u>圖一七</u>所示。 (請參考頁末表格)

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
【請參考頁末表格】	【請參考頁末表格】		
4. Test requirements 4.1. The measurements of even and odd current harmonics shall be performed up to the 40th harmonic. 4.2. The limits for single phase or three-phase "REESS charging mode coupled to the power grid" with input current ≤ 16 A per phase are given in Table 3 of paragraph 7.3.2.1. 4.3. The limits for single phase "REESS charging mode coupled to the power grid" with input current > 16 A and ≤ 75 A per phase are given in Table 4 of paragraph 7.3.2.2. 4.4. The limits for three-phase "REESS charging mode coupled to the power grid" with input current > 16 A and ≤ 75 A per phase are given in Table 5 of paragraph 7.3.2.2. 4.5. For three-phase "REESS charging mode coupled to the power grid" with input current > 16 A and ≤ 75 A per phase, when at least one of the three conditions a), b) or c) described in clause 5.2. of IEC 61000-3-12 is fulfilled, then the limits given in Table 6 of paragraph 7.3.2.2. can be applied.	4. Test Requirements 4.1. The measurements of even and odd current harmonics shall be performed up to the fortieth harmonic. 4.2. The limits for single phase or three-phase "RESS charging mode coupled to the power grid" with input current ≤ 16 A per phase are given in paragraph 7.3.2.1. Table 3. 4.3. The limits for single phase "RESS charging mode coupled to the power grid" with input current > 16 A and ≤ 75 A per phase are given in paragraph 7.3.2.2. Table 4. 4.4. The limits for three-phase "RESS charging mode coupled to the power grid" with input current > 16 A and ≤ 75 A per phase are given in paragraph 7.3.2.2. Table 5. 4.5. For three-phase "RESS charging mode coupled to the power grid" with input current > 16 A and ≤ 75 A per phase, when at least one of the three conditions a), b), c) described - 78 - in IEC 61000-3-12 (edition 1.0 - 2004) clause 5.2, is fulfilled then the limits given in paragraph 7.3.2.2. Table 6 can be applied.	13.4 試驗 要求 13.4.1 測量偶數及奇數的電流諧波，應執行到第四 <u>0</u> 次的諧波。 13.4.2 單相或三相「 REESS 充電模式連結至 電網 (Power grid) 」配置之限制，應依5.3.2.1表三之規定，每相電流輸入 <u>小於等於一六</u> 安培。 13.4.3 單相「 REESS 充電模式連結至 電網 (Power grid) 」配置之限制，依5.3.2.2表四之規定，每相電流輸入 <u>大於一六</u> 安培 <u>且小於等於七五</u> 安培。 13.4.4 三相「 REESS 充電模式連結至 電網 (Power grid) 」配置之限制，依5.3.2.2表五之規定，每相電流輸入 <u>大於一六</u> 安培 <u>且小於等於七五</u> 安培。 13.4.5 依據IEC 61000-3-12 5.2條款 a)、b)、c)三個條件中之一，對於三相「 REESS 充電模式連結至 電網 (Power grid) 」配置之車輛每相電流輸入 <u>大於一六</u> 安培 <u>且小於等於七五</u> 安培，應能滿足5.3.2.2表六之限制。	13.4 測試 要求 13.4.1 測量偶數及奇數的電流諧波，應執行到第四 <u>十</u> 次的諧波。 13.4.2 單相或三相 RESS 充電模式 <u>下</u> 連結 電源介面 配置之限制，應依5.3.2.1表三之規定，每相電流輸入 <u>≤ 16</u> 安培。 13.4.3 單相 RESS 充電模式 <u>下</u> 連結 電源介面 配置之限制，依5.3.2.2表四之規定，每相電流輸入 <u>> 16安培及≤ 75安培</u> 。 13.4.4 三相 RESS 充電模式 <u>下</u> 連結 電源介面 配置之限制，依5.3.2.2表五之規定，每相電流輸入 <u>> 16安培及≤ 75安培</u> 。 13.4.5 依據 IEC 61000-3-12 (Edition 1.0 - 2004) 5.2 條款 a)、b)、c)三個條件中之一，對於三相 RESS 充電模式 <u>下</u> 連結 電源介面 配置之車輛每相電流輸入 <u>> 16 安培及≤ 75 安培</u> ，應能滿足 5.3.2.2 表六之限制。
Annex 12 Method(s) of testing for emission of	Annex 12 Method(s) of testing for emission of voltage	14.車輛交流電源線的電壓變化、電壓波動及閃爍放射之 試驗 方法	14.車輛交流電源線的電壓變化、電壓波動及閃爍放射之 測試 方法

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
voltage changes, voltage fluctuations and flicker on AC power lines from vehicle 1. General 1.1. The test method described in this annex shall be applied to vehicles in configuration "REESS charging mode coupled to the power grid" 1.2. Test method This test is intended to measure the level of voltage changes, voltage fluctuations and flicker generated by vehicle in configuration "REESS charging mode coupled to the power grid" through its AC power lines in order to ensure it is compatible with residential, commercial and light industrial environments. If not otherwise stated in this annex the test shall be performed according to: (a) IEC 61000-3-3 for rated current in "REESS charging mode" ≤ 16 A per phase and not subjected to conditional connection; (b) IEC 61000-3-11 for rated current in "REESS charging mode" > 16 A and ≤ 75 A per phase and subjected to conditional connection.	changes, voltage fluctuations and flicker on AC power lines from vehicle 1. General 1.1. The test method described in this annex shall be applied to vehicles in configuration "RESS charging mode coupled to the power grid" 1.2. Test method This test is intended to measure the level of voltage changes, voltage fluctuations and flicker generated by vehicle in configuration "RESS charging mode coupled to the power grid" through its AC power lines in order to ensure it is compatible with residential, commercial and light industrial environments. If not otherwise stated in this annex the test shall be performed according to: (a) IEC 61000-3-3 (edition 2.0 - 2008) for rated current in "RESS charging mode" ≤ 16 A per phase and not subjected to conditional connection, (b) IEC 61000-3-11 (edition 1.0 - 2000) for rated current in "RESS charging mode" > 16 A and ≤ 75 A per phase and subjected to conditional connection.	14.1 一般規定 14.1.1 本節規範之<u>試驗</u>方法應適用於「<u>REESS</u>充電模式連結至<u>電網 (Power grid)</u>」配置之車輛。 14.1.2 <u>試驗</u>方法：此<u>試驗</u>主要為<u>量測</u>交流電源線「<u>REESS</u>充電模式連結至<u>電網 (Power grid)</u>」配置之車輛，產生電壓變化、電壓波動及閃爍放射之等級，確保與住宅區、商業區和輕工業週邊環境相容。若此章節未有所指定，則應依據以下<u>試驗</u>： (a) 依據IEC 61000-3-3，「<u>REESS</u>充電模」式下每相額定電流<u>小於等於一六</u>安培，且不受特定條件加以連接下<u>試驗</u>， (b) 依據IEC 61000-3-11，「<u>REESS</u>充電模」式下每相額定電流<u>大於一六</u>安培<u>且小於等於七五</u>安培，且受特定條件連接下<u>試驗</u>。	14.1 一般規定 14.1.1 本節規範之<u>測試</u>方法應適用於<u>RESS</u>充電模式<u>下</u>連結<u>電源介面</u>配置之車輛。 14.1.2 <u>測試</u>方法：此<u>測試</u>主要為<u>測量</u>交流電源線<u>RESS</u>充電模式<u>下</u>連結<u>電源介面</u>配置之車輛，產生電壓變化、電壓波動及閃爍放射之等級，確保與住宅區、商業區和輕工業週邊環境相容。若此章節未有所指定，則應依據以下<u>測試</u>： (a) 依據IEC 61000-3-3 (<u>Edition 2.0 - 2008</u>)，<u>RESS</u>充電模式<u>下</u>每相額定電流<u>≤16</u>安培，且不受特定條件加以連接下<u>檢測</u>， (b) 依據IEC 61000-3-11 (<u>Edition 1.0 - 2000</u>)，<u>RESS</u>充電模式<u>下</u>每相額定電流<u>>16</u>安培<u>及≤75</u>安培，且受特定條件連接下<u>檢測</u>。
2. Vehicle state during tests 2.1. The vehicle shall be in configuration "REESS charging mode coupled to the	2. Vehicle State during Tests 2.1. The vehicle shall be in configuration "RESS charging mode coupled to the power	14.2 車輛於試驗期間的狀態 14.2.1 車輛應處於「<u>REESS</u>充電模式<u>連接至電網 (Power grid)</u>」組態	14.2 車輛於試驗期間的狀態 14.2.1 車輛應處於「<u>RESS</u>連接至<u>電網</u>充電模式」組態下，<u>以額定功率</u>

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
power grid". The state of charge (SOC) of the traction battery shall be kept between 20 per cent and 80 per cent of the maximum SOC during the whole time duration of the measurement (this may lead to the measurement being split into different time slots with the need to discharge the vehicle's traction battery before starting the next time slot). If the current consumption can be adjusted, then the current shall be set to at least 80 per cent of its nominal value. The vehicle shall be immobilized, engine OFF. And all other equipment which can be switched on permanently by the driver or passenger should be OFF.	grid" at rated power until the AC current reached at least 80 per cent of its initial value.	下。 <u>主電池 (Traction battery) 之電量 (SOC)，於量測時整個持續時間內應保持在最大電量之百分之二〇至百分之八〇之間(其可能導致被分成在不同時段(Time slot) 中進行測量與開始下一個時段之前需要對車輛主電池進行放電)。若電流消耗可被調整，則電流應至少為標稱值之百分之八〇。</u> <u>車輛必須被固定且關閉引擎。所有其他可由駕駛或乘客開啟並維持於開啟狀態之配備應予以關閉。</u>	<u>進行充電，直到交流電流達到至少為其初始值之百分之八〇。</u>
3. Test arrangements 3.1. The tests for vehicle in configuration "REESS charging mode coupled to the power grid" with rated current ≤ 16 A per phase and not subjected to conditional connection shall be performed according to paragraph 4. of IEC 61000-3-3. 3.2. The tests for vehicle in configuration "REESS charging mode coupled to the power grid" with rated current > 16 A and ≤ 75 A per phase and subjected to	3. Test Arrangements 3.1. The tests for vehicle in configuration "RESS charging mode coupled to the power grid" with rated current ≤ 16 A per phase and not subjected to conditional connection shall be performed according IEC 61000-3-3 (edition 2.0 - 2008) paragraph 4. 3.2. The tests for vehicle in configuration "RESS charging mode coupled to the power grid" with rated current > 16 A and ≤ 75 A per phase and subjected to conditional connection shall be performed according	14.3 <u>試驗</u>準備 14.3.1 依據IEC 61000-3-3章節4，車輛處於「<u>REESS</u>充電模式連結至<u>電網 (Power grid)</u>」之配置，每相額定電流<u>小於等於一六</u>安培，且不受特定條件連接下<u>試驗</u>。 14.3.2 依據IEC 61000-3-11章節6，車輛處於「<u>REESS</u>充電模式連結至<u>電網 (Power grid)</u>」之配置，每相額定電流<u>大於一六</u>安培<u>且小於等於七五</u>安培，且受特定條件連接下<u>試驗</u>。	14.3 <u>測試</u>準備 14.3.1 依據IEC 61000-3-3 (<u>Edition 2.0 - 2008</u>) 章節4，車輛處於RESS充電模式<u>下</u>連結<u>電源介面</u>之配置，每相額定電流<u>≤ 16</u>安培，且不受特定條件連接下<u>檢測</u>。 14.3.2 依據IEC 61000-3-11 (Edition 1.0 - 2000) 章節6，車輛處於<u>RESS</u>充電模式<u>下</u>連結<u>電源介面</u>之配置，每相額定電流<u>> 16安培及≤ 75安培</u>，且受特定條件連接下<u>檢測</u>。 14.3.3 車輛處於<u>RESS</u>充電模式<u>下</u>連

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
conditional connection shall be performed according to paragraph 6. of IEC 61000-3-11. 3.3. The test set-up for vehicle in configuration "REESS charging mode coupled to the power grid" is shown in Figures 1a and 1b of the appendix to this annex. 【請參考頁末表格】	IEC 61000-3-11 (edition 1.0 - 2000) paragraph 6. 3.3. The test set-up for vehicle in configuration "RESS charging mode coupled to the power grid" is shown in figure 1 of Appendix 1 to this annex. 【請參考頁末表格】	14.3.3 車輛處於「REESS 充電模式連結至電網 (Power grid)」之配置狀態，試驗配置如圖二四之一及圖二四之二所示。 (請參考頁末表格)	結電源介面之配置狀態，試驗配置如一八所示。 (請參考頁末表格)
4. Test Requirements ... 4.2. The limits for vehicle in configuration "REESS charging mode coupled to the power grid" with input current ≤ 16 A per phase and not subjected to conditional connection are given in paragraph 7.4.2.1. 4.3. The limits for vehicle in configuration "REESS charging mode coupled to the power grid" with input current > 16 A and ≤ 75 A per phase and subjected to conditional connection are given in paragraph 7.4.2.2.	4. Test Requirements ... 4.2. The limits for vehicle in configuration "RESS charging mode coupled to the power grid" with input current ≤ 16 A per phase and not subjected to conditional connection are given in paragraph 7.4.2.1. Table 7. 4.3. The limits for vehicle in configuration "RESS charging mode coupled to the power grid" with input current > 16 A and ≤ 75 A per phase and subjected to conditional connection are given in paragraph 7.4.2.2. Table 8.	14.4 試驗要求 ... 14.4.2 車輛「REESS 充電模式連結至電網 (Power grid)」配置之限制，依5.4.2.1，每相額定電流小於等於一六安培，且不受特定條件連接。 14.4.3 車輛「REESS 充電模式連結至電網 (Power grid)」配置之限制，依5.4.2.2，每相額定電流大於一六安培且小於等於七五安培，且受特定條件連接。	14.4 測試要求 ... 14.4.2 車輛RESS 充電模式下連結電源介面配置之限制，依5.4.2.1表七，每相額定電流≤ 16安培，且不受特定條件連接。 14.4.3 車輛RESS 充電模式下連結電源介面配置之限制，依5.4.2.2表八，每相額定電流> 16安培及≤ 75安培，且受特定條件連接。
Annex 13 Method(s) of testing for emission of radiofrequency conducted disturbances on AC or DC power lines from vehicles 1. General 1.1. The test method described in this annex shall be applied to vehicles in	Annex 13 Method(s) of testing for emission of radiofrequency conducted disturbances on AC or DC power lines from vehicle. 1. General 1.1. The test method described in this annex shall be applied to vehicles in	15. 車輛交流及直流電源線的射頻傳導擾動放射試驗方法 15.1 一般規定 15.1.1 本節規範之試驗方法應適用於「REESS 充電模式連結至電網 (Power grid)」配置之車輛。 15.1.2 試驗方法：此試驗主要為測量	15. 車輛交流及直流電源線的射頻傳導干擾放射測試方法 15.1 一般規定 15.1.1 本節規範之測試方法應適用於RESS 充電模式下連結電源介面配置之車輛。 15.1.2 測試方法：此測試主要為測量

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
configuration "REESS charging mode coupled to the power grid". 1.2. Test method This test is intended to measure the level of radio frequency conducted disturbances generated by vehicle in configuration "REESS charging mode coupled to the power grid" through its AC or DC power lines in order to ensure it is compatible with residential, commercial and light industrial environments. If not otherwise stated in this annex the test shall be performed according to CISPR 16- 2-1	configuration "RESS charging mode coupled to the power grid". 1.2. Test method This test is intended to measure the level of radio frequency conducted disturbances generated by vehicle in configuration "RESS charging mode coupled to the power grid" through its AC or DC power lines in order to ensure it is compatible with residential, commercial and light industrial environments. If not otherwise stated in this annex the test shall be performed according to CISPR 16- 2-1 (edition 2.0 - 2008).	交流及直流電源線「REESS充電模式連結至電網 (Power grid)」配置之車輛，產生射頻傳導擾動之等級，確保與住宅區、商業區和輕工業週邊環境相容。若此章節未有所指定，則應依據CISPR 16-2-1試驗。	交流及直流電源線RESS充電模式下連結電源介面配置之車輛，產生射頻傳導干擾之等級，確保與住宅區、商業區和輕工業週邊環境相容。若此章節未有所指定，則應依據CISPR 16-2-1 (Edition 2.0 - 2008) 測試。
2. Vehicle state during tests 2.1. The vehicle shall be in configuration "REESS charging mode coupled to the power grid". The state of charge (SOC) of the traction battery shall be kept between 20 per cent and 80 per cent of the maximum SOC during the whole frequency range measurement (this may lead to split the measurement in different sub-bands with the need to discharge the vehicle's traction battery before starting the next sub-bands). If the current consumption can be adjusted, then the current shall be set to at least 80 per cent of its nominal value.	2. Vehicle state during tests 2.1. The vehicle shall be in configuration "RESS charging mode coupled to the power grid" at rated power until the AC or DC current reached at least 80 per cent of its initial value.	15.2 車輛於試驗期間的狀態 15.2.1車輛應處於「REESS充電模式連結至電網 (Power grid)」組態下。 主電池 (Traction battery) 之電量 (SOC)，於量測時整個頻率範圍內應保持在最大電量之百分之二〇至百分之八〇之間(其可能導致應分別量測不同的副頻(sub-bands)與開始下一個副頻之前需要對車輛主電池進行放電)。如電流消耗可被調整，則電流應至少為標稱值之百分之八〇。 車輛必須被固定且關閉引擎。所有其他可由駕駛或乘客開啟並維持於	15.2 車輛於試驗期間的狀態 15.2.1車輛應處於"RESS連接至電網充電模式"組態下，以額定功率進行充電，直到交流電流達到至少為其初始值之百分之八〇。

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
The vehicle shall be immobilized, engine OFF. And all other equipment which can be switched on permanently by the driver or passenger should be OFF.		<u>開啟狀態之配備應予以關閉。</u>	
3. Test arrangements 3.1. The test shall be performed according to clause 7.4.1. of CISPR 16-2-1 as floor-standing equipment. 3.2. The artificial mains network to be used for the measurement on vehicle is defined in clause 4.3. of CISPR 16-1-2. Artificial networks The AN(s) shall be mounted directly on the ground plane. The cases of the AN(s) shall be bonded to the ground plane. The measuring port of each AN shall be terminated with a 50 ohm load. The AN shall be placed as defined in Figures 1a to 1d. 【請參考頁末表格】 3.3. The test set-up for the connection of the vehicle in configuration "REESS charging mode coupled to the power grid" is shown in Figure 1a to 1d of the appendix to this annex. 3.4. The measurements shall be performed with a spectrum analyser or a scanning receiver. The parameters to be used are defined in	3. Test Arrangements 3.1. The test shall be performed according to CISPR 16-2-1(edition 2.0 - 2008) clause 7.4.1. as floor-standing equipments. 3.2. The artificial mains network to be used for the measurement on vehicle is defined in CISPR 16-1-2 (edition 1.2: 2006), clause 4.3. 3.3. The test set-up for the connection of the vehicle in configuration "RESS charging mode coupled to the power grid" is shown in figure 1 of Appendix 1 to this annex. 3.4. The measurements shall be performed with a spectrum analyser or a scanning receiver. The parameters to be used are respectively defined in CISPR 25 (second edition	15.3 <u>試驗</u> 準備 15.3.1 依據CISPR 16-2-1章節7.4.1落地型設備。 15.3.2 依據CISPR 16-1-2章節4.3，使用模擬網路電源量測車輛。 <u>模擬網路(Artificial network，AN)</u> <u>模擬網路應直接安裝在接地平面上。模擬網路之外殼應與接地平面接合。</u> <u>每一個模擬網路的量測接頭(Port)應給予五0歐姆負載。</u> <u>模擬網路應放置如圖二五之一、圖二五之二的位置。</u> (請參考頁末表格) 15.3.3 車輛處於「 <u>REESS</u> 充電模式連結至 <u>電網 (Power grid)</u> 」之配置狀態，試驗配置如圖二五之一、圖二五之二所示。 15.3.4 應使用頻譜分析儀或掃描接收機執行 <u>試驗</u> 。 <u>所使用</u> 參數應各別參照表一三、表一四。 (請參考頁末表格)	15.3 <u>測試</u> 準備 15.3.1 依據CISPR 16-2-1 (<u>edition 2.0 - 2008</u>)章節7.4.1落地型設備。 15.3.2 依據CISPR 16-1-2 (<u>edition 1.2: 2006</u>)章節4.3，使用模擬網路電源量測車輛。 15.3.3 車輛處於 <u>RESS</u> 充電模式 <u>下</u> 連結 <u>電源介面</u> 之配置狀態，試驗配置如圖一九所示。 15.3.4 應使用頻譜分析儀或掃描接收機執行 <u>測試</u> 。參數應各別參照CISPR 25 (Second edition 2002 and corrigendum 2004) 章節4.5.1 (table

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
Table 1 and Table 2. 【請參考頁末表格】	2002 and corrigendum 2004) clause 4.5.1 (Table 1) and 4.5.2 (Table 2).		1) and 4.5.2 (table 2)。
4. Test Requirements ... 4.2. Measurements shall be performed with average and either quasi-peak or peak detectors. The limits are given in paragraph 7.5. Table 7 for AC lines and Table 8 for DC lines. If peak detectors are used a correction factor of 20 dB as defined in CISPR 12 shall be applied."	4. Test Requirements ...□ 4.2. Measurements shall be performed with average and either quasi-peak or peak detectors. The limits are given in paragraph 7.5. Table 9 for AC lines and Table 10 for DC lines. If peak detectors are used a correction factor of 20 dB as defined in CISPR 12 (fifth edition, 2001 and Amd1: 2005) shall be applied.	15.4 <u>試驗</u> 要求 ... 15.4.2 量測應使用均值或峰值檢波器。限制值如條文5.5之規定，其 <u>表七</u> 係針對交流電源線， <u>表八</u> 係針對直流電源線規範。峰值檢波器如依據CISPR 12採用了 <u>二0</u> 分貝之校正係數，也應得以適用。	15.4 <u>測試</u> 要求 ... 15.4.2 量測應使用均值或峰值檢波器。限制值如條文5.5之規定，其 <u>表九</u> 係針對交流電源線， <u>表一0</u> 係針對直流電源線規範。峰值檢波器如依據CISPR 12 (<u>Fifth edition, 2001 and amd1:2005</u>)採用了 <u>20</u> 分貝之校正係數，也應得以適用
Annex 14 Method(s) of testing for emission of radiofrequency conducted disturbances on network and telecommunication access from vehicles 1. General 1.1. The test method described in this annex shall be applied to vehicles in configuration " <u>REESS</u> charging mode coupled to the power grid". 1.2. Test method This test is intended to measure the level of radio frequency conducted disturbances generated by vehicle in configuration " <u>REESS</u> charging mode coupled to the power grid" through its network and telecommunication access in	Annex 14 Method(s) of testing for emission of radiofrequency conducted disturbances on network and telecommunication access from vehicle 1. General 1.1. The test method described in this annex shall be applied to vehicles in configuration " <u>RESS</u> charging mode coupled to the power grid". 1.2. Test method This test is intended to measure the level of radio frequency conducted disturbances generated by vehicle in configuration " <u>RESS</u> charging mode coupled to the power grid" through its network and telecommunication access in	16. 車輛網路及電信 <u>存取</u> 界面的射頻傳導 <u>擾動</u> 放射 <u>試驗</u> 方法 16.1 一般規定 16.1.1 本節規範之 <u>試驗</u> 方法應適用於「 <u>REESS</u> 充電模式連結 <u>電網 (Power grid)</u> 」配置之車輛。 16.1.2 <u>試驗</u> 方法：此 <u>試驗</u> 主要為測量「 <u>REESS</u> 充電模式連結 <u>電網 (Power grid)</u> 」配置之車輛，經由車輛網路及電信 <u>存取</u> 界面產生射頻傳導 <u>擾動</u> 之等級，確保與住宅區、商業區和輕工業週邊環境相容。若此章節未有所指定，則應依據CISPR 22 <u>試驗</u> 。	16. 車輛網路及電信介面的射頻傳導 <u>干擾</u> 放射 <u>測試</u> 方法 16.1 一般規定 16.1.1 本節規範之 <u>測試</u> 方法應適用於 <u>RESS</u> 充電模式 <u>下</u> 連結 <u>電源介面</u> 配置之車輛。 16.1.2 <u>測試</u> 方法：此 <u>測試</u> 主要為測量 <u>RESS</u> 充電模式 <u>下</u> 連結 <u>電源介面</u> 配置之車輛，經由車輛網路及電信 <u>介面</u> 產生射頻傳導 <u>干擾</u> 之等級，確保與住宅區、商業區和輕工業週邊環境相容。若此章節未有所指定，則應依據CISPR 22 (<u>Edition 6.0 - 2008</u>) <u>測試</u> 。

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
order to ensure it is compatible with residential, commercial and light industrial environments. If not otherwise stated in this annex the test shall be performed according to CISPR 22.	order to ensure it is compatible with residential, commercial and light industrial environments. If not otherwise stated in this annex the test shall be performed according to CISPR 22 (edition 6.0 - 2008).		
2. Vehicle/ state during tests 2.1. The vehicle shall be in configuration "REESS charging mode coupled to the power grid". The state of charge (SOC) of the traction battery shall be kept between 20 per cent and 80 per cent of the maximum SOC during the whole frequency range measurement (this may lead to split the measurement in different sub-bands with the need to discharge the vehicle's traction battery before starting the next sub-bands). If the current consumption can be adjusted, then the current shall be set to at least 80 per cent of its nominal value. The vehicle shall be immobilized, engine OFF. And all other equipment which can be switched on permanently by the driver or passenger should be OFF.	2. Vehicle/ ESA State during Tests 2.1. The vehicle shall be in configuration "REESS charging mode coupled to the power grid" at rated power until the AC or DC current reached at least 80 per cent of its initial value.	16.2. 車輛/ ESA於試驗期間的狀態 16.2.1 車輛應處於「 <u>REESS</u> 充電模式連結 <u>電網 (Power grid)</u> 」充電模式”組態下。 <u>主電池 (Traction battery) 之電量 (SOC)，於量測時整個頻率範圍內應保持在最大電量之百分之二〇至百分之八〇之間(其可能導致應分別量測不同的副頻(sub-bands)與開始下一個副頻之前需要對車輛主電池進行放電)。如電流消耗可被調整，則電流應至少為標稱值之百分之八〇。</u> <u>車輛必須被固定且關閉引擎。所有其他可由駕駛或乘客開啟並維持於開啟狀態之配備應予以關閉。</u>	16.2. 車輛/ ESA於試驗期間的狀態 16.2.1 車輛應處於” <u>REESS</u> 連接至電網充電模式”組態下， <u>以額定功率進行充電，直到交流電流達到至少為其初始值之百分之八〇。</u>
3. Test arrangements 3.1. The test set-up shall be performed according to paragraph 5. of CISPR 22 for conducted emissions.	3. Test Arrangements 3.1. The test set-up shall be performed according to CISPR 22 (edition 6.0 - 2008) paragraph 5 for conducted emissions.	16.3 <u>試驗</u> 準備 16.3.1 依據CISPR 22章節5，執行傳導放射。 16.3.2 依據CISPR 22章節9.6.2，使用	16.3 <u>測試</u> 準備 16.3.1 依據 CISPR 22 CISPR 22 (Edition 6.0 - 2008) 章節5，執行傳導放射。

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
3.2. The impedance stabilisation to be used for the measurement on vehicle is defined in paragraph 9.6.2. of CISPR 22. Impedance Stabilization Communication lines shall be applied to the vehicle through IS(s). The IS(s) shall be mounted directly on the ground plane. The case of the IS(s) shall be bonded to the ground plane. The measuring port of each IS shall be terminated with a 50 ohm load. The IS shall be placed as defined in Figures 1a to 1d.	3.2. The impedance stabilisation to be used for the measurement on vehicle is defined in CISPR 22 (edition 6.0 - 2008) paragraph 9.6.2.	阻抗穩定器量測車輛。 <u>阻抗穩定器 (Impedance Stabilization, IS)</u> <u>通訊線路應經由阻抗穩定器連接於車輛。</u> <u>阻抗穩定器應直接安裝在接地平面上。阻抗穩定器之外殼應與接地平面接合。</u> <u>每一個阻抗穩定器的量測接頭(Port)應給予五〇歐姆負載。應依圖二六之一及圖二六之二置放阻抗穩定器。</u>	16.3.2 依據CISPR 22 (<u>Edition 6.0 - 2008</u>) 章節9.6.2，使用阻抗穩定器量測車輛。
3.3. The test set-up for the connection of the vehicle in configuration "REESS charging mode coupled to the power grid" is shown in Figures 1a to 1d of the appendix to this annex. 【請參考頁末表格】 If it is impossible to guarantee the functionality of vehicle, due to introduction of IS, an alternate method described in CISPR 22 (according to Figures 2a to 2d of this annex) shall be applied. 【請參考頁末表格】	3.3. The test set-up for the connection of the vehicle in configuration "RESS charging mode coupled to the power grid" is shown in figure 1 of Appendix 1 to this annex. 【請參考頁末表格】	16.3.3 車輛處於「<u>REESS</u>充電模式連結電網 (Power grid)」配置之狀態，試驗配置如<u>圖二六之一、圖二六之二所示</u>所示。 (請參考頁末表格) <u>若於採用阻抗穩定器下，無法確保車輛之功能性，可以CISPR 22所規定（如圖二七之一、圖二七之二所示）之方法予以替代。</u> (請參考頁末表格)	16.3.3 車輛處於<u>RESS</u>充電模式<u>下</u>連結<u>電源介面</u>配置之狀態，試驗配置如<u>圖二〇</u>所示。 (請參考頁末表格)
3.4. The measurements shall be performed with a spectrum analyser or a scanning receiver. The parameters to be used are defined in Table 1 and Table 2.	3.4. The measurements shall be performed with a spectrum analyser or a scanning receiver. The parameters to be used are respectively defined in CISPR 25 (second edition 2002 and corrigendum 2004) clause	16.3.4 應使用頻譜分析儀或掃描接收機執行<u>量測</u>。<u>所使用</u>參數應各別參照<u>表一三、表一四</u>。	16.3.4 應使用頻譜分析儀或掃描接收機執行<u>測試</u>。參數應各別參照<u>CISPR 25 (Second edition 2002 and corrigendum 2004) 章節4.5.1 (table 1)及4.5.2 (table 2)</u>。

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
	4.5.1 (Table 1) and 4.5.2 (Table 2).		
4. Test Requirements ... 4.2. Measurements shall be performed with average and either quasi-peak or peak detectors. The limits are given in Table 9 of paragraph 7.6. If peak detectors are used a correction factor of 20 dB as defined in CISPR 12 shall be applied."	4. Test Requirements ... 4.2. Measurements shall be performed with average and either quasi-peak or peak detectors. The limits are given in paragraph 7.6. Table 11 . If peak detectors are used a correction factor of 20 dB as defined in CISPR 12 (fifth edition 2001 and Amd1:2005) shall be applied.	16.4 <u>試驗</u> 要求 ... 16.4.2 量測應使用均值、準峰值或峰值檢波器。限制值如條文5.6之規定。峰值檢波器如依據CISPR 12採用了 <u>二0</u> 分貝之校正係數，也應得以適用。	16.4 <u>測試</u> 要求 ... 16.4.2 量測應使用均值、準峰值或峰值檢波器。限制值如條文5.6之規定。峰值檢波器如依據CISPR 12 (Fifth edition 2001 and amd1:2005)採用了 <u>20</u> 分貝之校正係數，也應得以適用。
Annex 15 Method of testing for immunity of vehicles to electrical fast transient/burst disturbances conducted along AC and DC power lines 1. General 1.1. The test method described in this annex shall only be applied to vehicles. This method concerns only the configuration of the vehicle with " REESS charging mode coupled to the power grid". 1.2. Test method This test is intended to demonstrate the immunity of the vehicle electronic systems. The vehicle shall be subject to electrical fast transient/burst disturbances conducted along AC and DC power lines of the vehicle as described in this annex. The vehicle shall be monitored during the tests.	Annex 15 Method(s) of testing for immunity of vehicles to electrical fast transient/burst disturbances conducted along AC and DC power lines 1. General 1.1. The test method described in this annex shall only be applied to vehicles. This method concerns only the configuration of the vehicle with " RESS in charging mode coupled to the power grid". 1.2. Test method This test is intended to demonstrate the immunity of the vehicle electronic systems. The vehicle shall be subject to electrical fast transient/burst disturbances conducted along AC and DC power lines of the vehicle as described in this annex. The vehicle shall be monitored during the tests. If not otherwise stated in this annex the test	17. 沿車輛交流及直流電源線上的電氣快速暫態 <u>脈波 (Electrical fast transient) / 叢訊擾動 (Burst disturbance) 傳導</u> 免疫力 <u>試驗</u> 方法 17.1 一般規定 17.1.1 本節規範之 <u>試驗</u> 方法應適用於「 <u>REESS</u> 充電模式連結 <u>電網 (Power grid)</u> 」配置之車輛。 17.1.2 <u>試驗</u> 方法：此 <u>試驗</u> 主要為證明車輛電機系統之免疫力。應量測沿車輛交流及直流電源線上的電氣快速暫態 <u>脈波 (Electrical fast transient) / 叢訊擾動 (Burst disturbance) 傳導</u> 。試驗期間車輛應被監控。若此章節未有所指定，則應依據IEC 61000- 4-4 <u>試驗</u> 。	17. 沿車輛交流及直流電源線上的電氣快速暫態 <u>脈衝傳導干擾</u> 免疫力 <u>測試</u> 方法 17.1 一般規定 17.1.1 本節規範之測試方法應適用於 <u>RESS</u> 充電模式 <u>下</u> 連結 <u>電源介面</u> 配置之車輛。 17.1.2 <u>測試</u> 方法：此 <u>測試</u> 主要為證明車輛電機系統之免疫力。應量測沿車輛交流及直流電源線上的電氣快速暫態 <u>脈衝傳導干擾</u> 。 <u>測試</u> 期間車輛應被監控。若此章節未有所指定，則應依據IEC 61000- 4-4(2nd edition 2004) <u>測試</u> 。

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
If not otherwise stated in this annex the test shall be performed according to IEC 61000- 4-4.	shall be performed according to IEC 61000- 4-4: 2nd edition 2004.		
2. Vehicle state during tests in configuration "REESS in charging mode coupled to the power grid" 2.1. The vehicle shall be in an unladen condition except for necessary test equipment. 2.1.1. The vehicle shall be immobilized, engine OFF and in charging mode. 2.1.2. Basic vehicle conditions The paragraph defines minimum test conditions (as far as applicable) and failures criteria for vehicle immunity tests. Other vehicle systems, which can affect immunity related functions, shall be tested in a way to be agreed between manufacturer and Technical Service. 【請參考頁末表格】	2. Vehicle state during tests in configuration "RESS in charging mode coupled to the power grid" 2.1. The vehicle shall be in an unladen condition except for necessary test equipment. 2.1.1. The vehicle shall be immobilized, engine OFF and in charging mode. 2.1.2. Basic vehicle conditions It defines minimum test conditions (as far as applicable) and failures criteria for vehicle immunity tests. Other vehicle systems, which can affect immunity related functions, must be tested in a way to be agreed between manufacturer and Technical Service. 【請參考頁末表格】	17.2 車輛應處於 REESS 充電模式連結 電網 (Power grid) 配置之狀態 17.2.1 除必要 試驗 設備外，車輛應在無負載之狀態。 17.2.1.1應固定車輛、關閉引擎及處於充電模式。 17.2.1.2車輛基本狀態 此段規範最小之 試驗 狀態及車輛免疫力 試驗 失效準則。其他會影響相關功能免疫力之車輛系統，需採用申請者及檢測機構間皆認同之方法 試驗 。 (請參考頁末表格)	17.2 車輛應處於 RESS 充電模式 下 連結 電源介面 配置之狀態 17.2.1 除必要 測試 設備外，車輛應在無負載之狀態。 17.2.1.1應固定車輛、關閉引擎及處於充電模式。 17.2.1.2 車輛基本狀態 此段規範最小之 測試 狀態及車輛免疫力 測試 失效準則。其他會影響相關功能免疫力之車輛系統，需採用申請者及檢測機構間皆認同之方法 測試 。 (請參考頁末表格)
3. Test equipment ... 3.2. The transient/burst generator shall meet the condition defined in paragraph 6.1. of IEC 61000-4-4. 3.3. The coupling/decoupling network shall meet the condition defined in paragraph 6.2. of IEC 61000-4-4. When the coupling/decoupling network cannot be	3. Test equipments ...□ 3.2. The transient/burst generator shall meet the condition defined in paragraph 6.1 of IEC 61000-4-4: 2nd edition, 2004. 3.3. The coupling/decoupling network shall meet the condition defined in paragraph 6.2. of IEC 61000-4-4: 2nd edition, 2004. When the coupling/decoupling network cannot	17.3 試驗 設備 ... 17.3.2 暫態脈波 產生器應符合IEC 61000-4-4章節 6.1規範。 17.3.3 耦合/非耦合網路(CDN)應符合IEC 61000-4-4章節6.2規範。當耦合/非耦合網路(CDN)不能使用交流或直流電源線時，可選擇使用規	17.3 測試 設備 ... 17.3.2 暫態脈衝 產生器應符合IEC 61000-4-4(2nd edition, 2004) 章節 6.1規範。 17.3.3 耦合/非耦合網路(CDN)應符合IEC 61000-4-4(2nd edition, 2004) 章節 6.2 規範。當耦合/非耦合網路(CDN)不能使用交流或直流電源線

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
used on AC or DC power lines, the capacitive coupling clamp defined in paragraph 6.3. of IEC 61000-4-4 can be used.	be used on AC or DC power lines, the capacitive coupling clamp defined in paragraph 6.3. of IEC 61000-4-4: 2nd edition, 2004 , can be used.	定於IEC 61000-4-4章節6.3之容抗式耦合夾具。	時，可選擇使用規定於IEC 61000-4-4(2nd edition, 2004)章節6.3之容抗式耦合夾具。
4. Test Setup 4.1. The vehicle test setup is based on the laboratory type setup as described in paragraph 7.2. of IEC 61000-4-4. ... 4.3. The Technical Service shall perform the test as specified in paragraph 7.7.2.1. Alternatively, if the manufacturer provides measurement from a test laboratory accredited to the applicable parts of ISO 17025 and recognized by the Type Approval Authority , the Technical Service may choose not to perform the test to confirm that the vehicle meets the requirements of this annex.	4. Test Setup 4.1. The vehicle test setup is based on the laboratory type setup as described in paragraph 7.2. of IEC 61000-4-4: 2nd edition, 2004 4.3. The Technical Service shall perform the test as specified in paragraph 7.7.2.1. Alternatively, if the manufacturer provides measurement from a test laboratory accredited to the applicable parts of ISO 17025 (second edition 2005 and Corrigendum: 2006) and recognized by the Approval Authority , the Technical Service may choose not to perform the test to confirm that the vehicle meets the requirements of this annex.	17.4 試驗 配置 17.4.1 車輛之 試驗 配置係依據IEC 61000-4-4章節7.2所規範之實驗室類型之配置。 ... 17.4.3 檢測機構應依照5.7.2.1規範執行 試驗 。 或者 ，申請者提供由符合ISO 17025 認證 且經 主管機構認可 之實驗室所出具之量測資料，檢測機構確認車輛符合本節規範 後 ，可選擇無須進行 試驗 。	17.4 測試 配置 17.4.1 車輛之 測試 配置係依據IEC 61000-4-4(2nd edition, 2004)章節7.2所規範之實驗室類型之配置。 ... 17.4.3 檢測機構應依照5.7.2.1規範執行 測試 。 替代作法為 ，若申請者提供由符合ISO 17025(Second edition 2005 and corrigendum:2006)認證之實驗室所出具之測量資料，檢測機構可選擇無須進行 測試 以確認車輛符合本節規範。
5. Generation of required Test Level ... 5.1.1. The test method according to IEC 61000-4-4 shall be used to establish the test level requirements. 5.1.2. Test phase The vehicle shall be positioned on the ground plane. The electrical fast transient/burst (EFT/B) shall be applied on	5. Generation of required Test Level ... 5.1.1. The test method according to IEC 61000-4-4: 2nd edition, 2004 shall be used to establish the test level requirements. 5.1.2. Test phase The vehicle shall be positioned on the ground plane. The electrical fast transient/burst (EFT/B) shall be applied on	17.5 試驗 等級之判別 ... 17.5.1.1 試驗 應依照IEC 61000-4-4，建立 試驗 等級要求。 17.5.1.2 試驗 程序 車輛應停放於地面上。依 圖二八 ，使用CDN於常態模式下，以電氣快速 暫態脈波 (EFT/ B)之方式施加於車輛的交流/直流電源線。 試驗 配置應	17.5 測試 等級之判別 ... 17.5.1.1 測試 應依照IEC 61000-4-4(2nd edition, 2004)，建立 測試 等級要求。 17.5.1.2 測試 程序 車輛應停放於地面上。依 圖二一 ，使用CDN於常態模式下，以電氣快速 暫態脈衝 (EFT/ B)之方式施加於車

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
the vehicle on the AC/DC power lines in common modes by using CDN as described in Figure 1 of the appendix to this annex . The test set-up shall be noted in the test report."	the vehicle on the AC/DC power lines in common modes by using CDN as described in appendix 1, figure 1 of this annex , The test setup must be noted in the test report.	被記錄於 試驗 報告。	輛的交流/直流電源線。 測試 配置應被記錄於 測試 報告。
Annex 16 Method of testing for immunity of vehicles to surges conducted along AC and DC power lines ... 1.1. The test method described in this annex shall only be applied to vehicles. This method concerns only the configuration of the vehicle with " REESS charging mode coupled to the power grid". 1.2. Test method This test is intended to demonstrate the immunity of the vehicle electronic systems. The vehicle shall be subject to surges conducted along AC and DC power lines of the vehicle as described in this annex. The vehicle shall be monitored during the tests. If not otherwise stated in this annex the test shall be performed according to IEC 61000- 4-5.	Annex 16 Method(s) of testing for immunity of vehicles to surges conducted along AC and DC power lines ... 1.1. The test method described in this annex shall only be applied to vehicles. This method concerns only the configuration of the vehicle with " RESS in charging mode coupled to the power grid". 1.2. Test method This test is intended to demonstrate the immunity of the vehicle electronic systems. The vehicle shall be subject to surges conducted along AC and DC power lines of the vehicle as described in this annex. The vehicle shall be monitored during the tests. If not otherwise stated in this annex the test shall be performed according to IEC 61000- 4-5: 2nd edition 2005 .	18. 車輛交流及直流電源線的突波傳導免疫力 試驗 方法 ... 18.1.1 本節規範之 試驗 方法應適用於 REESS 充電模式連結 電網 (Power grid) 配置之車輛。 18.1.2 試驗 方法：此 試驗 主要是證明車輛電機系統之免疫力。應量測沿車輛交流及直流電源線上的突波傳導。 試驗 期間車輛應被監控。若此章節未有所指定，則應依據IEC 61000- 4-5 試驗 。	18. 車輛交流及直流電源線的突波傳導免疫力 測試 方法 ... 18.1.1 本節規範之 測試 方法應適用於 RESS 充電模式 下 連結 電源介面 配置之車輛。 18.1.2 測試 方法：此 測試 主要是證明車輛電機系統之免疫力。應量測沿車輛交流及直流電源線上的突波傳導。 測試 期間車輛應被監控。若此章節未有所指定，則應依據IEC 61000- 4-5(2nd edition 2005) 測試 。
2. Vehicle state during tests in configuration " REESS in charging mode coupled to the power grid" ...	2. Vehicle state during tests in configuration " RESS in charging mode coupled to the power grid" ...	18.2 車輛應處於「 REESS 充電模式連結 電網 (Power grid) 」之配置狀態 ...	18.2 車輛應處於 RESS 充電模式 下 連結 電源介面 之配置狀態 ...

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
2.1.2. Basic vehicle conditions The paragraph defines minimum test conditions (as far as applicable) and failures criteria for vehicle immunity tests. Other vehicle systems, which can affect immunity related functions, shall be tested in a way to be agreed between manufacturer and Technical Service. 【請參考頁末表格】	2.1.2. Basic vehicle conditions It defines minimum test conditions (as far as applicable) and failures criteria for vehicle immunity tests. Other vehicle systems, which can affect immunity related functions, must be tested in a way to be agreed between manufacturer and Technical Service. 【請參考頁末表格】	18.2.1.2 基本車輛狀態 此段規範最少之 <u>試驗</u> 狀態及車輛免疫力 <u>試驗</u> 失效準則。 其他會影響相關功能免疫力之車輛系統，需採用申請者及檢測機構間皆認同之方法 <u>試驗</u> 。 (請參考頁末表格)	18.2.1.2 基本車輛狀態 此段規範最少之 <u>測試</u> 狀態及車輛免疫力 <u>測試</u> 失效準則。 其他會影響相關功能免疫力之車輛系統，需採用申請者及檢測機構間皆認同之方法 <u>測試</u> 。 (請參考頁末表格)
3. Test equipment 3.1. The test equipment is composed of a reference ground plane (a shielded room is not required), a surge generator and a coupling/decoupling network (CDN). 3.2. The surge generator shall meet the condition defined in paragraph 6.1. of IEC 61000-4- 5. 3.3. The coupling/decoupling network shall meet the condition defined in paragraph 6.3. of IEC 61000-4-5.	3. Test equipments 3.1. The test equipments is composed of a reference ground plane (a shielded room is not required), a surge generator and a coupling/decoupling network (CDN). 3.2. The surge generator shall meet the condition defined in paragraph 6.1 of IEC 61000-4- 5: 2nd edition, 2005. 3.3. The coupling / decoupling network shall meet the condition defined in paragraph 6.3. of IEC 61000-4-5: 2nd edition, 2005.	18.3 <u>試驗</u> 設備 18.3.1 <u>試驗</u> 設備係由一個參考平面(無需屏蔽室)、 <u>突波</u> 產生器 (<u>Surge generator</u>) 及耦合/非耦合網路(CDN)組成。 18.3.2 <u>突波</u> 產生器應符合 IEC 61000-4-5 章節6.1 規範。 18.3.3 耦合/非耦合網路(CDN)應符合 IEC 61000-4-5 章節6.3 規範。	18.3 <u>測試</u> 設備 18.3.1 <u>測試</u> 設備係由一個參考平面(無需屏蔽室)、 <u>暫態脈衝</u> 產生器及耦合/非耦合網路(CDN)組成。 18.3.2 <u>暫態脈衝</u> 產生器應符合 IEC 61000-4-5(2nd edition, 2005) 章節6.1 規範。 18.3.3 耦合/非耦合網路(CDN)應符合 IEC 61000-4-5(2nd edition, 2005) 章節6.3 規範。
4. Test setup 4.1. The vehicle test setup is based on the setup described in paragraph 7.2. of IEC 61000-4- 5. ... 4.3. The Technical Service shall perform the test as specified in paragraph 7.8.2.1. Alternatively, if the manufacturer provides measurement from a test	4. Test Setup 4.1. The vehicle test setup is based on the setup described in paragraph 7.2. of IEC 61000-4- 5: 2nd edition, 2005. ... 4.3. The Technical Service shall perform the test as specified in paragraph 7.8.2.1. Alternatively, if the manufacturer provides measurement from a test	18.4 <u>試驗</u> 配置 18.4.1 車輛之 <u>試驗</u> 配置係依據 IEC 61000-4-5 章節7.2 所規範之實驗室類型之配置。 ... 18.4.3 檢測機構應依照 <u>5.8.2.1</u> 規範執行 <u>試驗</u> 。 <u>或者</u> ，申請者提供由符合 ISO 17025 <u>認證</u> 且經主管機構 <u>認可</u> 之實	18.4 <u>測試</u> 配置 18.4.1 車輛之 <u>測試</u> 配置係依據 IEC 61000-4-5(2nd edition, 2005) 章節7.2 所規範之實驗室類型之配置。 ... 18.4.3 檢測機構應依照 <u>7.8.2.1</u> 規範執行 <u>測試</u> 。 <u>替代作法為</u> ，若申請者提供由符合 ISO 17025(Second edition 2005 and

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
laboratory accredited to the applicable parts of ISO 17025 and recognized by the Type Approval Authority , the Technical Service may choose not to perform the test to confirm that the vehicle meets the requirements of this annex.	laboratory accredited to the applicable parts of ISO 17025 (second edition 2005 and Corrigendum:2006) and recognized by the Approval Authority , the Technical Service may choose not to perform the test to confirm that the vehicle meets the requirements of this annex.	驗室所出具之量測資料，檢測機構確認車輛符合本節規範後，可選擇無須進行 <u>試驗</u> 。	<u>corrigendum:2006</u>)且經主管機關 <u>評鑑合格</u> 之實驗室所出具之測量法，檢測機構可選擇無須進行 <u>測試</u> 以確認車輛符合本節規範。
5. Generation of required test level ... 5.1.1. The test method according to IEC 61000-4-5 shall be used to establish the test level requirements. 5.1.2. Test phase The vehicle shall be positioned on the ground plane. The electrical surge shall be applied on the vehicle on the AC/DC power lines between each line and earth and between lines by using CDN as described in Figures 1 to 4 of the appendix to this annex, The test setup shall be noted in the test report." 【請參考頁末表格】	5. Generation of required Test Level ... 5.1.1. The test method according to IEC 61000-4-5: 2nd edition 2005 shall be used to establish the test level requirements. 5.1.2. Test phase The vehicle shall be positioned on the ground plane. The electrical surge shall be applied on the vehicle on the AC/DC power lines between each line and earth and between lines by using CDN as described in Appendix 1 to this annex. 【請參考頁末表格】	18.5 <u>試驗</u> 等級之判別 ... 18.5.1.1 <u>試驗</u> 應依照IEC 61000-4-5，建立 <u>試驗</u> 等級要求。 18.5.1.2 <u>試驗</u> 程序 車輛應停放於地面上。依 <u>圖二九</u> 、 <u>圖三〇</u> 、 <u>圖三一</u> 及 <u>圖三二</u> ，突波施加於車輛的每一交流/直流電源線之間及CDN線路之間。 <u>試驗配置應被記錄於試驗報告。</u> (請參考頁末表格)	18.5 <u>測試</u> 等級之判別 ... 18.5.1.1 <u>測試</u> 應依照 IEC 61000-4-5(<u>2nd edition 2005</u>)，建立 <u>測試</u> 等級要求。 18.5.1.2 <u>測試</u> 程序 車輛應停放於地面上。依 <u>圖二二</u> ，突波施加於車輛的每一交流/直流電源線之間及CDN線路之間。 (請參考頁末表格) 【(包含圖二二、圖二三、圖二四及圖二五)】
Annex 17 Method(s) of testing for emission of harmonics generated on AC power lines from an ESA 1. General 1.1. The test method described in this annex shall be applied to ESAs in		19 由ESA沿交流電源線所產生諧波放射之試驗方法 19.1 一般規定 19.1.1 本節規範之試驗方法應適用於「REESS充電模式連結電網(Power grid)」配置內之所有 <u>ESA</u> 。	

增/修內容	原內容	修訂國內法規條文案草案	對應國內法規條文
configuration "REESS charging mode coupled to the power grid" 1.2. Test method This test is intended to measure the level of harmonics generated by an ESA in configuration "REESS charging mode coupled to the power grid" through its AC power lines in order to ensure it is compatible with residential, commercial and light industrial environments. If not otherwise stated in this annex the test shall be performed according to: (a) IEC 61000-3-2 for input current in charging mode ≤ 16 A per phase for class A equipment; (b) IEC 61000-3-12 for input current in charging mode > 16 A and ≤ 75 A per phase.		<u>19.1.2 試驗方法：此試驗主要為量測「REESS 充電模式連結電網（Power grid）」配置之ESA，沿其交流電源線所產生諧波放射之等級，確保其與住宅區、商業區和輕工業環境相容。除非另有所規定，應依據下述進行試驗：</u> <u>(a) IEC 61000-3-2，類型A配備在充電模式下每相電流輸入小於等於一六安培；</u> <u>(b) IEC 61000-3-12，在充電模式下每相電流輸入大於一六安培且小於等於七五安培。</u>	
2. ESA state during tests 2.1. The ESA shall be in configuration "REESS charging mode coupled to the power grid". The state of charge (SOC) of the traction battery shall be kept between 20 per cent and 80 per cent of the maximum SOC during the whole time duration of the measurement (this may lead to the		<u>19.2 ESA於試驗期間的狀態</u> <u>19.2.1 ESA應處於「REESS連接到電網（Power grid）充電模式」配置組態</u> <u>主電池（Traction battery）之電量（SOC），於量測時整個持續時間內應保持在最大電量之百分之二〇至百分之八〇之間(其可能導致被分成在不同時段(Time slot)中進</u>	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
measurement being split into different time slots with the need to discharge the vehicle's traction battery before starting the next time slot). If the current consumption can be adjusted, then the current shall be set to at least 80 per cent of its nominal value.		<u>行測量與開始下一個時段之前需要對車輛主電池進行放電)。若電流消耗可被調整，則電流應至少為標稱值之百分之八〇。</u>	
3. Test arrangements 3.1. The observation time to be used for the measurements shall be as for quasi-stationary equipment as defined in Table 4 of IEC 61000-3-2. 3.2. The test set-up for single phase ESA in configuration "REESS charging mode coupled to the power grid" is shown in Figure 1 of the appendix to this annex. 3.3. The test set-up for three-phase ESA in configuration "REESS charging mode coupled to the power grid" is shown in Figure 2 of the appendix to this annex. 【請參考頁末表格】		19.3 試驗準備 19.3.1 <u>量測之觀察時間，依據IEC 61000-3-2 內表四之擬穩態（Quasi-stationary）配備。</u> 19.3.2處於「REESS充電模式連結電網（Power grid）」配置內之單相ESA，試驗配置如圖三三所示。 19.3.3 處於「REESS充電模式連結電網（Power grid）」配置內之三相ESA，試驗配置如圖三四所示。 (請參考頁末表格)	
4. Test requirements 4.1. The measurements of even and odd current harmonics shall be performed up to the 40th harmonic. 4.2. The limits for single phase or three-phase ESAs in configuration "REESS charging mode coupled to the power grid" with input current ≤ 16 A per phase are		19.4 試驗要求 19.4.1 <u>偶數及奇數的電流諧波量測，應執行到第四〇次諧波。</u> 19.4.2 處於「REESS充電模式連結電網（Power grid）」配置內之單相或三相所有ESA，其限制值於每相電流輸入小於等於一六安培者，應	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
given in Table 10 of paragraph 7.11.2.1. 4.3. The limits for single phase ESAs in configuration "REESS charging mode coupled to the power grid" with input current $> 16\text{ A}$ and $\leq 75\text{ A}$ per phase are given in Table 11 of - 187 - paragraph 7.11.2.2. 4.4. The limits for three-phase ESAs in configuration "REESS charging mode coupled to the power grid" with input current $> 16\text{ A}$ and $\leq 75\text{ A}$ per phase are given in paragraph Table 12 of 7.11.2.2. 4.5. For three-phase ESAs in configuration "REESS charging mode coupled to the power grid" with input current $> 16\text{ A}$ and $\leq 75\text{ A}$ per phase, when at least one of the three conditions a), b) or c) described in clause 5.2. of IEC 61000-3-12 is fulfilled, then the limits given in Table 13 of paragraph 7.11.2.2. can be applied.		<u>依4.12.2.1表三之規定。</u> <u>19.4.3 處於「REESS充電模式連結電網 (Power grid)」配置內之單相所有ESA，其限制值於每相電流輸入大於一六安培且小於等於七五安培者，應依4.12.2.2表四之規定。</u> <u>19.4.4 處於「REESS充電模式連結電網 (Power grid)」配置內之三相所有ESA，其限制值於每相電流輸入大於一六安培且小於等於七五安培者，應依4.12.2.2表五之規定。</u> <u>19.4.5 對於所有ESA處於「REESS充電模式連結電網 (Power grid)」配置內之三相所有ESA，其限制值於每相電流輸入大於一六安培且小於等於七五安培，符合IEC 61000-3-12 5.2條款內(a)、(b)及(c)三個條件之一者，應依4.12.2.2表六之規定。</u>	
Annex 18 Method(s) of testing for emission of voltage changes, voltage fluctuations and flicker on AC power lines from an ESA 1. General 1.1. The test method described in this annex shall be applied to ESAs in		<u>20. ESA交流電源線的電壓變化、電壓波動及閃爍 (Flicker) 等放射之試驗方法</u> <u>20.1 一般規定</u> <u>20.1.1 本節規範之試驗方法應適用於處於「REESS充電模式連結電網</u>	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
configuration "REESS charging mode coupled to the power grid" 1.2. Test method This test is intended to measure the level of voltage changes, voltage fluctuations and flicker generated by ESA in configuration "REESS charging mode coupled to the power grid" through its AC power lines in order to ensure it is compatible with residential, commercial and light industrial environments. If not otherwise stated in this annex the test shall be performed according to: (a) IEC 61000-3-3 for rated current in "REESS charging mode" ≤ 16 A per phase and not subjected to conditional connection (b) IEC 61000-3-11 for rated current in "REESS charging mode" > 16 A and ≤ 75 A per phase and subjected to conditional connection		<u>(Power grid) 配置之所有ESA。</u> 20.1.2 試驗方法：此試驗主要為量測「REESS 充電模式連結電網 (Power grid) 配置之ESA，沿其交流電源線所產生電壓變化、電壓波動及閃爍等放射之等級，確保其與住宅區、商業區和輕工業環境相容。除非另有所規定，應依據下述進行試驗： (a) IEC 61000-3-3，在「REESS 充電模式」下每相額定電流<u>小於等於一六</u>安培，且不受特定條件連接之試驗。 (b) IEC 61000-3-11，在「REESS 充電模式」下每相額定電流<u>大於一六</u>安培且<u>小於等於七五</u>安培，並受特定條件連接之試驗。	
2. ESA state during tests 2.1. The ESA shall be in configuration "REESS charging mode coupled to the power grid" The state of charge (SOC) of the traction battery shall be kept between 20 per cent and 80 per cent of the maximum SOC during the whole time duration of the		20.2 ESA應處於「REESS連接到電網 (Power grid) 充電模式」配置主電池 (Traction battery) 之電量 (SOC)，於量測時整個持續時間內應保持在最大電量之百分之二0至百分之八0之間(其可能導致被分成在不同時段(Time slot) 中進行測量與開始下一個時段之前需	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
measurement (this may lead to the measurement being split into different time slots with the need to discharge the vehicle's traction battery before starting the next time slot).. If the current consumption can be adjusted, then the current shall be set to at least 80 per cent of its nominal value.		<u>要對車輛主電池進行放電)。若電流消耗可被調整，則電流應至少為標稱值之百分之八〇。</u>	
3. Test Arrangements 3.1. The tests for ESA in configuration "REESS charging mode coupled to the power grid" with rated current ≤ 16 A per phase and not subjected to conditional connection shall be performed according to paragraph 4. of IEC 61000-3-3. 3.2. The tests for ESA in configuration "REESS charging mode coupled to the power grid" with rated current > 16 A and ≤ 75 A per phase and subjected to conditional connection shall be performed according to paragraph 6. of IEC 61000-3-11. 3.3. The test set-up for ESA in configuration "REESS charging mode coupled to the power grid" is shown in Figures 1a and 1b of the appendix to this annex. 【請參考頁末表格】		<u>20.3 試驗準備</u> <u>20.3.1 處於「REESS充電模式連結電網(Power grid)」配置內之ESA，應依據IEC 61000-3-3 章節4進行，每相額定電流小於等於一六安培，且不受特定條件連接之試驗。</u> <u>20.3.2 處於「REESS充電模式連結電網(Power grid)」配置內之ESA，應依據IEC 61000-3-11 章節6進行，每相額定電流大於一六安培且小於等於七五安培，並受特定條件連接下試驗。</u> <u>20.3.3 處於「REESS充電模式連結電網(Power grid)」配置內之ESA，試驗配置如三五之一、三五之二所示。</u> (請參考頁末表格)	
4. Test requirements 4.1. The parameters to be determined in the		<u>20.4 試驗要求</u> <u>20.4.1 於時域內應被確認之參數，為</u>	

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time-domain are "short duration flicker value", "long duration flicker value" and "voltage relative variation". 4.2. The limits for ESA in configuration "REESS charging mode coupled to the power grid" with input current ≤ 16 A per phase and not subjected to conditional connection are given in paragraph 7.12.2.1. 4.3. The limits for ESA in configuration "REESS charging mode coupled to the power grid" with input current > 16 A and ≤ 75 A per phase and subjected to conditional connection are given in paragraph 7.12.2.2.		<u>短時間閃爍值、長時間閃爍值及電壓之相對變化。</u> <u>20.4.2 處於「REESS充電模式連結電網 (Power grid)」配置內之ESA之限制值，應依據4.13.2.1進行，每相額定電流小於等於一六安培，且不受特定條件連接。</u> <u>20.4.3處於「REESS充電模式連結電網 (Power grid)」配置內之ESA之限制值，應依據4.13.2.2進行，每相額定電流大於一六安培且小於等於七五安培，並受特定條件連接。</u>	
Annex 19 Method(s) of testing for emission of radiofrequency conducted disturbances on AC or DC power lines from an ESA 1. General 1.1. The test method described in this annex shall be applied to ESAs in configuration "REESS charging mode coupled to the power grid". 1.2. Test method This test is intended to measure the level of radio frequency conducted disturbances generated by ESA in configuration "REESS charging mode coupled to the power grid" through its AC		<u>21. 由ESA沿交流及直流電源線之射頻傳導擾動放射 (Emission of radiofrequency conducted disturbance) 試驗方法</u> <u>21.1 一般規定</u> <u>21.1.1 本節規範之試驗方法應適用於「REESS充電模式連結電網 (Power grid)」配置內之所有ESA。</u> <u>21.1.2 試驗方法：此試驗主要為量測交流或直流電源線「REESS充電模式連結電網 (Power grid)」配置內之ESA，沿其交流或直流電源線所產生射頻傳導放射之等級，確保其與住宅區、商業區和輕工業環境</u>	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
or DC power lines in order to ensure it is compatible with residential, commercial and light industrial environments. If not otherwise stated in this annex the test shall be performed according to CISPR 16- 2-1.		<u>相容。除非另有所規定，應依據 CISPR 16-2-1 進行試驗。</u>	
2. ESA state during tests 2.1. The ESA shall be in configuration "REESS charging mode coupled to the power grid". The state of charge (SOC) of the traction battery shall be kept between 20 per cent and 80 per cent of the maximum SOC during the whole frequency range measurement (this may lead to split the measurement in different sub-bands with the need to discharge the vehicle's traction battery before starting the next sub-bands). If the test is not performed with a REESS the ESA should be tested at rated current. If the current consumption can be adjusted, then the current shall be set to at least 80 per cent of its nominal value.		<u>21.2 ESA於試驗期間的狀態</u> <u>21.2.1 ESA應處於「 REESS連接至電網 (Power grid) 充電模式」配置下。</u> <u>主電池 (Traction battery) 之電量 (SOC)，於量測時整個頻率範圍內應保持在最大電量之百分之二0至百分之八0之間(其可能導致應分別量測不同的副頻(sub-bands)與開始下一個副頻之前需要對車輛主電池進行放電)。</u> <u>若係未與REESS一起執行試驗之ESA，則應在額定電流進行試驗。如電流消耗可被調整，則電流應至少為標稱值之百分之八0。</u>	
3. Test arrangements 3.1. The test shall be performed according to clause 7.4.1. of CISPR 16-2-1 as table-standing equipment. 3.2. The artificial mains network to be used for the measurement on vehicle		<u>21.3 試驗準備</u> <u>21.3.1 依據CISPR 16-2-1章節7.4.1 桌上型設備 (Table-standing equipment)。</u> <u>21.3.2 依據CISPR 16-1-2章節4.3，使</u>	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
components is defined in clause 4.3. of CISPR 16-1-2. Artificial networks The AN(s) shall be mounted directly on the ground plane. The cases of the AN(s) shall be bonded to the ground plane. The conducted emissions on AC and DC power lines are measured successively on each power line by connecting the measuring receiver on the measuring port of the related AN, the measuring port of the AN inserted in the other power lines being terminated with a 50 ohm load. The AN shall be placed in front, aligned and on the same side of the vehicle power charging plug. 3.3. The test set-up for the connection of the ESAs in configuration "REESS charging mode coupled to the power grid" is shown in Figure 1 of the appendix to this annex. 3.4. The measurements shall be performed with a spectrum analyser or a scanning receiver. The parameters to be used are defined in Table 1 and Table 2. 【請參考頁末表格】		<u>用模擬網路電源於車輛組件之量測。</u> <u>模擬網路(Artificial network, AN)</u> <u>模擬網路應直接安裝在接地平面上。</u> <u>模擬網路之外殼應與接地平面結合。</u> <u>於交流和直流電源線上之傳導放射，係藉由連接在相關模擬網路的量測接頭(Port)之量測接收機，連續在各電源線上進行量測，插入於其他電源線之模擬網路量測接頭，應給予五〇歐姆負載。</u> <u>模擬網路應置放於前方，並與車輛上的電源充電插頭排列於同一側。</u> <u>21.3.3 處於「REESS充電模式連結電網(Power grid)」配置內之所有ESA，其試驗配置如圖三六所示。</u> <u>21.3.4 應使用頻譜分析儀或掃描接收機執行量測。所使用參數應各別參照表一五與表一六。</u> (請參考頁末表格)	
4. Test Requirements		<u>21.4 試驗要求</u>	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
4.1. The limits apply throughout the frequency range 0.15 to 30 MHz for measurements performed in a semi anechoic chamber or an outdoor test site. 4.2. Measurements shall be performed with average and either quasi-peak or peak detectors. The limits are given in Table 14 of paragraph 7.13.2.1 for AC lines and in Table 15 of paragraph 7.13.2.2. for DC lines. If peak detectors are used a correction factor of 20 dB as defined in CISPR 12 shall be applied.		21.4.1 <u>於半電波暗室 (Semi anechoic chamber) 或戶外試驗場地之量測，應適用頻率範圍在 0.15 至 30 MHz 內之限制值。</u> 21.4.2 <u>量測應使用均值、以及準峰值或峰值檢波器。限制值依4.14.2.1、4.14.2.2規定，其表七係針對交流電源線，表八係針對直流電源線規範。峰值檢波器者，應依據CISPR 12採用 20 分貝之校正係數。</u>	
Annex 20 Method(s) of testing for emission of radiofrequency conducted disturbances on network and telecommunication access from an ESA 1. General 1.1. The test method described in this annex shall be applied to ESAs in configuration "REESS charging mode coupled to the power grid". 1.2. Test method This test is intended to measure the level of radio frequency conducted disturbances generated by ESA in configuration "REESS charging mode coupled to the power grid" through its network and telecommunication access in order to ensure it is compatible with		22. <u>由ESA於網路及電信存取界面之射頻傳導擾動放射試驗方法</u> 22.1 <u>一般規定</u> 22.1.1 <u>「REESS充電模式連結電網 (Power grid)」配置內之所有ESA應於本節規範之試驗方法進行。</u> 22.1.2 <u>試驗方法：此試驗主要為量測「REESS 充電模式連結電網 (Power grid)」配置內之ESA，沿車輛網路及電信存取介面，其產生射頻傳導擾動之等級，確保與住宅區、商業區和輕工業環境相容。除非另有所規定，應依據CISPR 22試驗。</u>	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
residential, commercial and light industrial environments. If not otherwise stated in this annex the test shall be performed according to CISPR 22.			
2. ESA state during tests 2.1. The ESA shall be in configuration "REESS charging mode coupled to the power grid". The state of charge (SOC) of the traction battery shall be kept between 20 per cent and 80 per cent of the maximum SOC during the whole frequency range measurement (this may lead to split the measurement in different sub-bands with the need to discharge the vehicle's traction battery before starting the next sub-bands). If the test is not performed with a REESS the ESA should be tested at rated current. If the current consumption can be adjusted, then the current shall be set to at least 80 per cent of its nominal value.		<u>22.2. ESA於試驗期間之狀態</u> <u>22.2.1 ESA應處於「REESS充電模式連接至電網(Power grid)」配置。主電池(Traction battery)之電量(SOC)，於量測時整個頻率範圍內應保持在最大電量之百分之二〇至百分之八〇之間(其可能導致應分別量測不同的副頻(sub-bands)與開始下一個副頻之前需要對車輛主電池進行放電)。</u> <u>若係未與REESS一起執行試驗之ESA，則應在額定電流進行試驗。如電流消耗可被調整，則電流應至少為標稱值之百分之八〇。</u>	
3. Test arrangements 3.1. The test set-up shall be performed according to paragraphs 8 and 9 of CISPR 22 for conducted emissions. 3.2. Impedance Stabilization Communication lines shall be applied to the ESA through IS(s). The impedance stabilization (IS) to be		<u>22.3 試驗準備</u> <u>22.3.1 依據CISPR 22 章節8及9，執行傳導放射之準備。</u> <u>22.3.2 阻抗穩定器(Impedance stabilization, IS)：通訊線路應經由阻抗穩定器連接於ESA。</u> <u>連接至網路及通訊電纜之阻抗穩定器，應依CISPR 22第9.6.2條之定</u>	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
connected in the network and communication cables is defined in paragraph 9.6.2. of CISPR 22. The IS(s) shall be mounted directly on the ground plane. The conducted emissions on network and telecommunication lines are measured successively on each line by connecting the measuring receiver on the measuring port of the related IS, the measuring port of the IS inserted in the other lines being terminated with a 50 ohm load. The IS shall be placed in front, aligned and on the same side of the vehicle power charging plug. 3.3. The test set-up for the connection of the ESA in configuration "REESS charging mode coupled to the power grid" is shown in Figure 1 of the appendix to this annex. 【請參考頁末表格】 3.4. The measurements shall be performed with a spectrum analyser or a scanning receiver. The parameters to be used are defined in Table 1 and Table 2.		<u>義。</u> <u>阻抗穩定器應直接安裝在接地平面上。</u> <u>網路和電信 (Telecommunication) 線路上之傳導放射，係藉由連接在相關阻抗穩定器之量測接頭之量測接收機，連續在各線路上進行量測，插入於其他線路之阻抗穩定器量測接頭，應給予五 0 歐姆負載。</u> <u>阻抗穩定器應置放於前方，並與車輛上的電源充電插頭排列於同一側。</u> <u>22.3.3 處於「REESS 充電模式連結電網 (Power grid)」配置之 ESA，其連接之試驗配置如圖三七所示。</u> (請參考頁末表格) <u>22.3.4 應使用頻譜分析儀或掃描接收機執行量測。所使用參數應各別參照表一三與表一四。</u>	
4. Test Requirements 4.1. The limits apply throughout the frequency range 0.15 to 30 MHz for		<u>22.4 試驗要求</u> <u>22.4.1 於半電波暗室 (Semi anechoic chamber) 或戶外試驗場地之量</u>	

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measurements performed in a semi anechoic chamber or an outdoor test site. 4.2. Measurements shall be performed with average and either quasi-peak or peak detectors. The limits are given in Table 16 of paragraph 7.14.2.1. If peak detectors are used a correction factor of 20 dB as defined in CISPR 12 shall be applied.		<u>測，應適用頻率範圍在0.1至30 MHz內之限制值。</u> <u>22.4.2量測應使用均值、以及準峰值或峰值檢波器。限制值依4.15.2.1之表九規定。峰值檢波器者，應依據CISPR 12採用20分貝之校正係數。</u>	
Annex 21 Method of testing for immunity of an ESA to electrical fast transient/burst disturbances conducted along AC and DC power lines 1. General 1.1. The test method described in this annex shall only be applied to ESAs. This method applies only to ESA in configuration "REESS charging mode coupled to the power grid". 1.2. Test method This test is intended to demonstrate the immunity of the ESA. The ESA shall be subject to electrical fast transient/burst disturbances conducted along AC and DC power lines of the ESA as described in this annex. The ESA shall be monitored during the tests. If not otherwise stated in this annex the test shall be performed according to IEC 61000- 4-4.		<u>23. 沿交流及直流電源線進行電性快速暫態脈波（Electrical fast transient）/ 叢訊擾動（Burst disturbance）傳導之ESA免疫力試驗方法</u> <u>23.1 一般規定</u> <u>23.1.1 本節規範之試驗方法僅適用於所有ESA。該方法僅適用於「REESS充電模式連結電網（Power grid）」配置內之所有ESA。</u> <u>23.1.2 試驗方法：此試驗主要為確認ESA之免疫力。應量測沿ESA交流及直流電源線上之電性快速暫態脈波/叢訊擾動傳導。試驗期間之ESA應被監控。除非另有規定，應依據IEC 61000- 4-4試驗。</u>	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
2. ESA state during tests in configuration "REESS in charging mode coupled to the power grid" 2.1. Basic ESA conditions The paragraph defines minimum test conditions (as far as applicable) and failures criteria for ESA immunity tests. 【請參考頁末表格】 2.2. Only non-perturbing equipment shall be used while monitoring the ESA. The ESA shall be monitored to determine whether the requirements of this annex are met (e.g. by using (a) video camera(s), a microphone, etc.).		<u>23.2 「REESS充電模式連結電網 (Power grid)」配置內之ESA於試驗期間之狀態</u> <u>23.2.1. 基本ESA狀態：</u> <u>此處規範最小之試驗狀態（在可適用的範圍內）及ESA免疫力試驗失效準則</u> (請參考頁末表格) <u>23.2.2 監控ESA試驗狀態應使用無干擾之設備。</u> <u>應監控ESA(如使用攝影機、麥克風等)，以利判定符合規範。</u>	
3. Test equipment 3.1. The test equipment is composed of a reference ground plane (a shielded room is not required), a transient / burst generator, coupling / decoupling network (CDN) and capacitive coupling clamp. 3.2. The transient/burst generator shall meet the condition defined in paragraph 6.1. of IEC 61000-4-4. 3.3. The coupling/decoupling network shall meet the condition defined in paragraph 6.2. of IEC 61000-4-4. When the coupling/decoupling network cannot be used on AC or DC power lines, the capacitive coupling clamp defined in		<u>23.3 試驗設備</u> <u>23.3.1 試驗設備係由一個參考平面 (無需屏蔽室)、暫態/叢訊產生器、耦合/非耦合網路(CDN)以及電容式耦合夾具。</u> <u>23.3.2 暫態脈波產生器應符合IEC 61000-4-4章節 6.1規範。</u> <u>23.3.3 耦合/非耦合網路(CDN)應符合IEC 61000-4-4章節6.2規範。當耦合/非耦合網路(CDN)不能使用交流或直流電源線時，可選擇使用規定於IEC 61000-4-4章節6.3之容抗式耦合夾具。</u>	

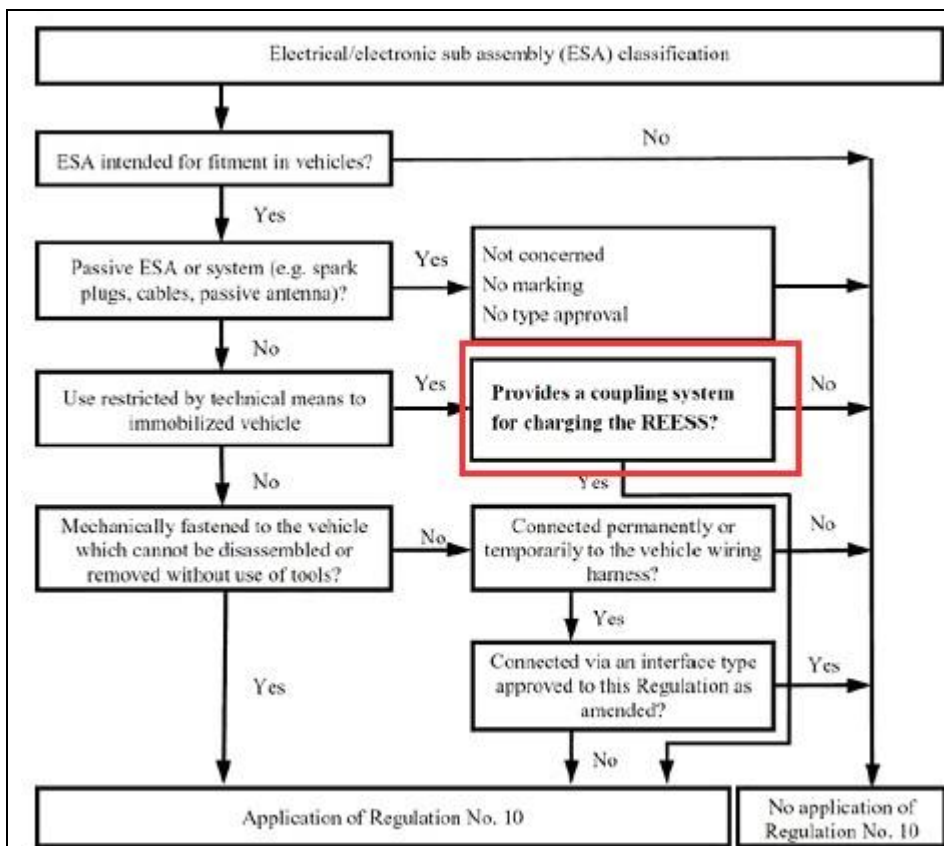
增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
paragraph 6.3. of IEC 61000-4-4 can be used.			
4. Test set-up 4.1. The ESA test setup is based on the laboratory type set-up as described in paragraph 7.2. of IEC 61000-4-4. 4.2. The ESA shall be placed directly on the ground plane. 4.3. The Technical Service shall perform the test as specified in paragraph 7.15.2.1. Alternatively, if the manufacturer provides measurement from a test laboratory accredited to the applicable parts of ISO 17025 and recognized by the Type Approval Authority, the Technical Service may choose not to perform the test to confirm that the ESA meets the requirements of this annex.		<u>23.4 試驗配置</u> <u>23.4.1 ESA之試驗配置係依據IEC 61000-4-4章節7.2所規範之實驗室類型之配置。</u> <u>23.4.2 ESA應直接置放於接地平面上。</u> <u>23.4.3 檢測機構應依照4.15.2.1規範執行試驗。或者，申請者提供由符合ISO 17025認證且經主管機關認可之實驗室所出具之量測資料，檢測機構確認ESA符合本節規範後，可選擇無須進行試驗。</u>	
5. Generation of required test level 5.1. Test methodology 5.1.1. The test method according to IEC 61000-4-4 shall be used to establish the test level requirements. 5.1.2. Test phase The ESA shall be positioned on the ground plane. The electrical fast transient/burst (EFT/B) shall be applied on the ESA on the AC/DC power lines in common modes by using CDN as described in Figure 1 of the appendix to		<u>23.5 試驗等級之判別</u> <u>23.5.1 試驗依據</u> <u>23.5.1.1 試驗應依照 IEC 61000-4-4，建立試驗等級要求。</u> <u>23.5.1.2 試驗程序</u> <u>ESA應置放於接地平面上。依圖三八，使用CDN於常態模式下，以電氣快速暫態脈波/叢訊(EFT/B)之方式施加於ESA的交流/直流電源線。</u> <u>試驗配置應被記錄於試驗報告。</u> (請參考頁末表格)	

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this annex. The test setup shall be noted in the test report. 【請參考頁末表格】			
Annex 22 Method of testing for immunity of ESAs to surges conducted along AC and DC power lines 1. General 1.1. The test method described in this annex shall only be applied to ESAs. This method applies only to ESAs in configuration "REESS charging mode coupled to the power grid". 1.2. Test method This test is intended to demonstrate the immunity of the ESA. The ESA shall be subject to surges conducted along AC and DC power lines of the ESA as described in this annex. The ESA shall be monitored during the tests. If not otherwise stated in this annex the test shall be performed according to IEC 61000- 4-5.		<u>24. 沿交流及直流電源線進行突波傳導之所有ESA免疫力試驗方法</u> <u>24.1 一般規定</u> <u>24.1.1 本節規範之試驗方法僅適用於所有ESA。該方法僅適用於「REESS 充電模式連結電網（Power grid）」配置內之所有ESA。</u> <u>24.1.2 試驗方法：此試驗主要為證明ESA之免疫力。應量測沿ESA交流及直流電源線上之突波傳導。試驗期間ESA應被監控。除非另有規定，應依據IEC 61000- 4-5試驗。</u>	
2. ESA state during tests in configuration "REESS in charging mode coupled to the power grid" 2.1. The ESA shall be in charging mode. 2.1.2. Basic ESA conditions		<u>24.2 ESA於試驗期間「REESS充電模式連結電網（Power grid）」之配置狀態</u> <u>24.2.1 ESA應處於充電模式。</u> <u>24.2.1.2 基本ESA狀態：</u>	

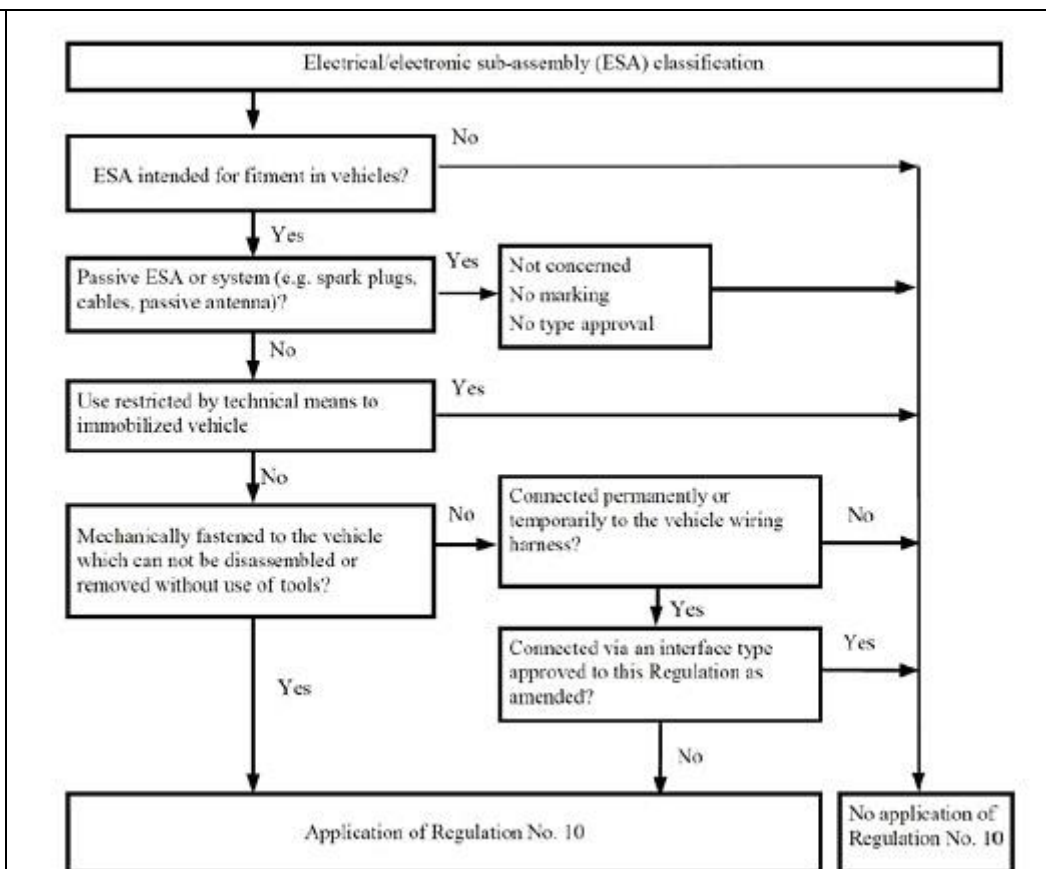
增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
The paragraph defines minimum test conditions (as far as applicable) and failures criteria for ESA immunity tests. 【請參考頁末表格】 2.2. Only non-perturbing equipment shall be used while monitoring the ESA. The ESA shall be monitored to determine whether the requirements of this annex are met (e.g. by using (a) video camera(s), a microphone, etc.).		<u>此處規範最小之試驗狀態(在可適用的範圍內)及ESA免疫力試驗失效準則。</u> (請參考頁末表格) <u>24.2.2 監控ESA試驗狀態應使用無干擾之設備。</u> <u>應監控ESA(如使用攝影機、麥克風等)，以利判定是否符合規範。</u>	
3. Test equipment 3.1. The test equipment is composed of a reference ground plane (a shielded room is not required), a surge generator and a coupling/decoupling network (CDN). 3.2. The surge generator shall meet the condition defined in paragraph 6.1. of IEC 61000-4- 5. 3.3. The coupling/decoupling network shall meet the condition defined in paragraph 6.3. of IEC 61000-4-5.		<u>24.3 試驗設備</u> <u>24.3.1 試驗設備係由一個參考平面(無需屏蔽室)、突波產生器及耦合/非耦合網路(CDN)組成。</u> <u>24.3.2 突波產生器應符合 IEC 61000-4-5 章節6.1 規範。</u> <u>24.3.3 耦合/非耦合網路(CDN)應符合 IEC 61000-4-5 章節6.3 規範。</u>	
4. Test set-up 4.1. The ESA test set-up is based on the set-up described in paragraph 7.2. of IEC 61000-4-5. 4.2. The ESA shall be placed directly on the ground plane. 4.3. The Technical Service shall perform the test as specified in paragraph 7.16.2.1.		<u>24.4 試驗配置</u> <u>24.4.1 ESA之試驗配置係依據 IEC 61000-4-5 章節7.2 所規範之實驗室類型之配置。</u> <u>24.4.2 ESA應直接置放於接地平面上。</u> <u>24.4.3 檢測機構應依照4.16.2.1 規範執行試驗。</u>	

增/修內容	原內容	修訂國內法規條文草案	對應國內法規條文
Alternatively, if the manufacturer provides measurement from a test laboratory accredited to the applicable parts of ISO 17025 and recognized by the Type Approval Authority, the Technical Service may choose not to perform the test to confirm that the ESA meets the requirements of this annex.		<u>或者，申請者提供由符合 ISO 17025 認證且經主管機關認可之實驗室所出具之量測資料，檢測機構確認 ESA 符合本節規範，則可選擇無須進行試驗。</u>	
5. Generation of required test level 5.1. Test methodology 5.1.1. The test method according to IEC 61000-4-5 shall be used to establish the test level requirements. 5.1.2. Test phase The ESA shall be positioned on the ground plane. The electrical surge shall be applied on the ESA on the AC/DC power lines between each line and earth and between lines by using CDN as described in Figures 1 to 4 of the appendix to this annex. The test set-up shall be noted in the test report		<u>24.5 試驗等級之判別</u> <u>24.5.1 試驗依據</u> <u>24.5.1.1 試驗應依照 IEC 61000-4-5，建立試驗等級要求。</u> <u>24.5.1.2 試驗程序</u> <u>ESA 應直接置放於接地平面上。依圖三九、圖四〇、圖四一及圖四二，電機突波施加於 ESA 的每一交流/直流電源線之間及 CDN 線路之間。試驗配置應被記錄於試驗報告。</u>	

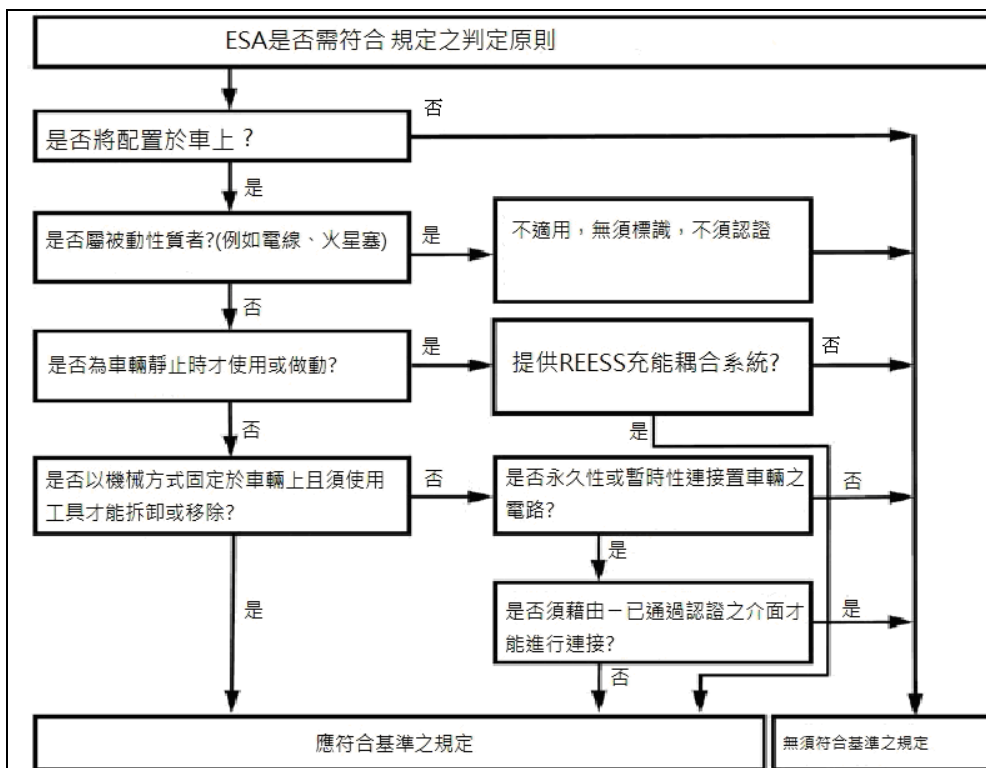
增/修內容	原內容
3. Application for approval 3.2.1. Applicability of this Regulation to ESA:	3. Application for approval 3.2.1. Applicability of this Regulation to ESA:



3.2.1-new-C



3.2.1-old-C (參考一百零二年第三季「車輛型式安全審驗協商會議」會議紀錄)



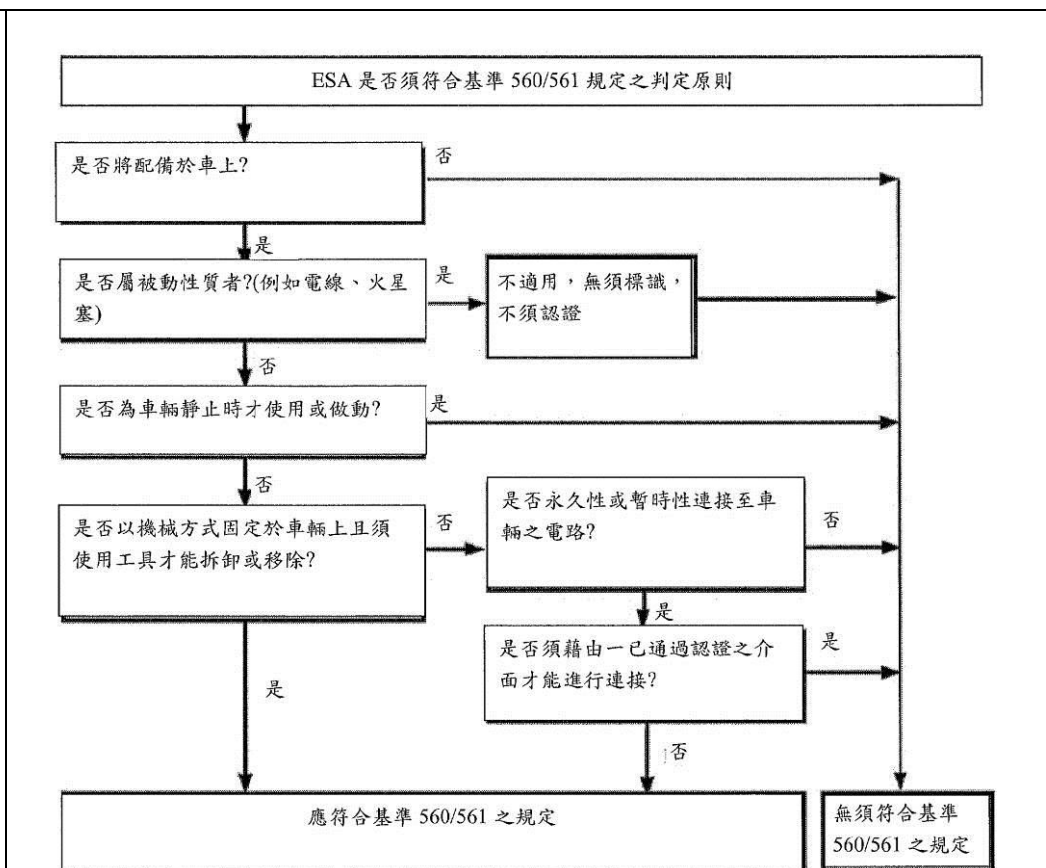
Annex 2A-63-new-E

frequency bands [Hz]	max. output power [W]	antenna position at vehicle, specific conditions for installation and/or use
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Annex 2A-63-C

頻寬 [Hz]	最大輸出功率 [W]	車輛天線位置, 安裝及 / 或使用之特殊條件
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6. Specification in configurations other than REESS charging mode coupled to the power grid
6.7.1 table 1



Annex 2A-63-old-E

frequency bands [Hz]	max. output power [W]	antenna position at vehicle, specific conditions for installation and/or use
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Annex 2A-63-old-C

無

6. Specification in configurations other than REESS charging mode coupled to the power grid
6.9.1 table 2

Table 1: Maximum allowed pulse amplitude

Polarity of pulse amplitude	Maximum allowed pulse amplitude for	
	Vehicles with 12 V systems	Vehicles with 24 V systems
Positive	+ 75 V	+ 150 V
Negative	- 100 V	- 450 V

Table 2: Maximum allowed pulse amplitude

Polarity of pulse amplitude	Maximum allowed pulse amplitude for	
	Vehicles with 12 V systems	Vehicles with 24 V systems
Positive	+75	+150
Negative	-100	-450

6.7.1 table 1 new-C

表一：最大允許脈波振幅

	最大允許脈波振幅	
脈波振幅極性	配備 12 伏特之車輛	配備 24 伏特之車輛
正極	+75	+150
負極	-100	-450

6.9.1 table 2 old-C

表二：最大允許脈波振幅

	最大允許脈波振幅	
脈波振幅極性	配備 12 伏特之車輛	配備 24 伏特之車輛
正極	+75	+150
負極	-100	-450

6.9.1-E

Table 2: Immunity of ESA

Test pulse number	Immunity test level	Functional status for systems:	
		Related to immunity related functions	Not related to immunity related functions
I	III	C	D
2a	III	B	D
2b	III	C	D
3a/3b	III	A	D
4	III	B (for ESA which shall be operational during engine start phases)	D
		C (for other ESA)	

6.8.1-E

Table 1: Immunity of ESA

Test pulse number	Immunity test level	Functional status for systems:	
		Related to immunity related functions	Not related to immunity related functions
1	III	C	D
2a	III	B	D
2b	III	C	D
3a/3b	III	A	D
4	III	B (for ESA which must be operational during engine start phases)	D
		C (for other ESA)	

6.9.1 new-C

6.8.1 old-C

表二：ESA 之免疫力

試驗脈波 號碼	免疫力 <u>試驗</u> 位 準標準	系統功能狀態	
		與免疫力有關之功能	與免疫力無關 之功能
1	III	C	D
2a	III	B	D
2b	III	C	D
3a/3b	III	A	D
4	III	B (在引擎運轉期間， ESA 必須作動)	D
		C (對其他 ESA)	

表一：ESA 之免疫力

試驗脈波 號碼	免疫力 <u>測試</u> 位 準標準	系統功能狀態	
		與免疫力有關之功能	與免疫力無關 之功能
1	III	C	D
2a	III	B	D
2b	III	C	D
3a/3b	III	A	D
4	III	B (在引擎運轉期間， ESA 必須作動)	D
		C (對其他 ESA)	

7.11.2.1 new-E

Table 10: Maximum allowed harmonics (input current ≤ 16 A per phase)

Harmonic number n	Maximum authorized harmonic current A
<i>Odd harmonics</i>	
3	2.3
5	1.14
7	0.77
9	0.40
11	0.33
13	0.21
$15 \leq n \leq 39$	$0.15 \times 15/n$
<i>Even harmonics</i>	
2	1.08
4	0.43
6	0.30
$8 \leq n \leq 40$	$0.23 \times 8/n$

無

7.11.2.1-C

表三：允許最大諧波值（每相電流輸入 ≤ 16 安培）

<u>諧波數 n</u>	<u>允許最大諧波電流 A（安培）</u>
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	<u>奇數諧波</u>	
	<u>3</u>	<u>2.3</u>
	<u>5</u>	<u>1.14</u>
	<u>7</u>	<u>0.77</u>
	<u>9</u>	<u>0.40</u>
	<u>11</u>	<u>0.33</u>
	<u>13</u>	<u>0.21</u>
	<u>15 ≤ n ≤ 39</u>	<u>0.15x15/n</u>
	<u>偶數諧波</u>	
	<u>2</u>	<u>1.08</u>
	<u>4</u>	<u>0.43</u>
	<u>6</u>	<u>0.30</u>
	<u>8 ≤ n ≤ 40</u>	<u>0.23x8/n</u>

| 7.11.2.2-E | 無 |

Table 11: Maximum allowed harmonics (input current > 16 A and ≤ 75 A per phase) for equipment other than balanced three-phase equipment.								
Minimum R _{sce}	Acceptable individual harmonic current I _n /I ₁ %						Maximum current harmonic ratio %	
	I ₃	I ₅	I ₇	I ₉	I ₁₁	I ₁₃	THD	PWHD
33	21.6	10.7	7.2	3.8	3.1	2	23	23
66	24	13	8	5	4	3	26	26
120	27	15	10	6	5	4	30	30
250	35	20	13	9	8	6	40	40
≥ 350	41	24	15	12	10	8	47	47
Relative values of even harmonics lower or equal to 12 shall be lower than 16/n %. Even harmonics greater than 12 are taken into account in the THD and PWHD in the same way than odd harmonics.								
Linear interpolation between successive values of R _{sce} is authorized.								

Table 12: Maximum allowed harmonics (input current > 16 A and ≤ 75 A per phase) for balanced three-phase equipment.

Minimum R _{sce}	Acceptable individual harmonic current I _n /I ₁ %				Maximum current harmonic ratio %	
	I ₅	I ₇	I ₁₁	I ₁₃	THD	PWHD
33	10.7	7.2	3.1	2	13	22
66	14	9	5	3	16	25
120	19	12	7	4	22	28
250	31	20	12	7	37	38
≥ 350	40	25	15	10	48	46

Relative values of even harmonics lower or equal to 12 shall be lower than 16/n %. Even harmonics greater than 12 are taken into account in the THD and PWHD in the same way as odd harmonics.

Linear interpolation between successive values of R_{sce} is authorized.

Table 13: Maximum allowed harmonics (input current > 16 A and ≤ 75 A per phase) for balanced three-phase equipment under specific conditions

Minimum R _{sce}	Acceptable individual harmonic current I _n /I ₁ %				Maximum current harmonic ratio %	
	I ₅	I ₇	I ₁₁	I ₁₃	THD	PWHD
33	10.7	7.2	3.1	2	13	22
≥ 120	40	25	15	10	48	46

Relative values of even harmonics lower or equal to 12 shall be lower than 16/n %. Even harmonics greater than 12 are taken into account in the THD and PWHD in the same way as odd harmonics.

7.11.2.2-C

表四：非平衡式三相設備允許最大諧波值（每相電流輸入>16 安培及≤75 安培）

最小 R _{SCE}	可以接受的個別諧波電流 I _n /I ₁ %						最大諧波電流比率 %	
	I ₃	I ₅	I ₇	I ₉	I ₁₁	I ₁₃	THD	PWHD
33	21.6	10.7	7.2	3.8	3.1	2	23	23
66	24	13	8	5	4	3	26	26
120	27	15	10	6	5	4	30	30
250	35	20	13	9	8	6	40	40
≥350	41	24	15	12	10	8	47	47

無

小於或等於 12 的偶數諧波相對值應低於 $16/n\%$ ，大於 12 的偶數諧波可採用與奇數諧波相同的方式來考慮 THD 和 PWHD。
可允許 R_{SCE} 序列值之間採用線性插值。

表五：平衡三相設備允許最大諧波值（每相電流輸入 >16 安培及 ≤ 75 安培）

<u>最小 R_{SCE}</u>	<u>可以接受的個別諧波電流 I_n/I_1 %</u>					<u>最大諧波 電流比率%</u>
	<u>I_5</u>	<u>I_7</u>	<u>I_{11}</u>	<u>I_{13}</u>	<u>THD</u>	<u>PWHD</u>
<u>33</u>	<u>10.7</u>	<u>7.2</u>	<u>3.1</u>	<u>2</u>	<u>13</u>	<u>22</u>
<u>66</u>	<u>14</u>	<u>9</u>	<u>5</u>	<u>3</u>	<u>16</u>	<u>25</u>
<u>120</u>	<u>19</u>	<u>12</u>	<u>7</u>	<u>4</u>	<u>22</u>	<u>28</u>
<u>250</u>	<u>31</u>	<u>20</u>	<u>12</u>	<u>7</u>	<u>37</u>	<u>38</u>
<u>≥ 350</u>	<u>40</u>	<u>25</u>	<u>15</u>	<u>10</u>	<u>48</u>	<u>46</u>
<u>小於或等於 12 的偶數諧波相對值應低於 $16/n\%$，大於 12 的偶數諧波可採用與奇數諧波相同的方式來考慮 THD 和 PWHD。</u> <u>可允許 R_{SCE} 序列值之間採用線性插值。</u>						

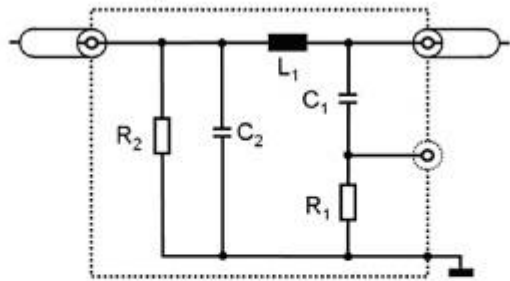
表六：特殊條件下的平衡三相設備允許最大諧波值（每相電流輸入 >16 安培及 ≤ 75 安培）

<u>最小 R_{SCE}</u>	<u>可以接受的個別諧波電流 I_n/I_1 %</u>					<u>最大諧波 電流比率 %</u>
	<u>I_5</u>	<u>I_7</u>	<u>I_{11}</u>	<u>I_{13}</u>	<u>THD</u>	<u>PWHD</u>
<u>33</u>	<u>10.7</u>	<u>7.2</u>	<u>3.1</u>	<u>2</u>	<u>13</u>	<u>22</u>
<u>≥ 120</u>	<u>40</u>	<u>25</u>	<u>15</u>	<u>10</u>	<u>48</u>	<u>46</u>
<u>小於或等於 12 的偶數諧波相對值應低於 $16/n\%$，大於 12 的偶數諧波可採用與奇數諧波相同的方式來考慮 THD 和 PWHD。</u>						

7.13.2.1-E Table 14: Maximum allowed radiofrequency conducted disturbances on AC power lines <table border="1"> <thead> <tr> <th>Frequency (MHz)</th><th>Limits and detector</th></tr> </thead> <tbody> <tr> <td rowspan="3">0.15 to 0.5</td><td>66 to 56 dB microvolts (quasi-peak)</td></tr> <tr> <td>56 to 46 dB microvolts (average)</td></tr> <tr> <td>(linearly decreasing with logarithm of frequency)</td></tr> <tr> <td>0.5 to 5</td><td>56 dB microvolts (quasi-peak)</td></tr> <tr> <td></td><td>46 dB microvolts (average)</td></tr> <tr> <td rowspan="2">5 to 30</td><td>60 dB microvolts (quasi-peak)</td></tr> <tr> <td>50 dB microvolts (average)</td></tr> </tbody> </table>	Frequency (MHz)	Limits and detector	0.15 to 0.5	66 to 56 dB microvolts (quasi-peak)	56 to 46 dB microvolts (average)	(linearly decreasing with logarithm of frequency)	0.5 to 5	56 dB microvolts (quasi-peak)		46 dB microvolts (average)	5 to 30	60 dB microvolts (quasi-peak)	50 dB microvolts (average)	無
Frequency (MHz)	Limits and detector													
0.15 to 0.5	66 to 56 dB microvolts (quasi-peak)													
	56 to 46 dB microvolts (average)													
	(linearly decreasing with logarithm of frequency)													
0.5 to 5	56 dB microvolts (quasi-peak)													
	46 dB microvolts (average)													
5 to 30	60 dB microvolts (quasi-peak)													
	50 dB microvolts (average)													
7.13.2.1 new-C <u>表七：允許交流電源線最大射頻傳導擾動值</u> <table border="1"> <thead> <tr> <th><u>頻率 (MHz)</u></th><th><u>限值及檢波器</u></th></tr> </thead> <tbody> <tr> <td><u>0.15~0.5</u></td><td><u>66~56 dBμV (準峰值)</u> <u>56~46 dBμV (平均值)</u> <u>(隨著頻率的對數呈線性遞減)</u></td></tr> <tr> <td><u>0.5~5</u></td><td><u>56 dBμV (準峰值)</u> <u>46 dBμV (平均值)</u></td></tr> <tr> <td><u>5~30</u></td><td><u>60 dBμV (準峰值)</u> <u>50 dBμV (平均值)</u></td></tr> </tbody> </table>	<u>頻率 (MHz)</u>	<u>限值及檢波器</u>	<u>0.15~0.5</u>	<u>66~56 dBμV (準峰值)</u> <u>56~46 dBμV (平均值)</u> <u>(隨著頻率的對數呈線性遞減)</u>	<u>0.5~5</u>	<u>56 dBμV (準峰值)</u> <u>46 dBμV (平均值)</u>	<u>5~30</u>	<u>60 dBμV (準峰值)</u> <u>50 dBμV (平均值)</u>	無					
<u>頻率 (MHz)</u>	<u>限值及檢波器</u>													
<u>0.15~0.5</u>	<u>66~56 dBμV (準峰值)</u> <u>56~46 dBμV (平均值)</u> <u>(隨著頻率的對數呈線性遞減)</u>													
<u>0.5~5</u>	<u>56 dBμV (準峰值)</u> <u>46 dBμV (平均值)</u>													
<u>5~30</u>	<u>60 dBμV (準峰值)</u> <u>50 dBμV (平均值)</u>													
7.13.2.2-E Table 15: Maximum allowed radiofrequency conducted disturbances on DC power lines <table border="1"> <thead> <tr> <th>Frequency (MHz)</th><th>Limits and detector</th></tr> </thead> <tbody> <tr> <td rowspan="2">0.15 to 0.5</td><td>79 dB microvolts (quasi-peak)</td></tr> <tr> <td>66 dB microvolts (average)</td></tr> <tr> <td rowspan="2">0.5 to 30</td><td>73 dB microvolts (quasi-peak)</td></tr> <tr> <td>60 dB microvolts (average)</td></tr> </tbody> </table>	Frequency (MHz)	Limits and detector	0.15 to 0.5	79 dB microvolts (quasi-peak)	66 dB microvolts (average)	0.5 to 30	73 dB microvolts (quasi-peak)	60 dB microvolts (average)	無					
Frequency (MHz)	Limits and detector													
0.15 to 0.5	79 dB microvolts (quasi-peak)													
	66 dB microvolts (average)													
0.5 to 30	73 dB microvolts (quasi-peak)													
	60 dB microvolts (average)													
7.13.2.2 new-C <u>表八：允許直流電源線最大射頻傳導擾動值</u> <table border="1"> <thead> <tr> <th><u>頻率</u></th><th><u>限值及檢波器</u></th></tr> </thead> <tbody> <tr> <td></td><td></td></tr> </tbody> </table>	<u>頻率</u>	<u>限值及檢波器</u>												
<u>頻率</u>	<u>限值及檢波器</u>													

	(MHz) 0.15~0.5 0.5~30	79 dBμV (準峰值) 66 dBμV (平均值) 73 dBμV (準峰值) 60 dBμV (平均值)																	
7.14.2.1-E	Table 16: Maximum allowed radiofrequency conducted disturbances on network and telecommunication access <table><tr><th>Frequency (MHz)</th><th>Voltage limits (detector)</th><th>Current limits (detector)</th></tr><tr><td rowspan="3">0.15 to 0.5</td><td>84 to 74 dB microvolts (quasi-peak)</td><td>40 to 30 dB microamperes (quasi-peak)</td></tr><tr><td>74 to 64 dB microvolts (average)</td><td>30 to 20 dB microamperes (average)</td></tr><tr><td>(linearly decreasing with logarithm of frequency)</td><td>(linearly decreasing with logarithm of frequency)</td></tr><tr><td rowspan="2">0.5 to 30</td><td>74 dB microvolts (quasi-peak)</td><td>30 dB microamperes (quasi-peak)</td></tr><tr><td>64 dB microvolts (average)</td><td>20 dB microamperes (average)</td></tr></table>			Frequency (MHz)	Voltage limits (detector)	Current limits (detector)	0.15 to 0.5	84 to 74 dB microvolts (quasi-peak)	40 to 30 dB microamperes (quasi-peak)	74 to 64 dB microvolts (average)	30 to 20 dB microamperes (average)	(linearly decreasing with logarithm of frequency)	(linearly decreasing with logarithm of frequency)	0.5 to 30	74 dB microvolts (quasi-peak)	30 dB microamperes (quasi-peak)	64 dB microvolts (average)	20 dB microamperes (average)	無
Frequency (MHz)	Voltage limits (detector)	Current limits (detector)																	
0.15 to 0.5	84 to 74 dB microvolts (quasi-peak)	40 to 30 dB microamperes (quasi-peak)																	
	74 to 64 dB microvolts (average)	30 to 20 dB microamperes (average)																	
	(linearly decreasing with logarithm of frequency)	(linearly decreasing with logarithm of frequency)																	
0.5 to 30	74 dB microvolts (quasi-peak)	30 dB microamperes (quasi-peak)																	
	64 dB microvolts (average)	20 dB microamperes (average)																	
7.14.2.1 new -C	表九：允許車輛網路及電信存取界面的最大射頻傳導擾動值 <table><tr><th>頻率 (MHz)</th><th>電壓限值(檢波器)</th><th>電流限值(檢波器)</th></tr><tr><td rowspan="2">0.15~0.5</td><td>84~74 dBμV (準峰值)</td><td>40~30 dBμA (準峰值)</td></tr><tr><td>74~64 dBμV (平均值) (隨著頻率的對數呈線性遞減)</td><td>30~20 dBμA (平均值) (隨著頻率的對數呈線性遞減)</td></tr><tr><td>0.5~30</td><td>74 dBμV (準峰值) 64 dBμV (平均值)</td><td>30 dBμA (準峰值) 20 dBμA (平均值)</td></tr></table>			頻率 (MHz)	電壓限值(檢波器)	電流限值(檢波器)	0.15~0.5	84~74 dBμV (準峰值)	40~30 dBμA (準峰值)	74~64 dBμV (平均值) (隨著頻率的對數呈線性遞減)	30~20 dBμA (平均值) (隨著頻率的對數呈線性遞減)	0.5~30	74 dBμV (準峰值) 64 dBμV (平均值)	30 dBμA (準峰值) 20 dBμA (平均值)					
頻率 (MHz)	電壓限值(檢波器)	電流限值(檢波器)																	
0.15~0.5	84~74 dBμV (準峰值)	40~30 dBμA (準峰值)																	
	74~64 dBμV (平均值) (隨著頻率的對數呈線性遞減)	30~20 dBμA (平均值) (隨著頻率的對數呈線性遞減)																	
0.5~30	74 dBμV (準峰值) 64 dBμV (平均值)	30 dBμA (準峰值) 20 dBμA (平均值)																	
Appendix 8-E				無															

Figure 1: HV artificial network



Legend	C_2 : 0.1 microfarads
L_1 : 5 microhenries	R_1 : 1 kilohm
C_1 : 0.1 microfarads	R_2 : 1 megohm (discharging C_2 to < 50 V _{dc} within 60 s)

Figure 2: Impedance of HV artificial network

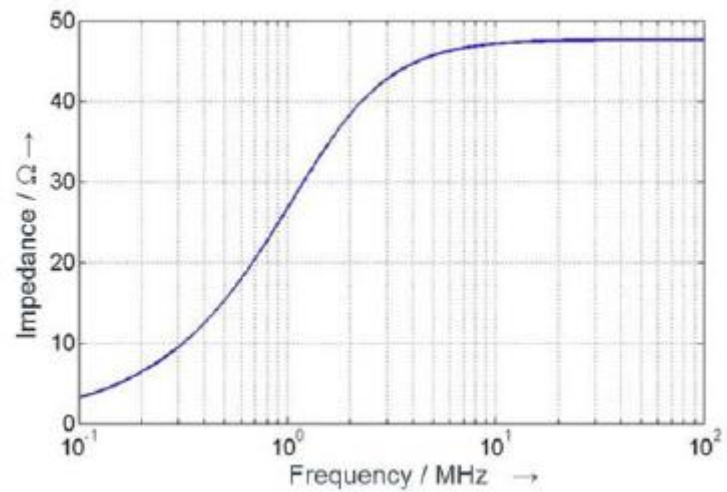
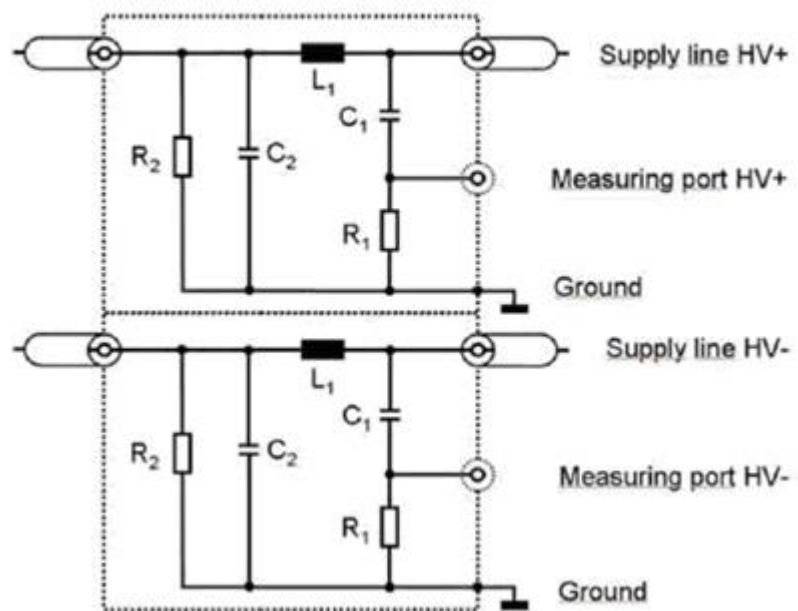
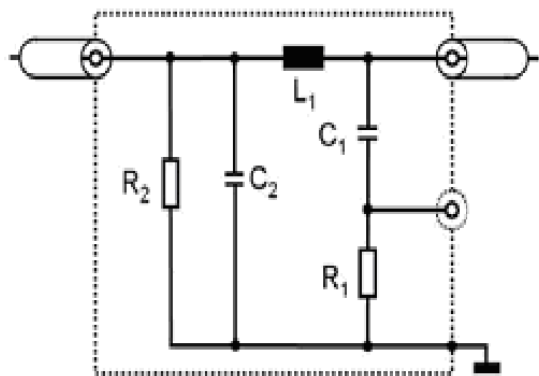


Figure 3: Combination of HV artificial network



Appendix 8-C

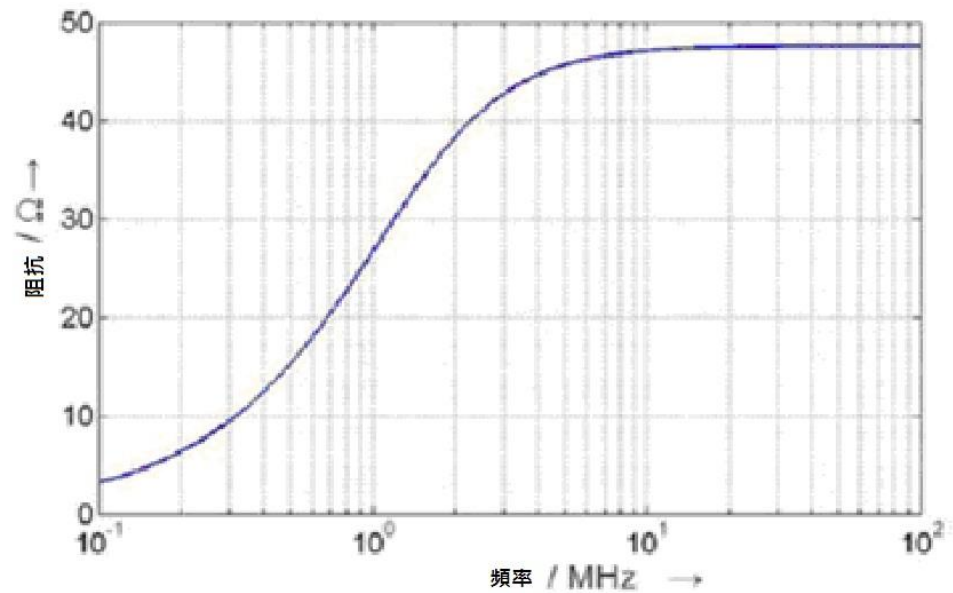


[説明](#)

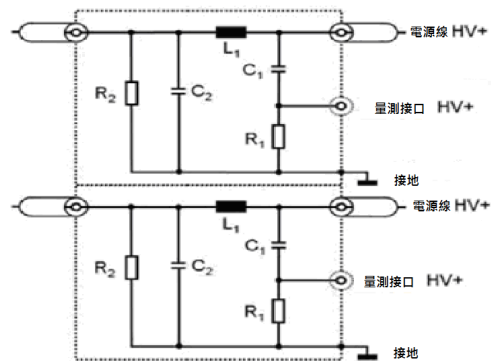
[C₂: 0.1μF](#)

<u>$L_1 : 5\mu\text{H}$</u>	<u>$R_1 : 1\text{K}\Omega$</u>
<u>$C_1 : 0.1\mu\text{F}$</u>	<u>$R_2 : 1\text{M}\Omega$ (60秒內放電)</u> <u>$C_2 < 50\text{V}_{\text{dc}}$</u>

圖七：高壓模擬網路



圖八：高壓模擬網路的阻抗與頻率關係圖

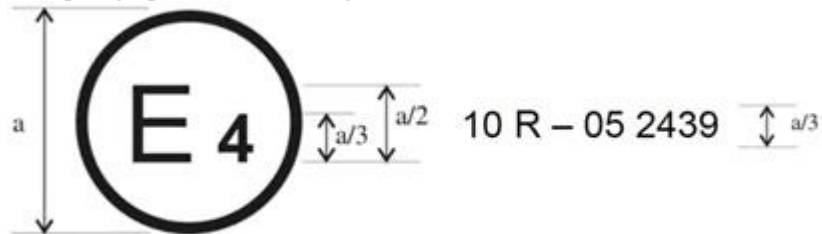


圖九：高壓模擬網路的組合圖

Annex 1 -E

Model A

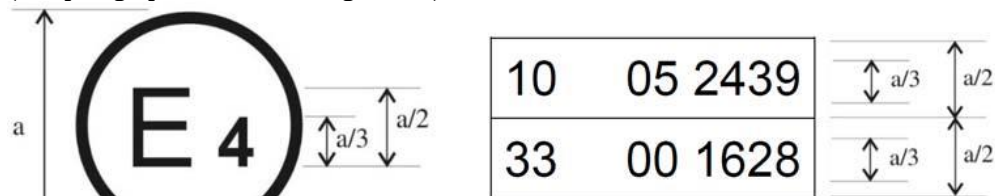
(See paragraph 5.2. of this Regulation)



$a = 6 \text{ mm}^{*/}$

Model B

(See paragraph 5.2. of this Regulation)

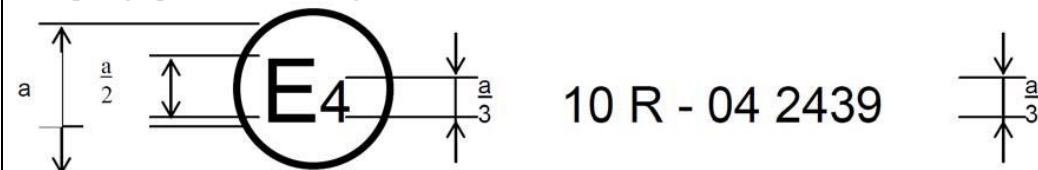


$a = 6 \text{ mm min}$

Annex 1

Model A

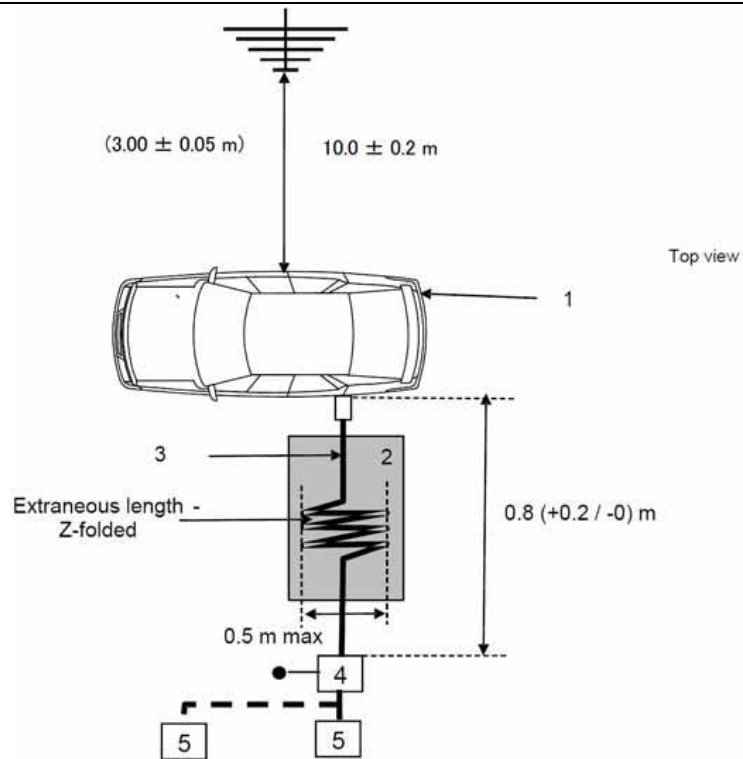
(See paragraph 5.2. of this Regulation)



$a = 6 \text{ mm min}$

Model B

(See paragraph 5.2. of this Regulation)



Legend

1 Vehicle under test

2 Insulating support

3 Charging cable

4 Artificial Network(s) grounded

5 Power mains socket

Vehicle in configuration "REESS charging mode" coupled to the power grid

Example of test setup for vehicle with plug located front/rear of vehicle (AC powered without communication)

Figure 3c



- 1 Vehicle under test
- 2 Insulating support
- 3 Charging cable
- 4 Artificial Network(s) grounded
- 5 Power mains socket

Vehicle in configuration "REESS charging mode" coupled to the power grid

Example of test set-up for vehicle with plug located on vehicle side (AC or DC powered with communication)

Figure 3e

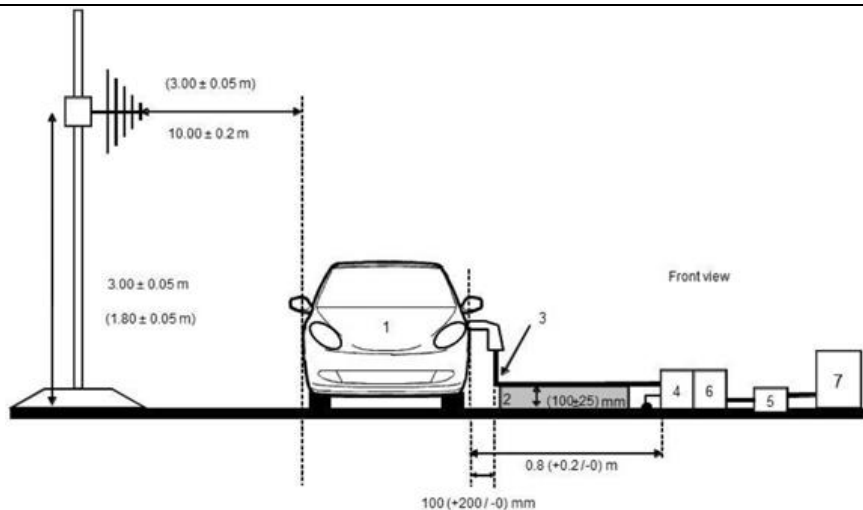
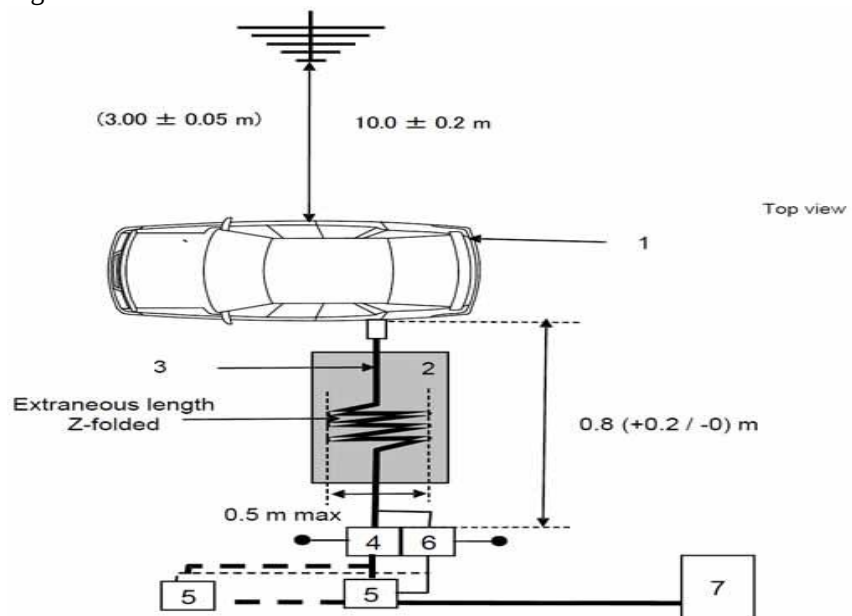


Figure 3f



Legend

1 Vehicle under test

2 Insulating support

- 3 Charging / communication cable
- 4 AC or DC Artificial Network(s) grounded
- 5 Power mains socket
- 6 Impedance Stabilization(s) grounded
- 7 Charging Station

Vehicle in configuration "REESS charging mode" coupled to the power grid Example of test setup for vehicle with plug located front/rear of the vehicle (AC or DC powered with communication)

Figure 3g

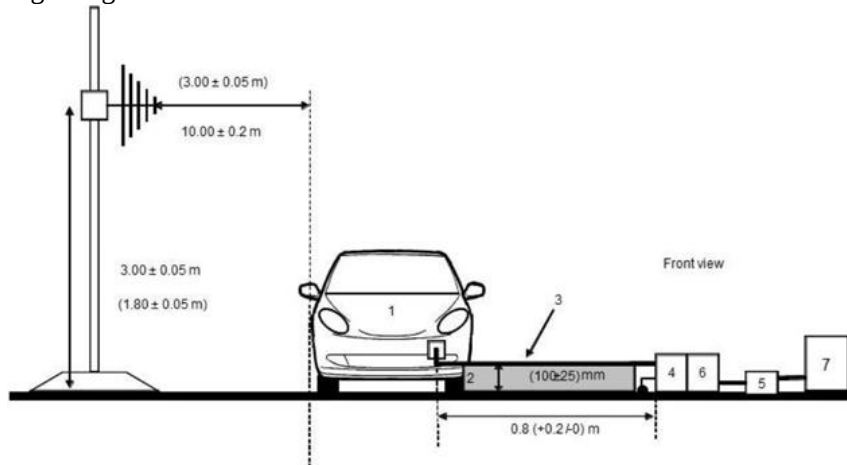
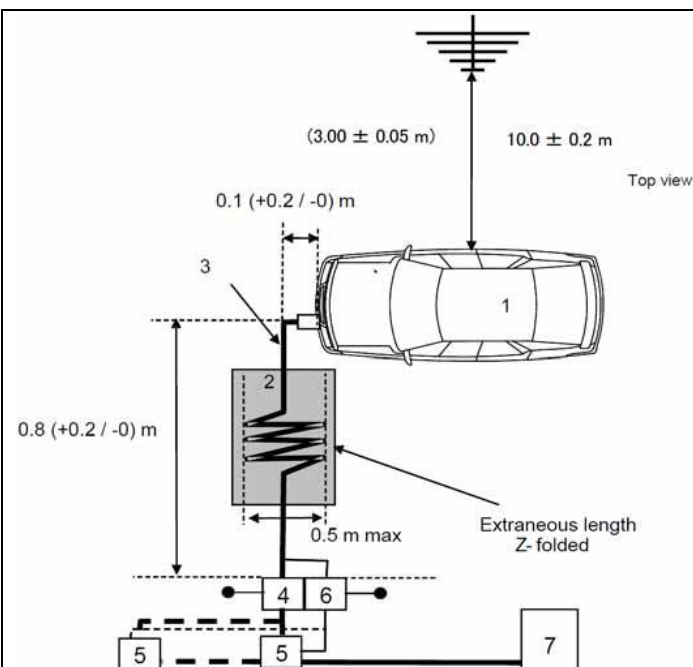
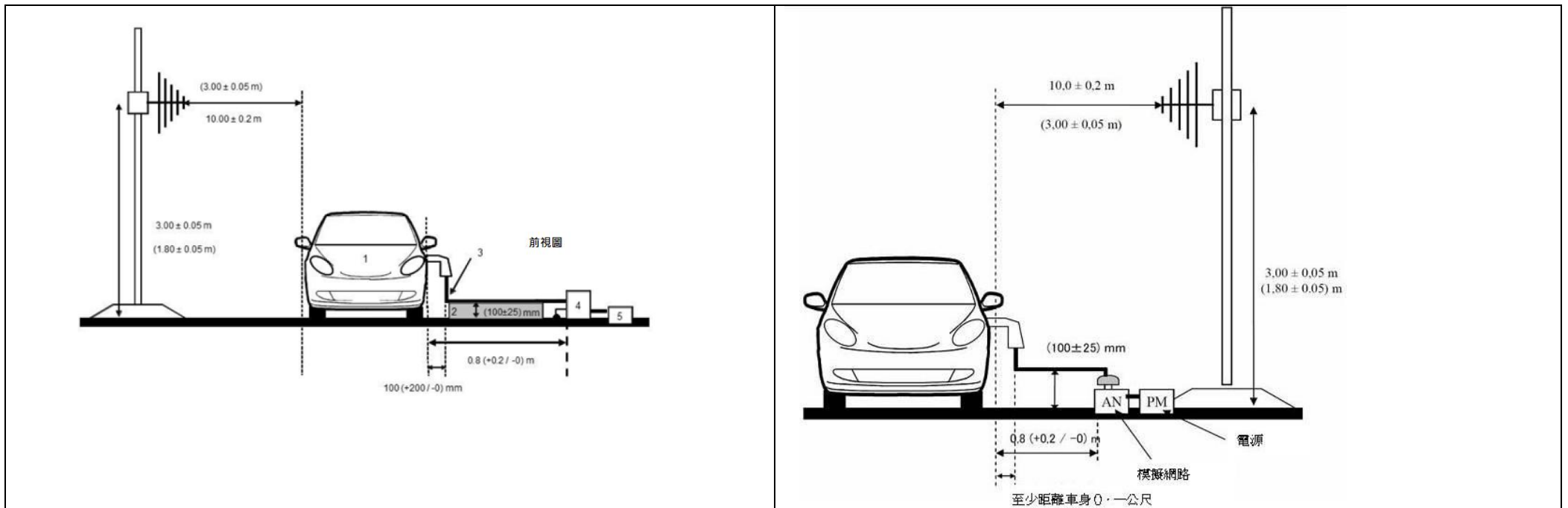
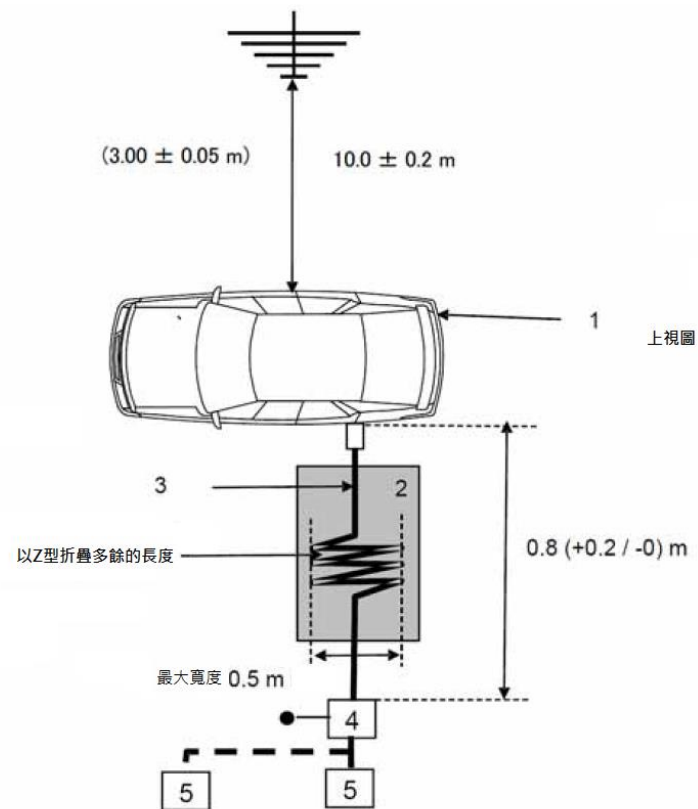


Figure 3h

 Top view Legend 1 Vehicle under test 2 Insulating support 3 Charging / communication cable 4 AC or DC Artificial Network(s) grounded 5 Power mains socket 6 Impedance Stabilisation(s) grounded 7 Charging Station	
Annex 4 2.2. new-C	Annex 4 2.2. old-C

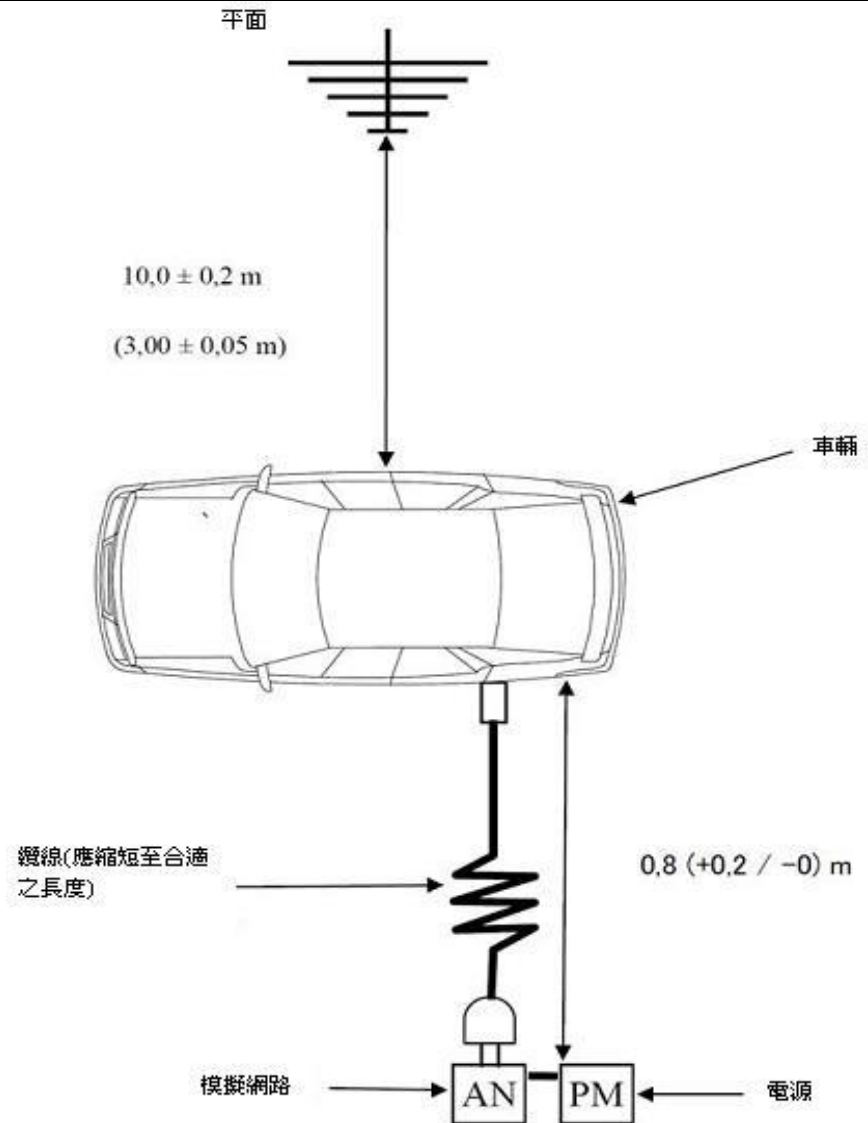




說明

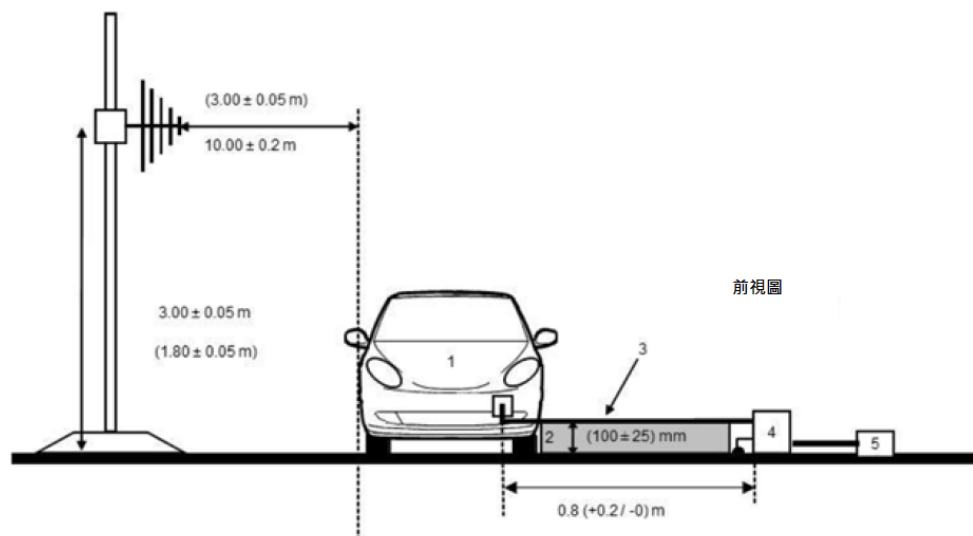
1. 待測車輛
2. 絕緣支撐
3. 充電電纜
4. 模擬網路接地
5. 電源插座

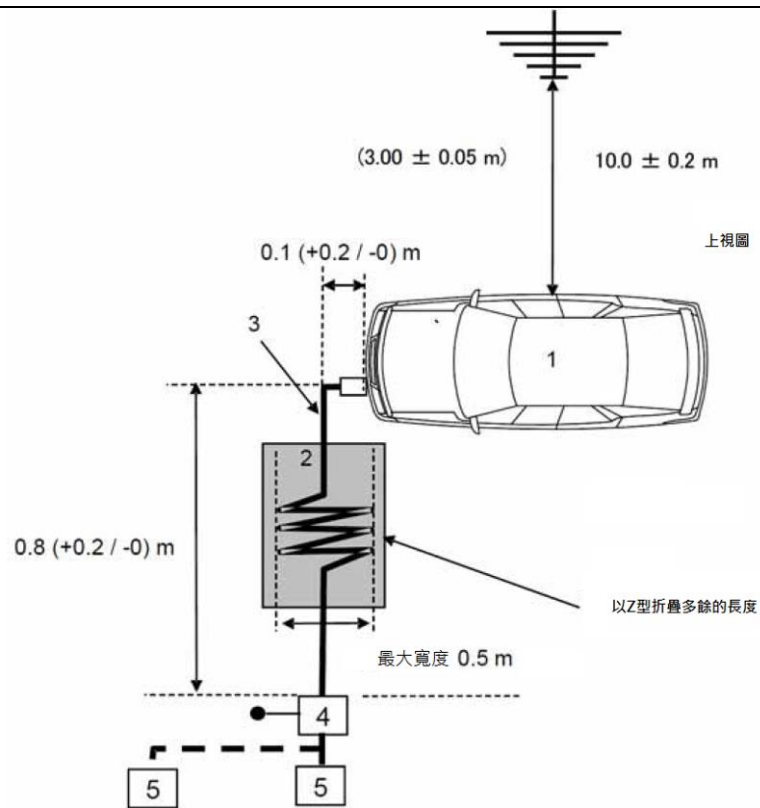
車輛處於 RESS 充電模式連結電網之配置與車輛插頭位於前/後的位置
試驗設置範例（交流電源不具有通訊設施）。



圖七：車輛處於RESS充電模式下連結電源介面之配置

圖一〇之一：車輛處於REESS充電模式連結電網之配置



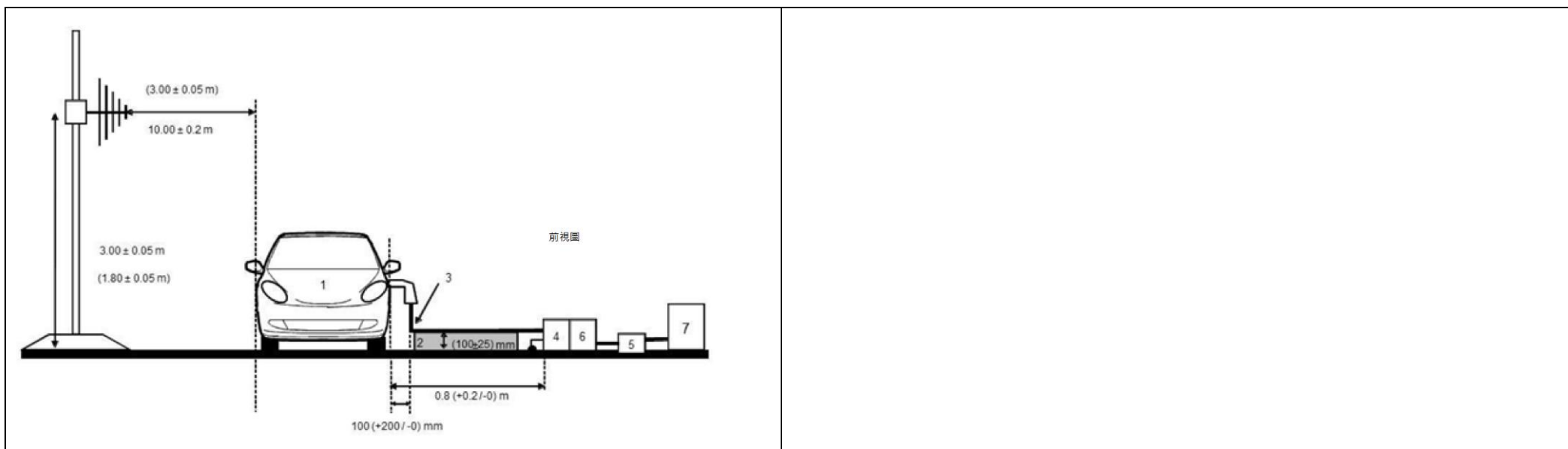


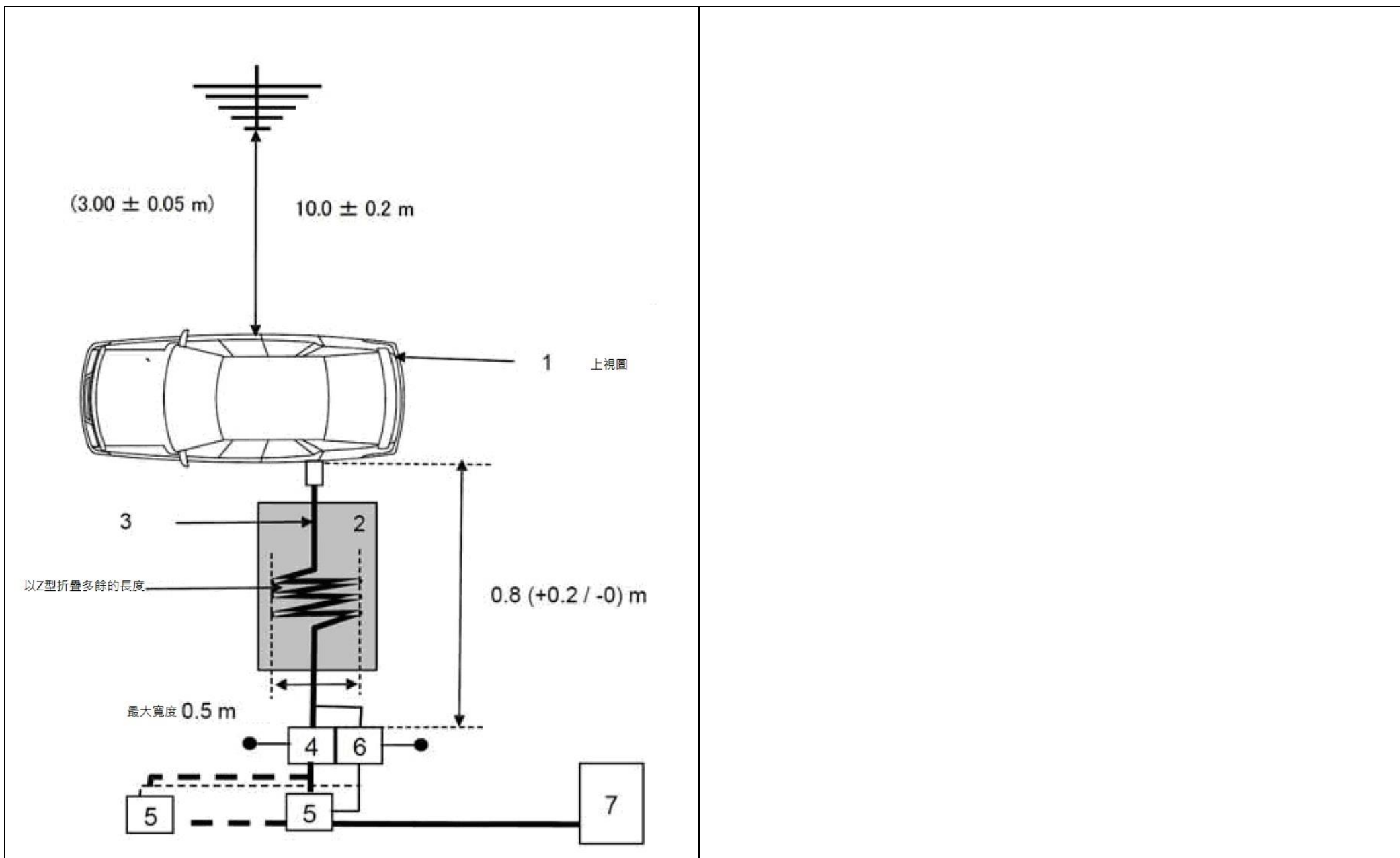
說明

1. 待測車輛
2. 絕緣支撐
3. 充電電纜
4. 模擬網路接地
5. 電源插座

車輛處於REESS充電模式連結電網之配置與車輛插頭位於側面的位置試驗設置範例（交流或直流電源具有通訊設施）。

圖一0之二：車輛處於REESS充電模式連結電網之配置



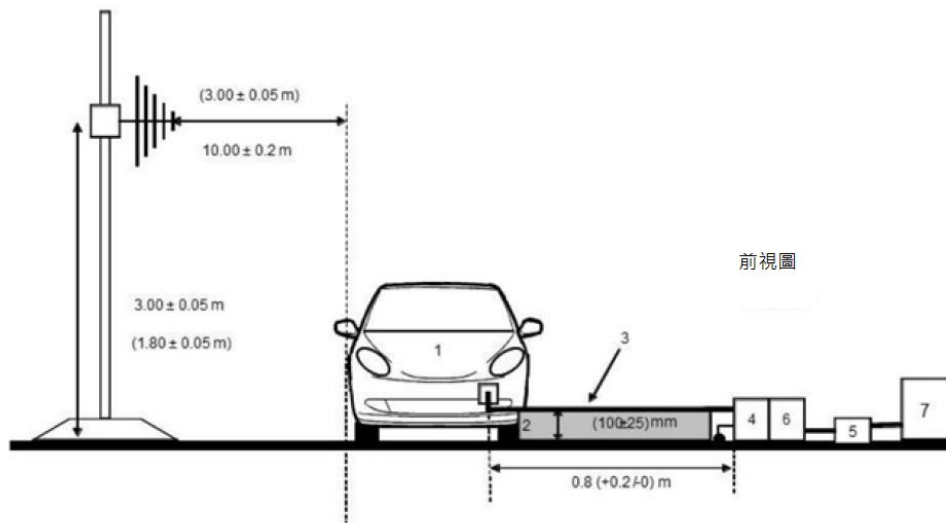


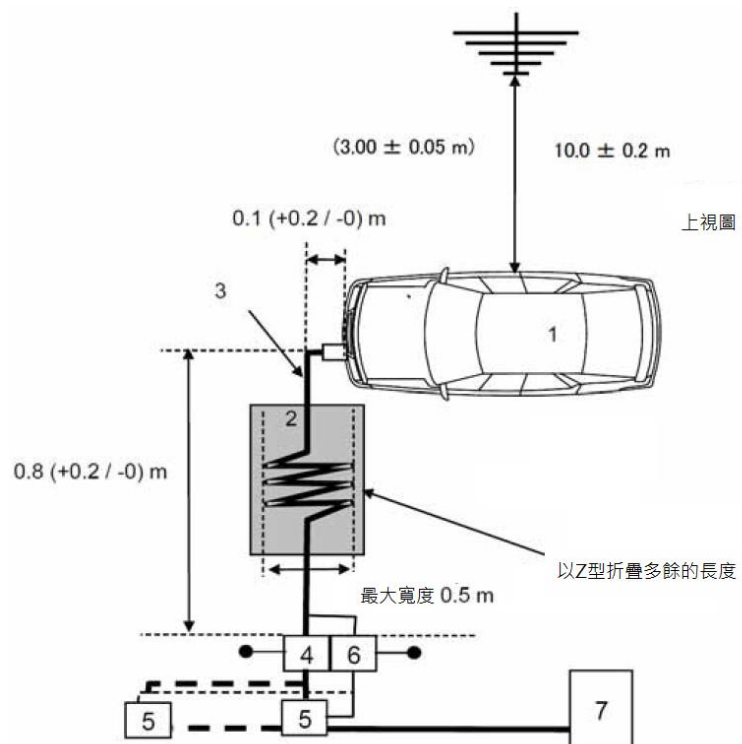
說明

1. 待測車輛
2. 絕緣支撐
3. 充電/通訊電纜
4. 交流或直流模擬網路接地
5. 電源插座
6. 阻抗穩定接地
7. 充電站

車輛處於 REESS 充電模式連結電網之配置與車輛插頭位於前/後的位置
試驗設置範例（交流或直流電源具有通訊設施）。

圖一〇之三：車輛處於REESS充電模式連結電網之配置





說明

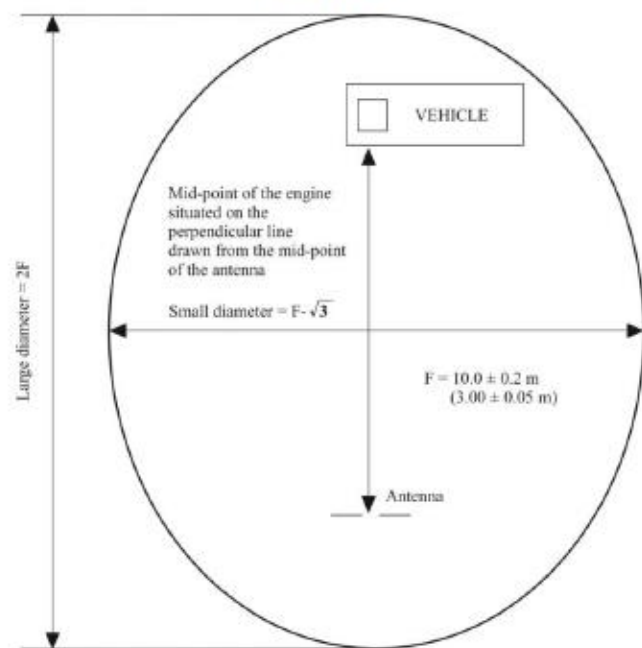
1. 待測車輛
2. 絕緣支撐
3. 充電/通訊電纜
4. 交流或直流模擬網路接地
5. 電源插座
6. 阻抗穩定接地
7. 充電站

圖一〇之四：車輛處於REESS充電模式連結電網之配置

Annex 4 3.1.new-E

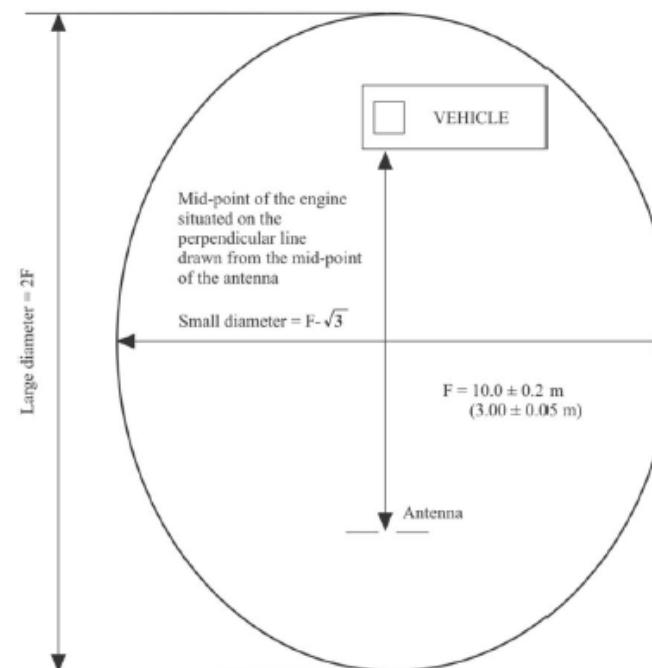
Annex 4 3.1.old-E

Figure 1: Clear horizontal surface free of electromagnetic reflection delimitation of the surface defined by an ellipse

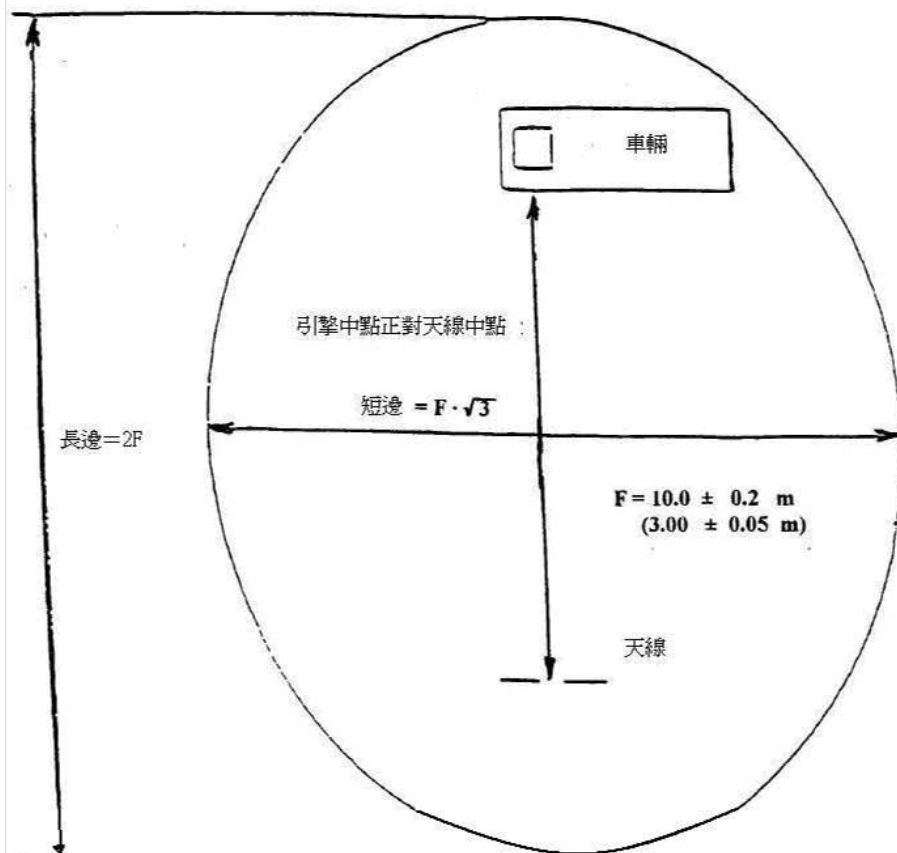


Annex 4 3.1. new-C

Figure 1: Clear horizontal surface free of electromagnetic reflection delimitation of the surface defined by an ellipse

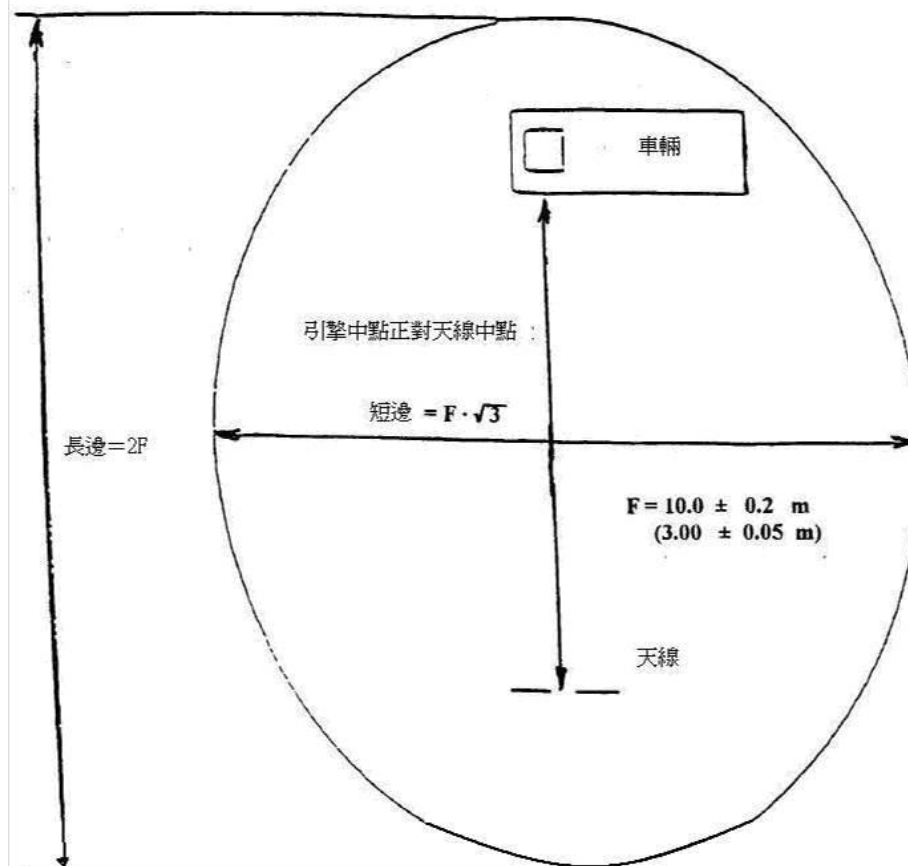


Annex 4 3.1. old-C



圖一一：電磁反射示意圖
備註：括弧內為 3m 檢測之尺寸

Annex 4 3.1.-new-E

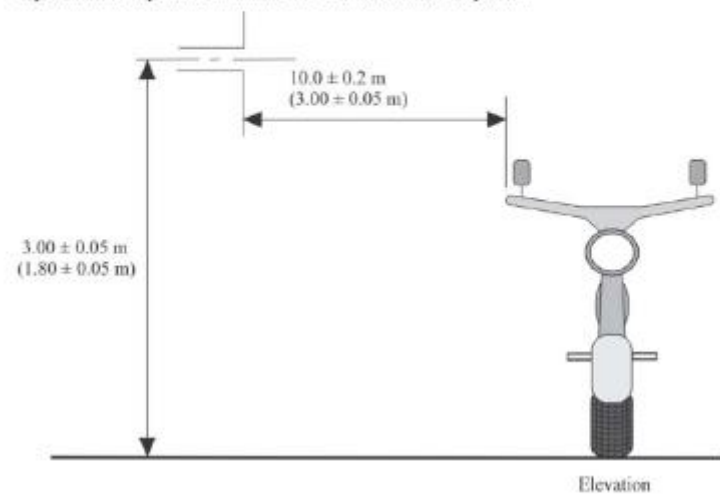


圖八：電磁反射示意圖
備註：括弧內為 3m 檢測之尺寸

Annex 4 3.1.old-E

Figure 2: Position of antenna in relation to the vehicle

Dipole antenna in position to measure the vertical radiation components



Dipole antenna in position to measure the horizontal radiation components

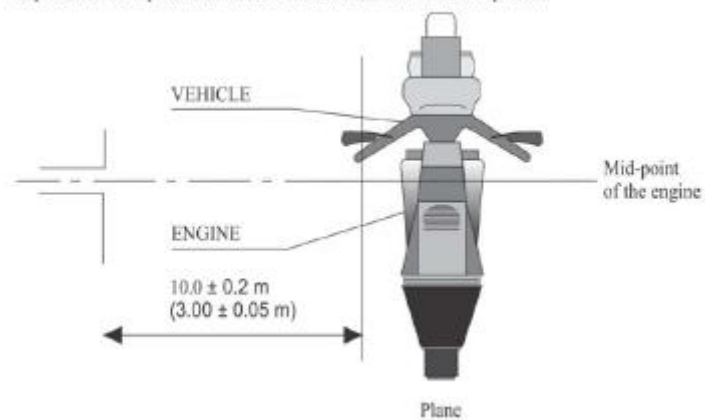
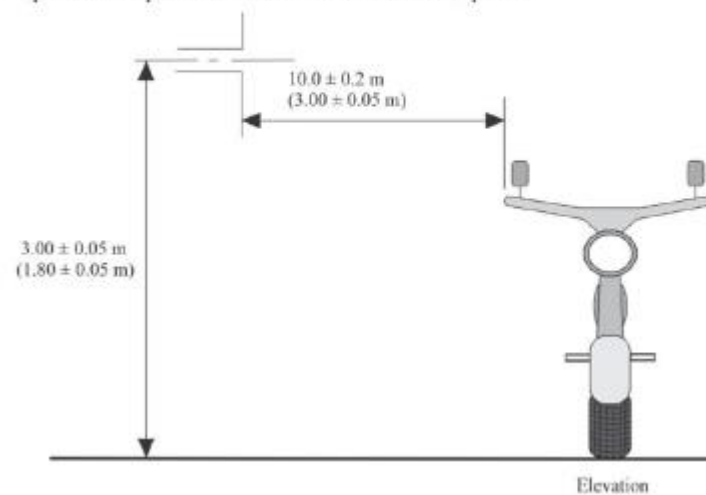
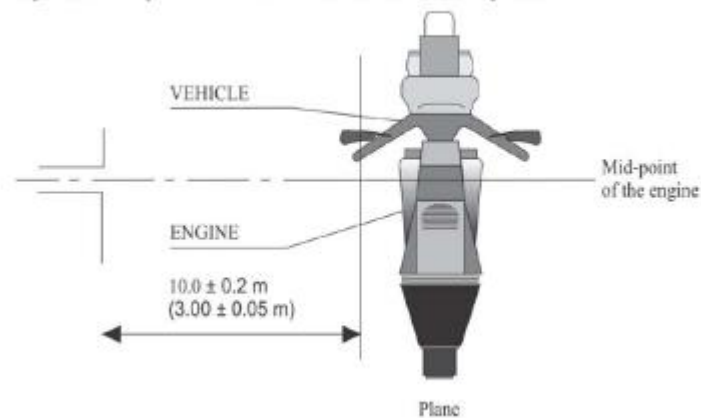


Figure 2: Position of antenna in relation to the vehicle

Dipole antenna in position to measure the vertical radiation components

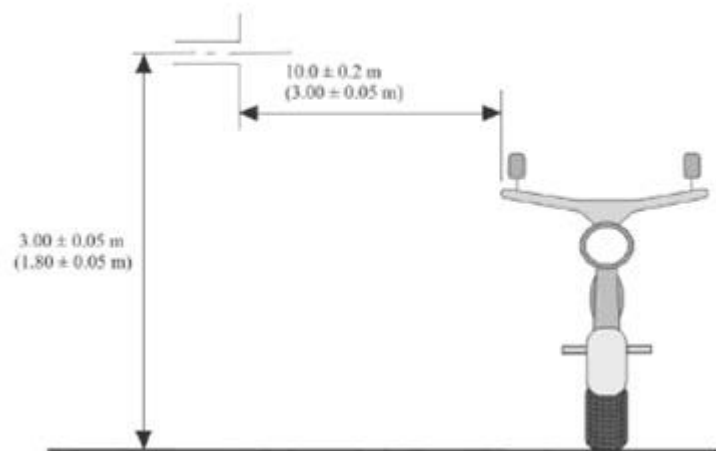


Dipole antenna in position to measure the horizontal radiation components



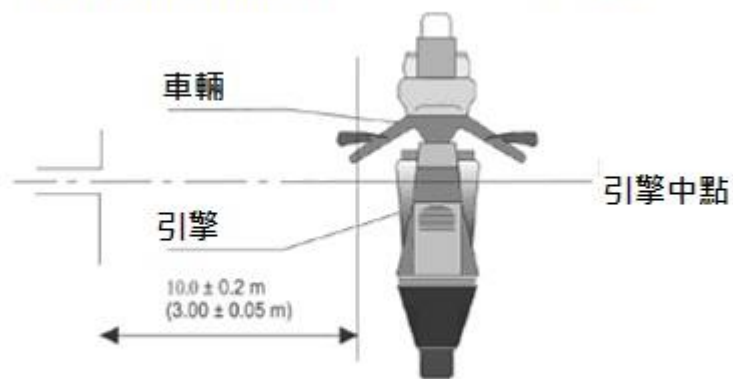
Annex 4 3.1. new-C

Annex 4 3.1.old-C



垂直極化量測示意圖

前視圖



水平極化量測示意圖

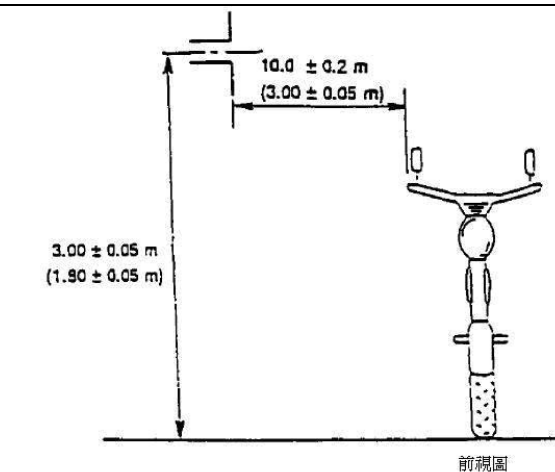
俯視圖

圖一二：天線與車輛位置圖（二）

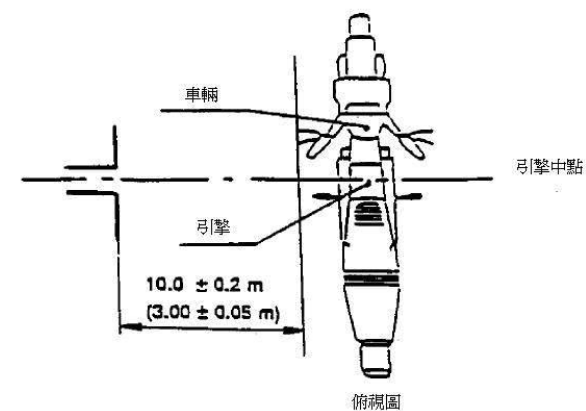
Annex4 4.3-new-E

Annex 4 4.3

Table 1: Spectrum analyser parameters



垂直極化量測示意圖



水平極化量測示意圖

圖九：天線與車輛位置圖（二）

Annex4 4.3-old-E

無

Frequency range MHz	Peak detector		Quasi-peak detector		Average detector	
	RBW at -3 dB	Scan time	RBW at -6 dB	Scan time	RBW at -3 dB	Scan time
30 to 1,000	100/120 kHz	100 ms/MHz	120 kHz	20 s/MHz	100/120 kHz	100 ms/MHz

Note:
If a spectrum analyser is used for peak measurements, the video bandwidth shall be at least three times the resolution bandwidth (RBW).

Table 2: Scanning receiver parameters

Frequency range MHz	Peak detector			Quasi-peak detector			Average detector		
	BW at -6 dB	Step size ^a	Dwell time	BW at -6 dB	Step size ^a	Dwell time	BW at -6 dB	Step size ^a	Dwell time
30 to 1,000	120 kHz	50 kHz	5 ms	120 kHz	50 kHz	1 s	120 kHz	50 kHz	5 ms

^aFor purely broadband disturbances, the maximum frequency step size may be increased up to a value not greater than the bandwidth value.

Annex4 4.3/ Annex5 3.3/ Annex7 4.3 new-C	無
--	---

表一0：頻譜分析儀參數

頻率 範圍 MHz	峰值檢波器		準峰值檢波器		均值檢波器	
	解析頻 寬在 -3dB	掃描時 間	解析頻 寬在 -3dB	掃描時 間	解析頻 寬在 -3dB	掃描時 間
30-10 00	100/120k Hz	100ms/ MHz	120kHz	20s/M Hz	100/120k Hz	100ms/ MHz

備註：
如果頻譜分析儀被以峰值的測量，視訊頻寬應至少有三次解析頻寬（RBW）。

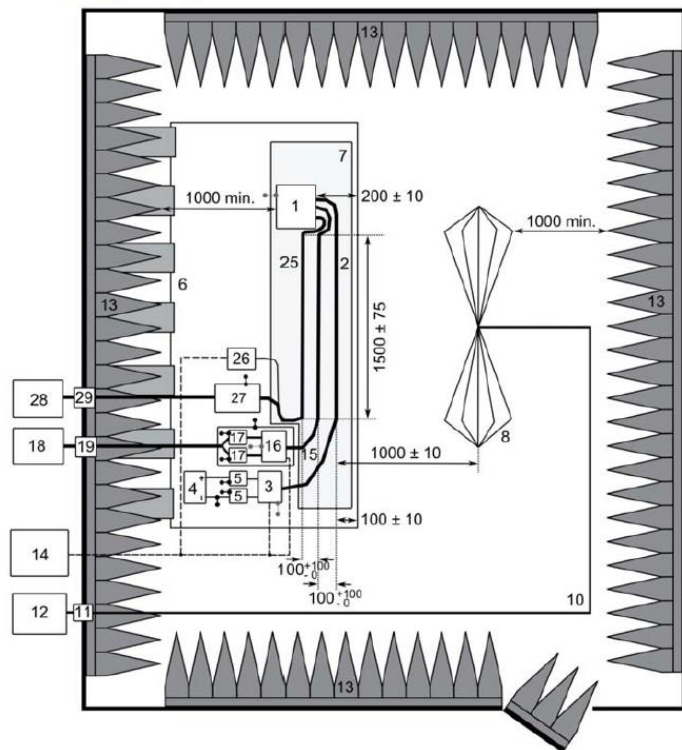
表一一：掃描接收機參數

頻率 範圍 MHz	峰值檢波器			準峰值檢波器			均值檢波器		
	頻寬 在 -6dB	步長 ^a	停 留 時 間	頻寬 在 -6dB	步長 ^a	停留 時間	頻寬 在 -6dB	步 長 ^a	停 留 時 間

30-1000 120k Hz 50kH z 5ms 120k Hz 50kH z 1ms 120k Hz 50k Hz 5ms ^a對於純粹的頻寬擾動，最大頻率步長值可增大到不大於頻寬值。	
Annex 7-3.2-new-E "Figure 2: Test configuration for ESAs involved in "REESS charging mode coupled to the power grid"(example for biconical antenna) Top view (horizontal polarization) Legend:	無

1 ESA (grounded locally if required in test plan) 2 LV Test harness 3 LV Load simulator (placement and ground connection according to CISPR 25 paragraph 6.4.2.5) 4 Power supply (location optional) 5 LV Artificial network (AN) 6 Ground plane (bonded to shielded enclosure) 7 Low relative permittivity support ($\epsilon_{\text{r}} < 1.4$) 8 Biconical antenna 10 High-quality coaxial cable e.g. double-shielded (50 ohms) 11 Bulkhead connector 12 Measuring instrument 13 RF absorber material 14 Stimulation and monitoring system 15 HV harness 16 HV load simulator 17 HV AN 18 HV power supply 19 HV feed-through 25 AC/DC charger harness 26 AC/DC load simulator (e.g. PLC) 27 50 microhenry LISN (AC) or HVAN (DC) 28 AC/DC power supply 29 AC/DC feed-through	
Annex 7-3.2 new-C	

上視圖(水平極化)



說明:

- 1.ESA (如果試驗計劃需要則予以接地)
- 2.低壓試驗導線
- 3.低壓負載模擬器 (根據 CISPR 25 第 6.4.2.5 條款安置和接地連接)
- 4.電源供應 (位置可選)
- 5.低壓模擬網路
- 6.接地平面 (連接到屏蔽圍體)
- 7.保持相對低的介電常數 ($\epsilon_r < 1.4$)
- 8.雙錐型天線
- 10.高品質同軸電纜, 如雙層屏蔽 (50Ω)
- 11.隔板連接器

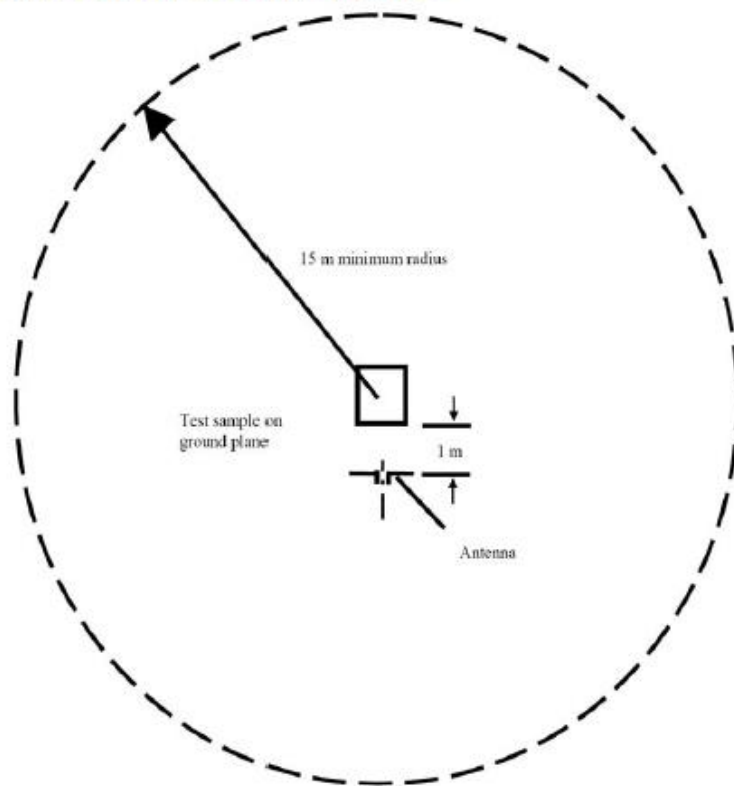
12.測量儀 13.RF 吸波材料 14.激勵與監控系統 15.高壓導線 16.高壓負載模擬器 17.高壓模擬網路 18.高壓電源供應 19.高壓饋通 25.交流/直流充電器導線 26.交流/直流負載模擬器（如 PLC） 27.50 μH 的 LISN（交流）或 HVAN（直流） 28.交流/直流電源供應 29.交流/直流饋通 圖一三：ESA 涉及 REESS 充電模式連結電網配置試驗（如雙錐型天線）	
Annex 7 7-3.3 new-E	Annex 7 7-3.2 old-E

Annex 7 - Appendix

Figure 1

Open area test site: Electrical/electronic sub-assembly test area boundary

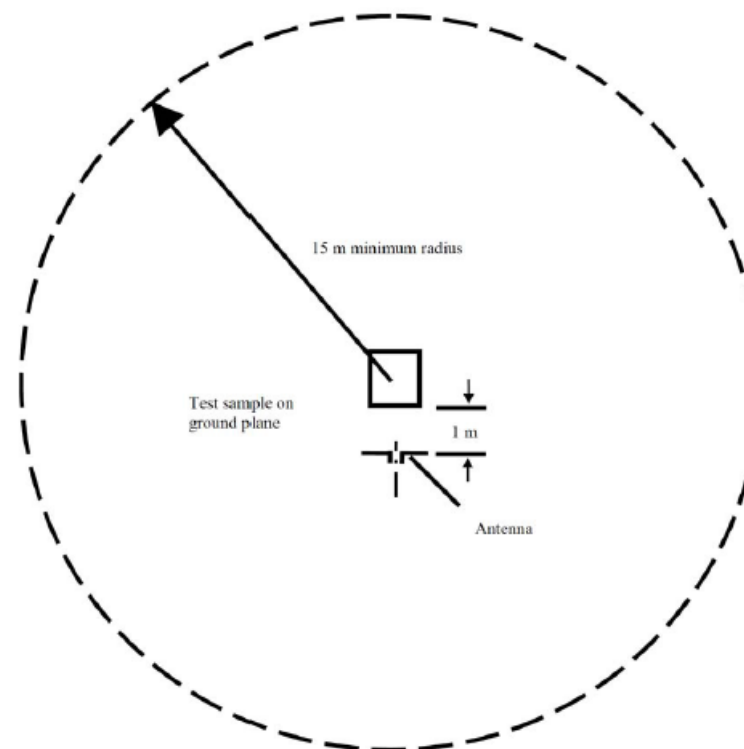
Level clear area free from electromagnetic reflecting surfaces



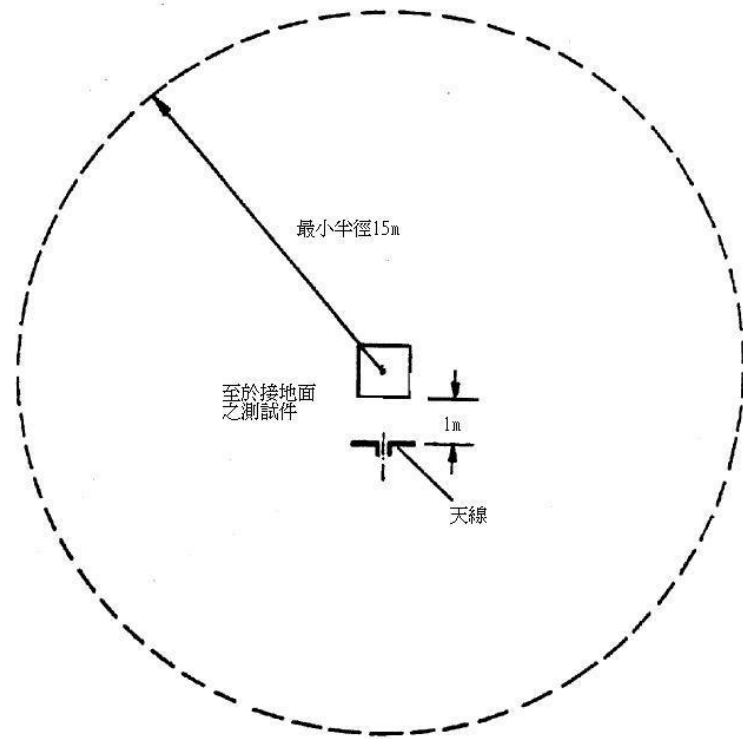
Annex 7 7-3.3 new-C

Open area test site: Electrical/electronic sub-assembly test area boundary

Level clear area free from electromagnetic reflecting surfaces

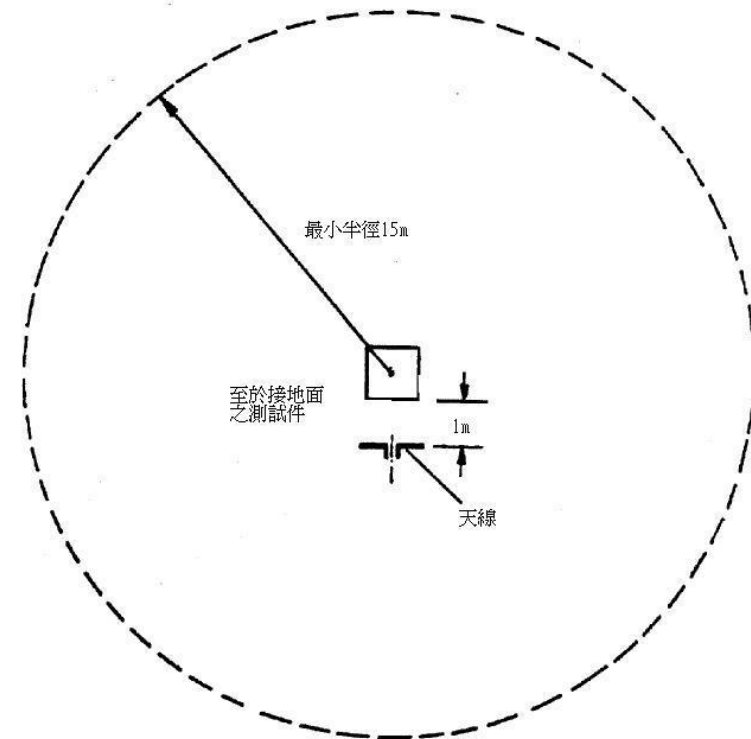


Annex 7 7-3.2 old-C



圖一四

Annex 6 - 2.2new-E



圖一0

Annex 6 -2.2 old-E

Figure 4a

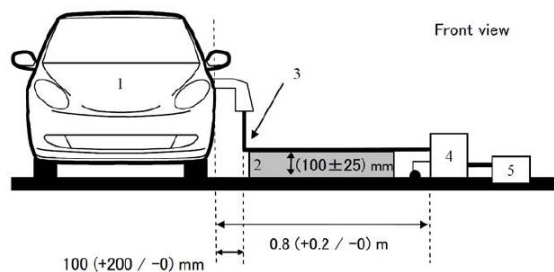
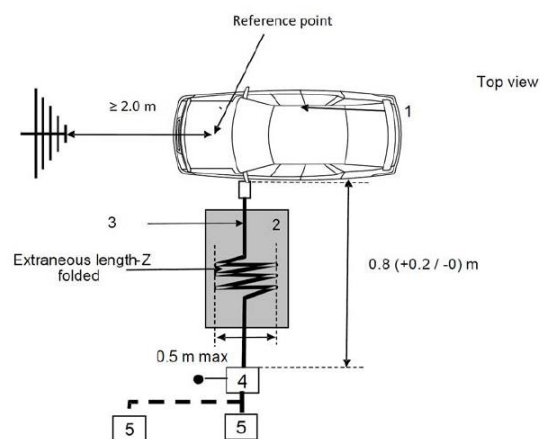


Figure 4b



Legend

1 Vehicle under test

2 Insulating support

3 Charging cable

4 Artificial Network(s) grounded

5 Power mains socket

Example of test set-up for vehicle with plug located front / rear of vehicle (AC power charging without communication)

Figure 4: Vehicle in configuration "RESS in charging mode coupled to the power grid"

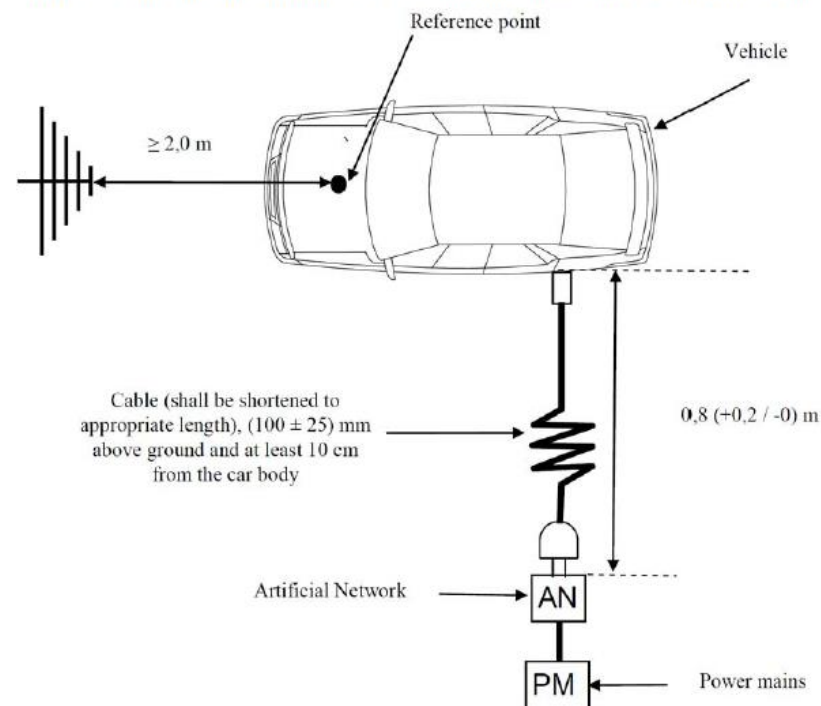


Figure 4c

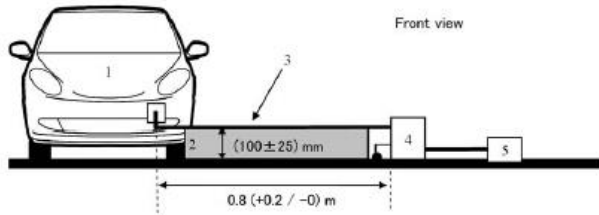
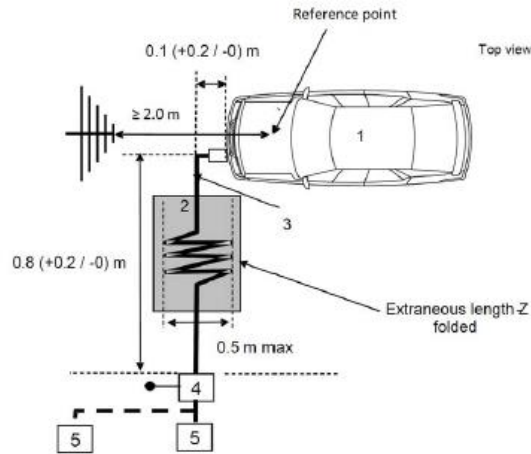


Figure 4d



Legend

- 1 Vehicle under test
- 2 Insulating support
- 3 Charging cable
- 4 Artificial Network(s) grounded
- 5 Power mains socket

Example of test set-up for vehicle with plug located on vehicle side (AC or DC power charging with communication)

Figure 4e

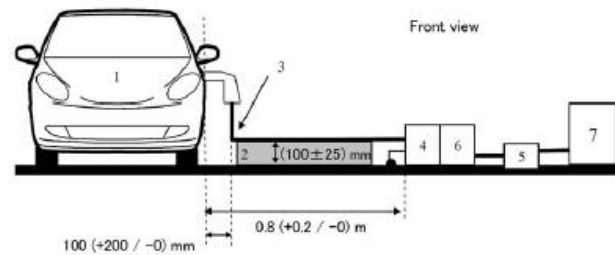
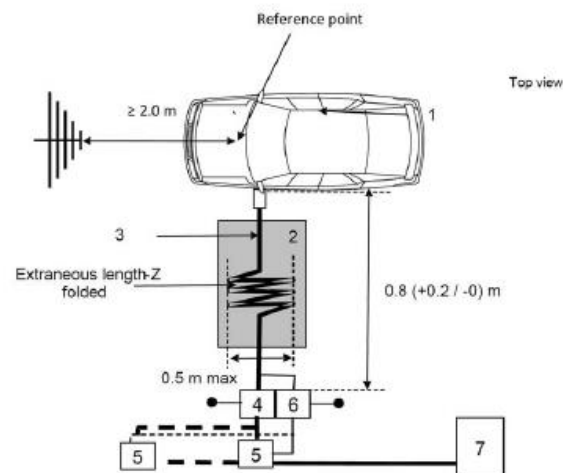


Figure 4f



Legend

- 1 Vehicle under test
- 2 Insulating support
- 3 Charging / communication cable
- 4 AC or DC Artificial Network(s) grounded
- 5 Power mains socket
- 6 Impedance Stabilisation(s) grounded
- 7 Charging Station

Example of test set-up for vehicle with plug located front / rear of the vehicle (AC or DC power charging with communication)

Figure 4g

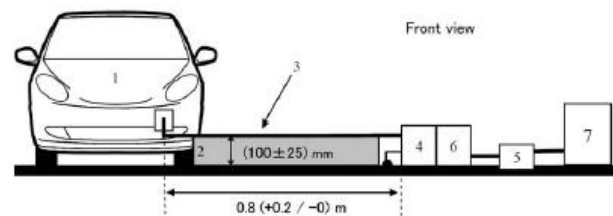
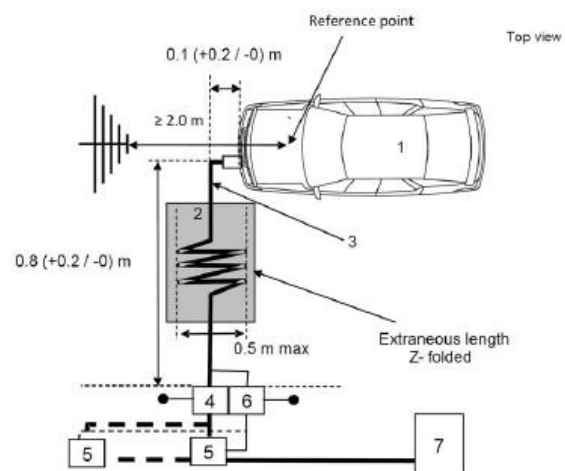


Figure 4h

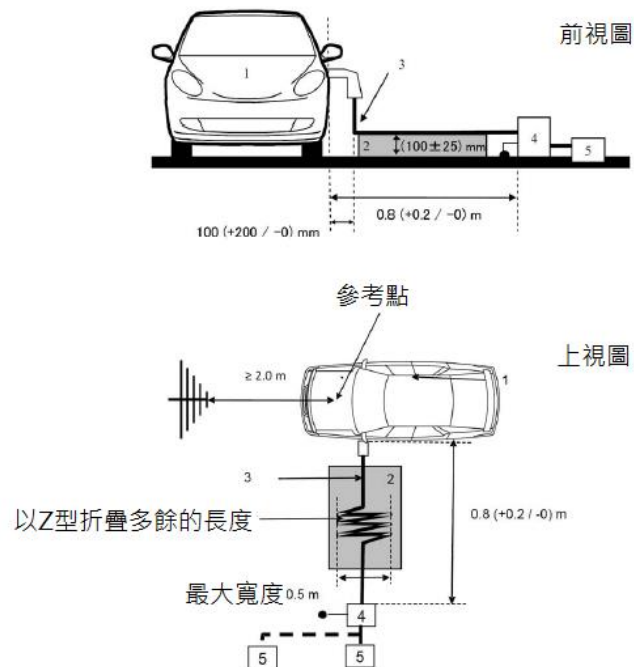


Legend

- 1 Vehicle under test
- 2 Insulating support
- 3 Charging / communication cable
- 4 AC or DC Artificial Network(s) grounded
- 5 Power mains socket
- 6 Impedance Stabilisation(s) grounded
- 7 Charging Station

Annex 6 - 2.2.3new-C

Annex 6 -2.2 old-C

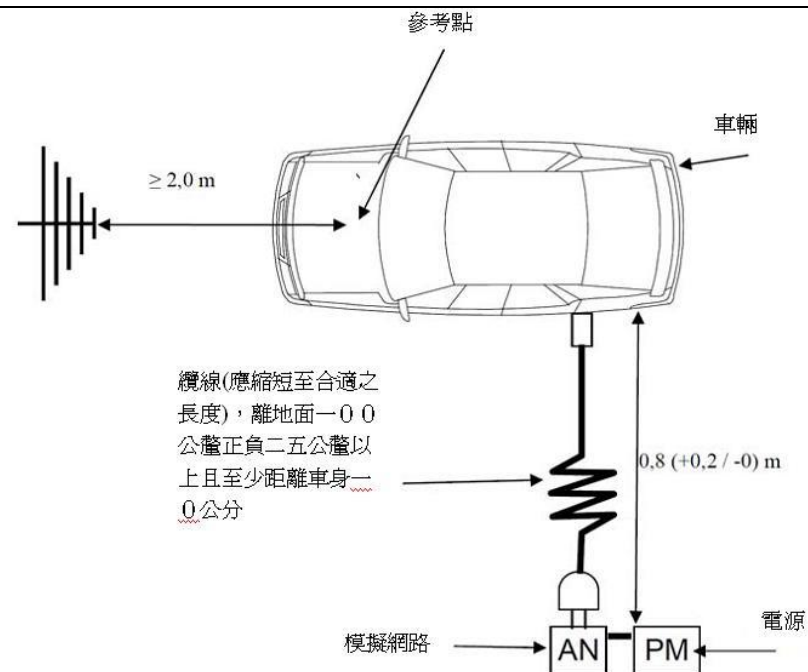


說明:

1. 待測車輛
2. 絕緣支撐
3. 充電/通訊電纜
4. 模擬網路接地
5. 電源插座

車輛插頭位於車輛前/後的位置試驗設置範例（交流電源不具有通訊設施）。

圖一五之一：車輛處於 REESS 充電模式連結電網之配置

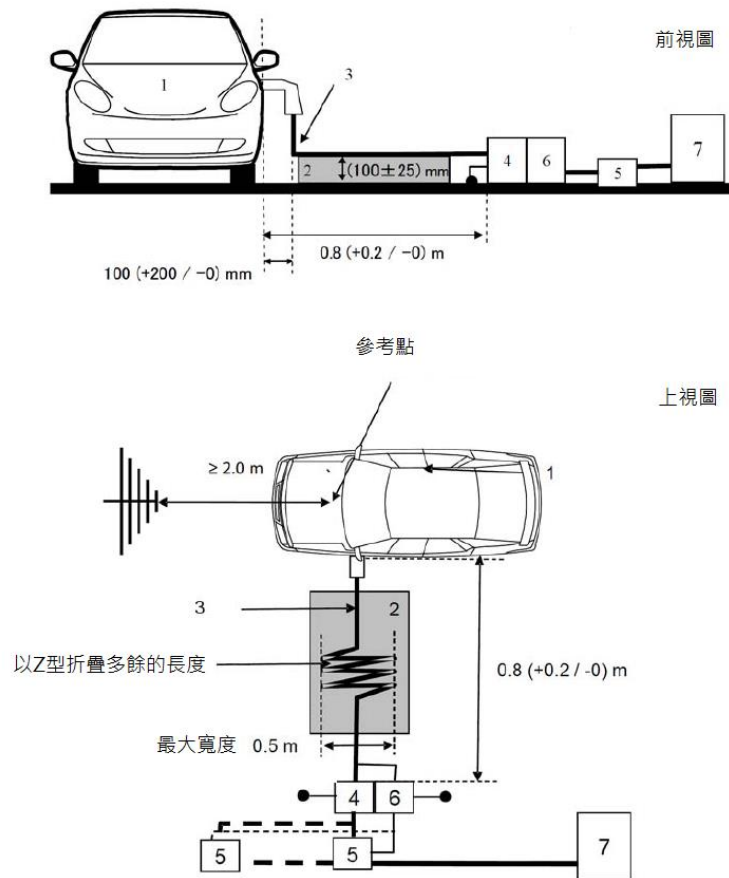


圖一—：車輛處於 RESS 充電模式下連結電源介面之配置

※纜線應縮短至合適的長度，且離地面一〇〇正負二五公釐，並至少距離車身一〇公分

通訊設施)。

圖一五之二：車輛處於 REESS 充電模式連結電網之配置



說明

1. 待測車輛
2. 絕緣支撐
3. 充電/通訊電纜
4. 交流或直流模擬網路接地

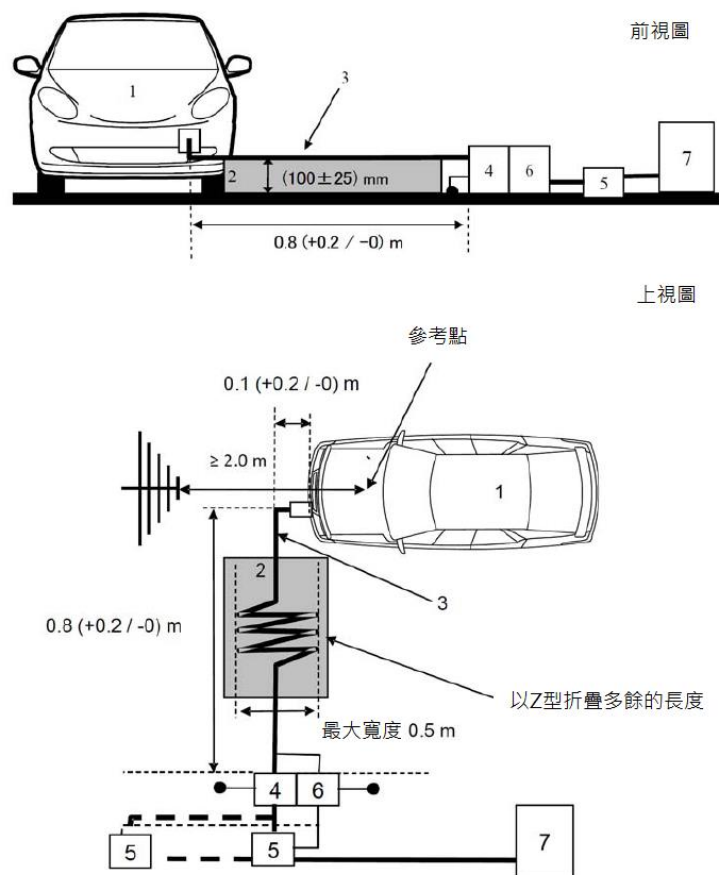
5. 電源插座

6. 阻抗穩定器接地

7. 充電站

車輛插頭位於車輛前/後的位置試驗設置範例（交流或直流電源具有通訊設施）。

圖一五之三：車輛處於 REESS 充電模式連結電網之配置



說明

1. 待測車輛

2. 絕緣支撐 3. 充電/通訊電纜 4. 交流或直流模擬網路接地 5. 電源插座 6. 阻抗穩定器接地 7. 充電站 圖一五之四：車輛處於REESS充電模式連結電網之配置											
Annex 6-2.2.1.2-new-E <table border="1"> <thead> <tr> <th>"REESS charging mode" vehicle test conditions</th><th>Failure criteria</th></tr> </thead> <tbody> <tr> <td>The REESS shall be in charging mode. The REESS state of charge (SOC) shall be kept between 20 per cent and 80 per cent of the maximum SOC during the whole frequency range measurement (this may lead to split the measurement in different sub-bands with the need to discharge the vehicle's traction battery before starting the next sub-bands). If the current consumption can be adjusted, then the current shall be set to at least 20 per cent of its nominal value.</td><td>Vehicle sets in motion.</td></tr> </tbody> </table>	"REESS charging mode" vehicle test conditions	Failure criteria	The REESS shall be in charging mode. The REESS state of charge (SOC) shall be kept between 20 per cent and 80 per cent of the maximum SOC during the whole frequency range measurement (this may lead to split the measurement in different sub-bands with the need to discharge the vehicle's traction battery before starting the next sub-bands). If the current consumption can be adjusted, then the current shall be set to at least 20 per cent of its nominal value.	Vehicle sets in motion.	10.2.2.2-old-E <table border="1"> <thead> <tr> <th>"RESS in charging mode" vehicle test conditions</th><th>Failure criteria</th></tr> </thead> <tbody> <tr> <td>The RESS shall be in charging mode. The RESS state of charge shall be agreed in between the manufacturer and the Technical Service.</td><td>Vehicle sets in motion</td></tr> </tbody> </table>	"RESS in charging mode" vehicle test conditions	Failure criteria	The RESS shall be in charging mode. The RESS state of charge shall be agreed in between the manufacturer and the Technical Service.	Vehicle sets in motion		
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10.3.3.4 –new-E	10.3.3.4 –old-E										

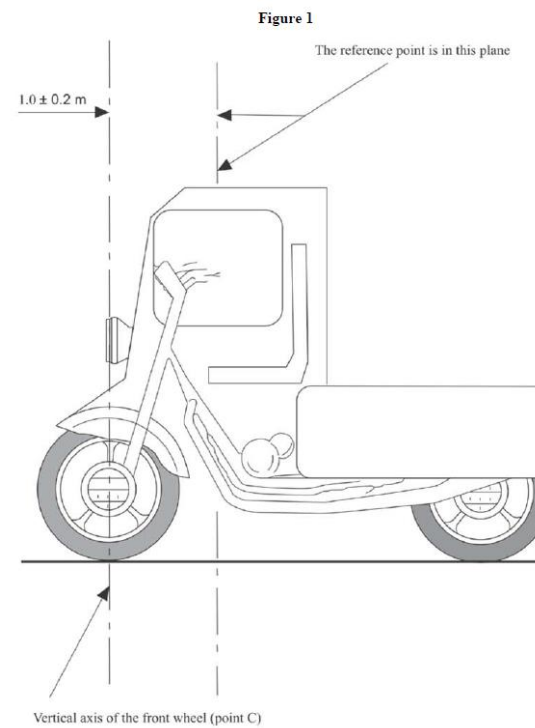
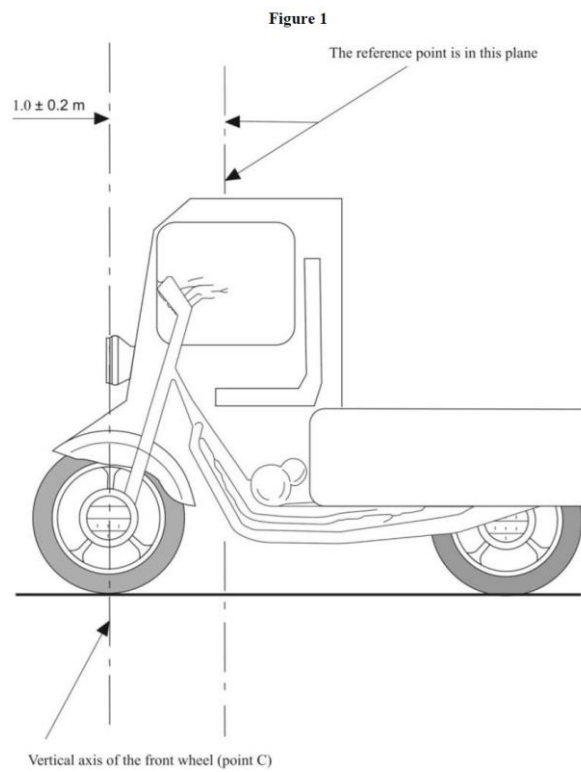
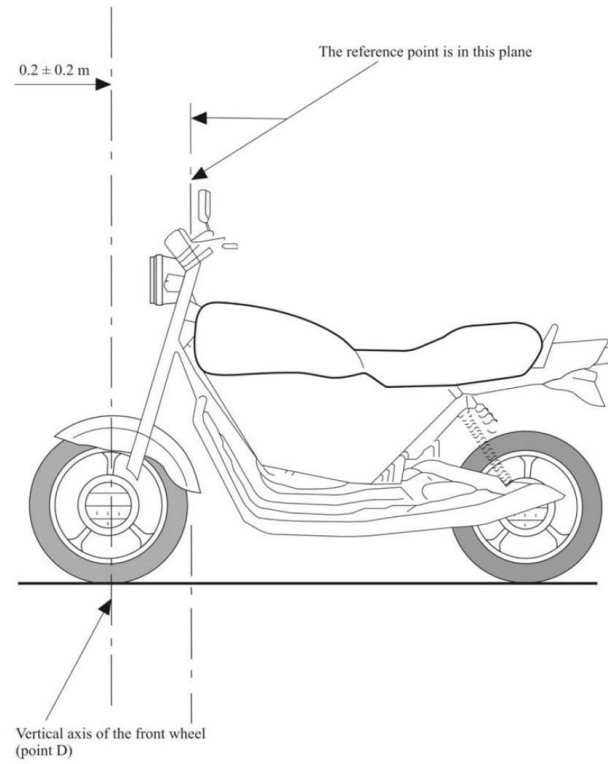
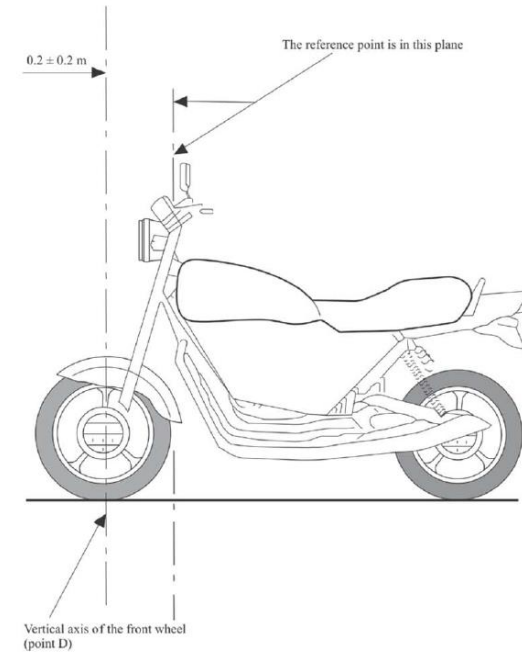


Figure 2

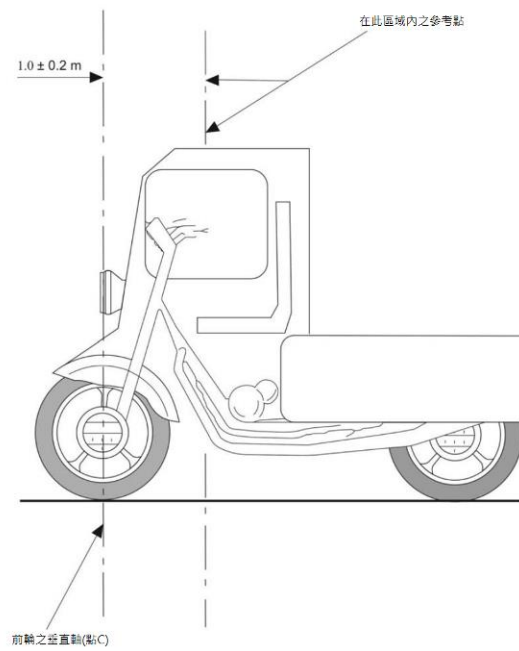


10.3.3.4 –new-C

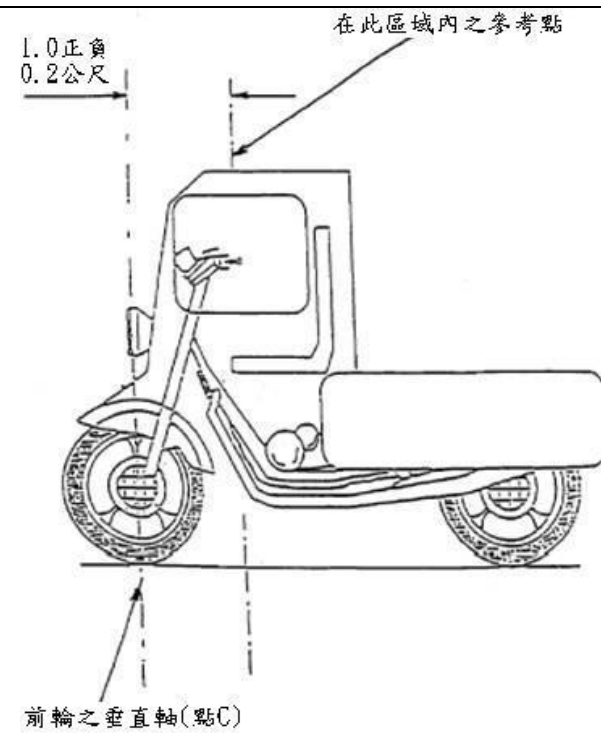
Figure 2



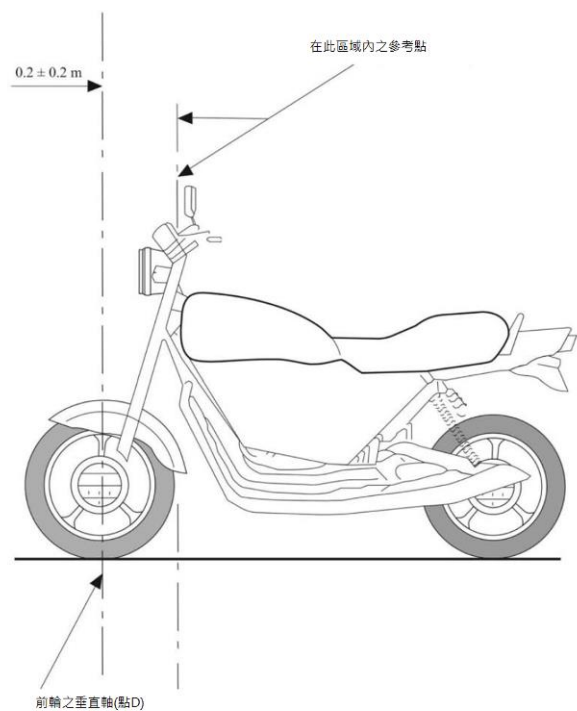
10.3.3.4 old-C



圖一六

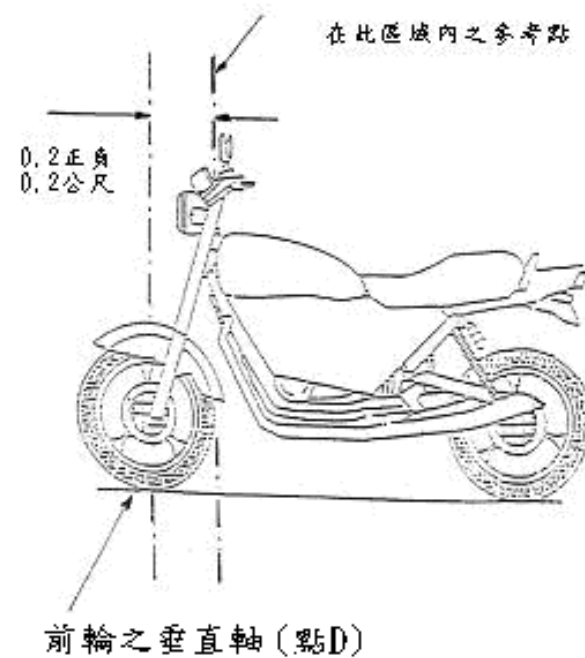


圖一二



圖一六之一

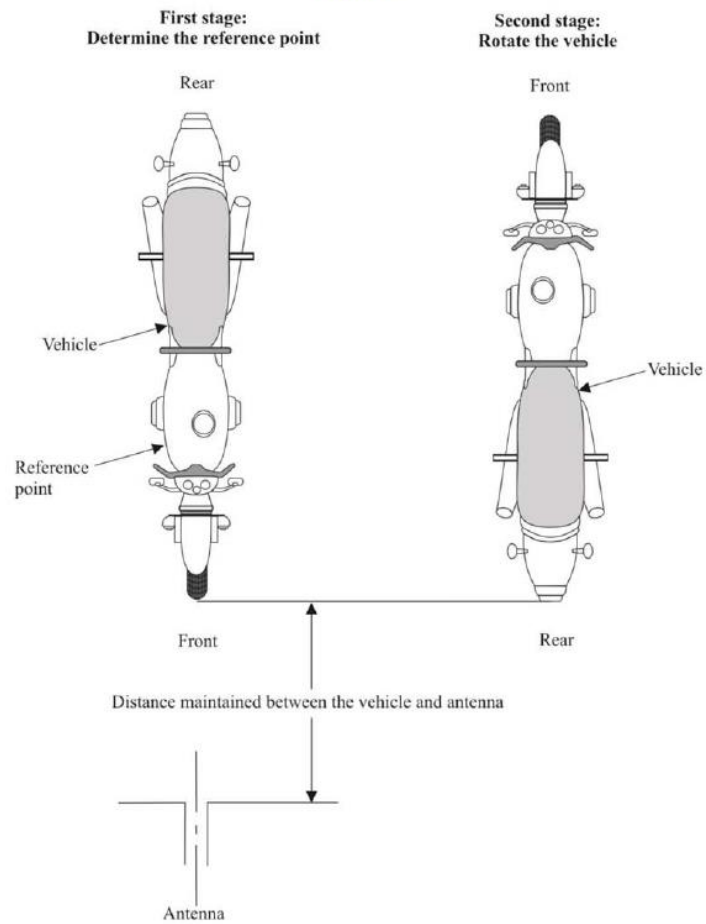
VSTD-10.3.3.5 -new-E



圖一二之一

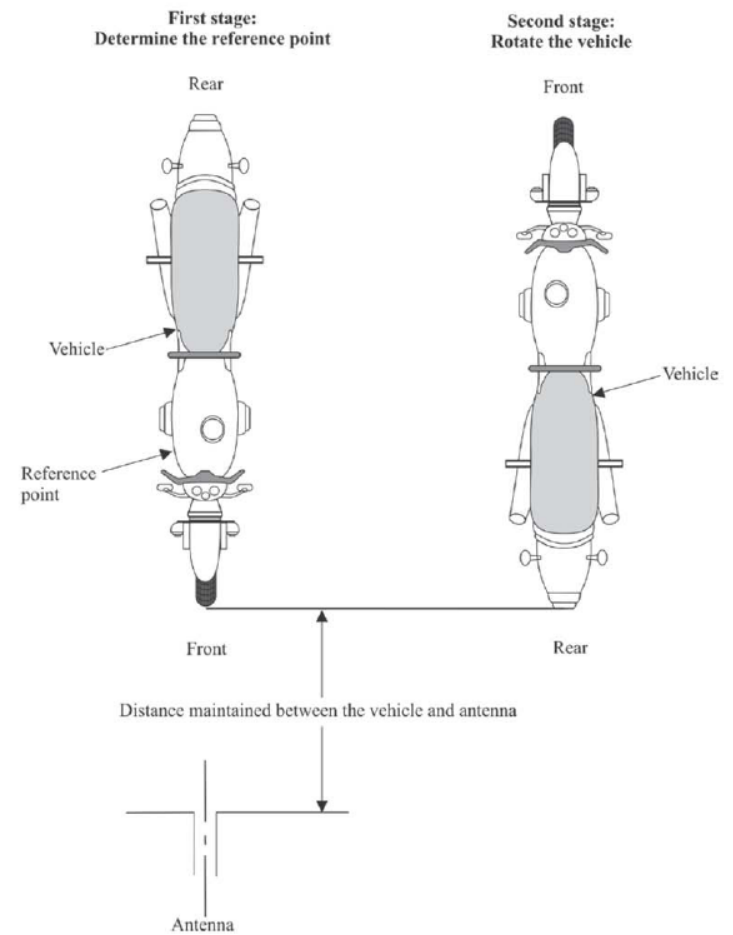
10.3.3.5 -old-E

Figure 3

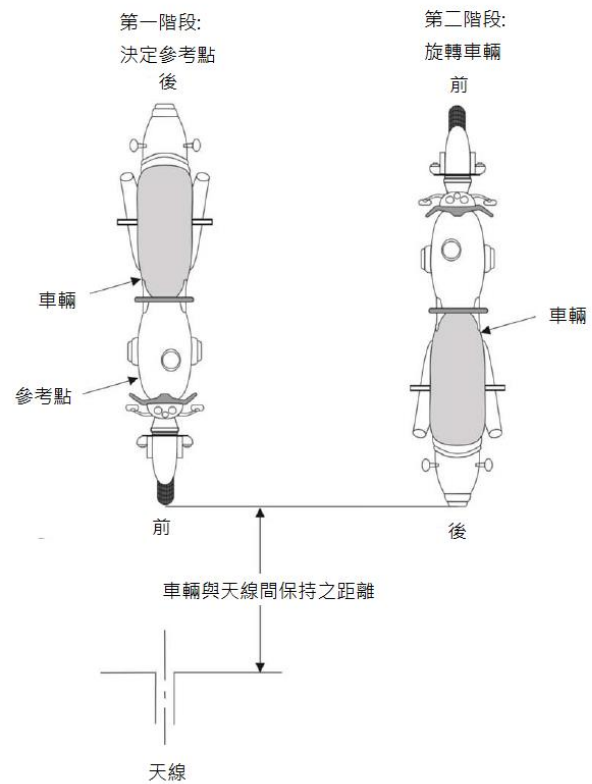


VSTD-10.3.3.5 –new-C

Figure 3

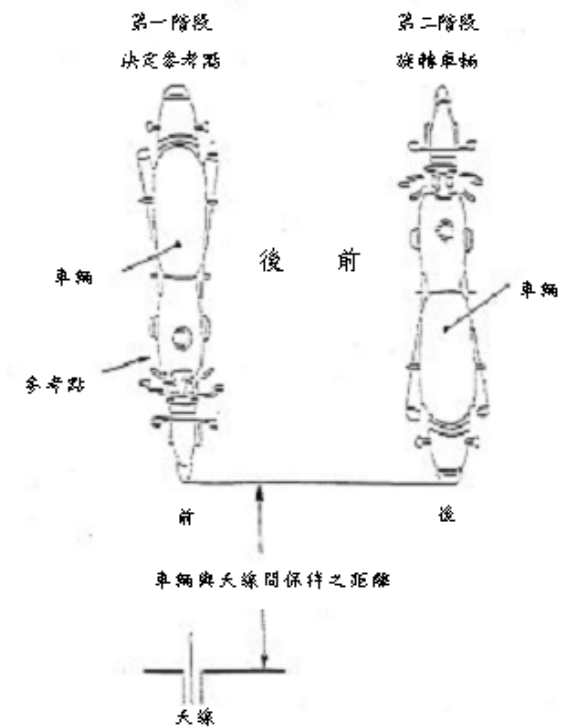


10.3.3.5 –old-C



圖一七

Annex 9-4.2-new-E

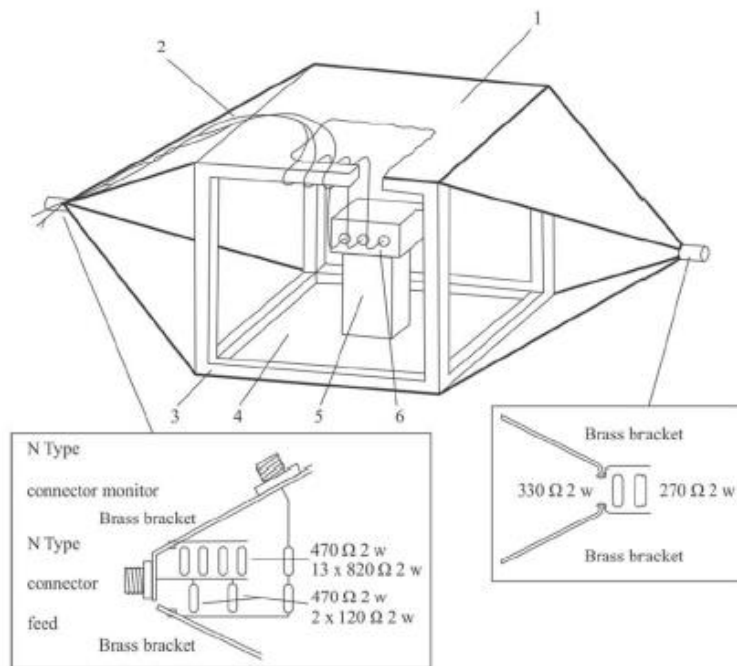


圖一三

Annex 9-4.1.2-old-E

Annex 9 - Appendix 2 Typical TEM cell dimensions The following table shows the dimensions for constructing a cell with specified upper frequency limits: <table><tr><th>Upper frequency (MHz)</th><th>Cell form factor W: b</th><th>Cell form factor L/W</th><th>Plate separation b (cm)</th><th>Septum S (cm)</th></tr><tr><td>200</td><td>1.69</td><td>0.66</td><td>56</td><td>70</td></tr><tr><td>200</td><td>1.00</td><td>1</td><td>60</td><td>50</td></tr></table>	Upper frequency (MHz)	Cell form factor W: b	Cell form factor L/W	Plate separation b (cm)	Septum S (cm)	200	1.69	0.66	56	70	200	1.00	1	60	50	Annex 9 - Appendix 2 Typical TEM cell dimensions The following table shows the dimensions for constructing a cell with specified upper frequency limits: <table><tr><th>Upper frequency (MHz)</th><th>Cell form factor W: b</th><th>Cell form factor L/W</th><th>Plate separation b (cm)</th><th>Septum S (cm)</th></tr><tr><td>200</td><td>1.69</td><td>0.66</td><td>56</td><td>70</td></tr><tr><td>200</td><td>1.00</td><td>1</td><td>60</td><td>50</td></tr></table>	Upper frequency (MHz)	Cell form factor W: b	Cell form factor L/W	Plate separation b (cm)	Septum S (cm)	200	1.69	0.66	56	70	200	1.00	1	60	50
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Annex9 -new-E	11.4.5.1-old-E																														

Figure 1: 800 mm Stripline testing



Details of stripline feed

1 = Ground plate

2 = Main loom and sensor/actuator cables

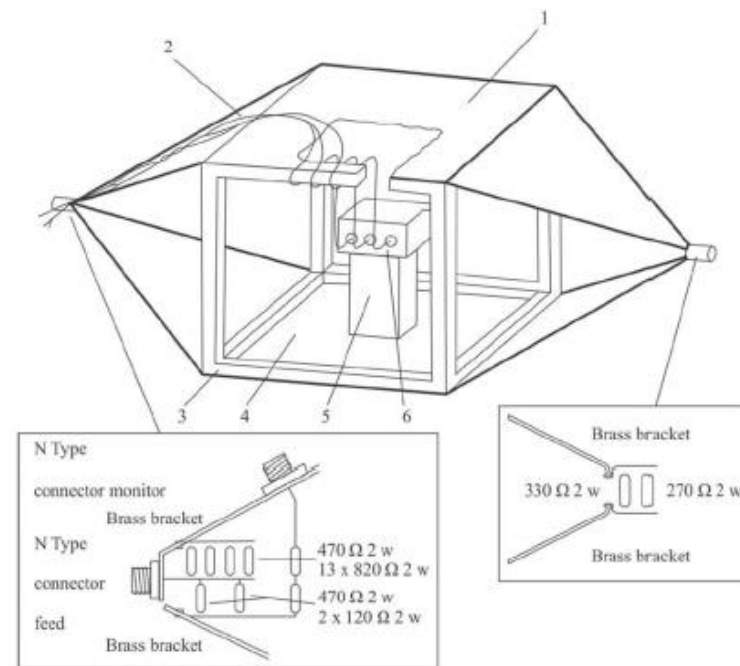
3 = Wooden frame

4 = Driven plate

5 = Insulator

6 = Test object

Figure 1: 800 mm Stripline testing



Details of stripline feed

1 = Ground plate

2 = Main loom and sensor/actuator cables

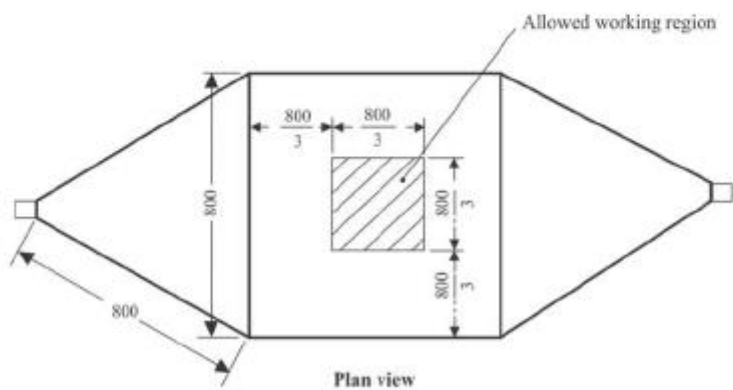
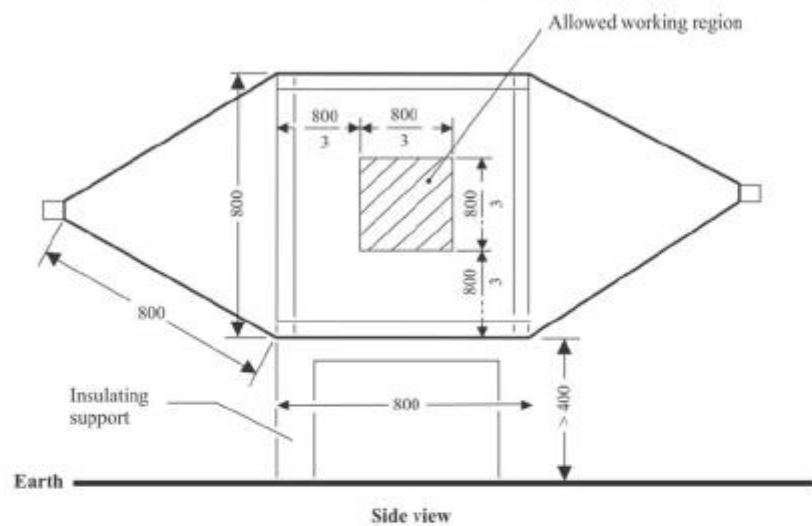
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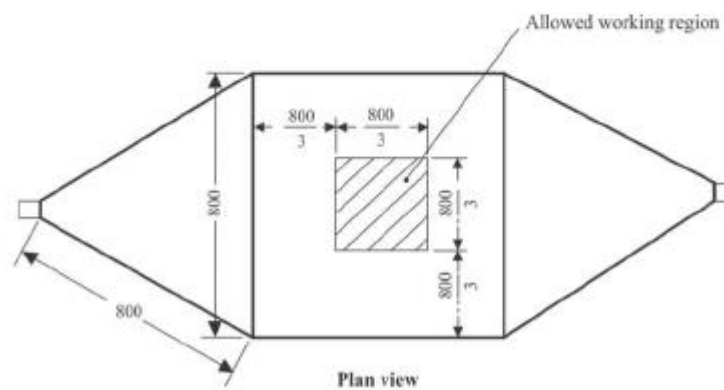
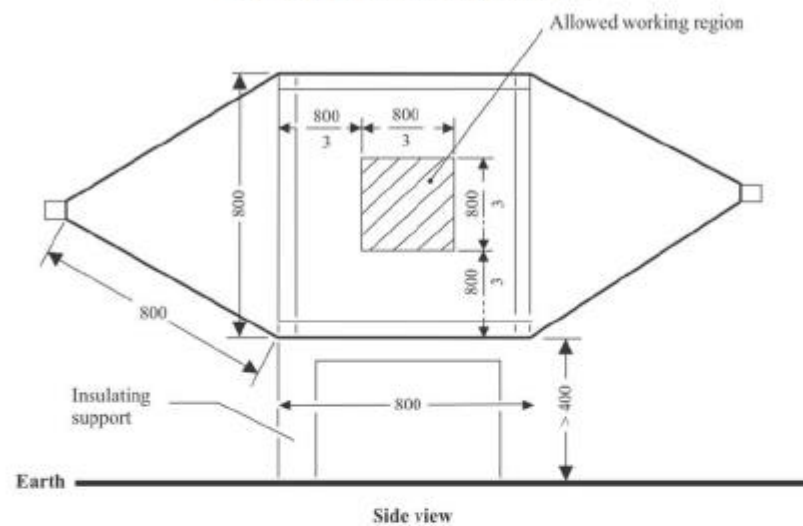
6 = Test object

Figure 2: 800 mm stripline dimensions

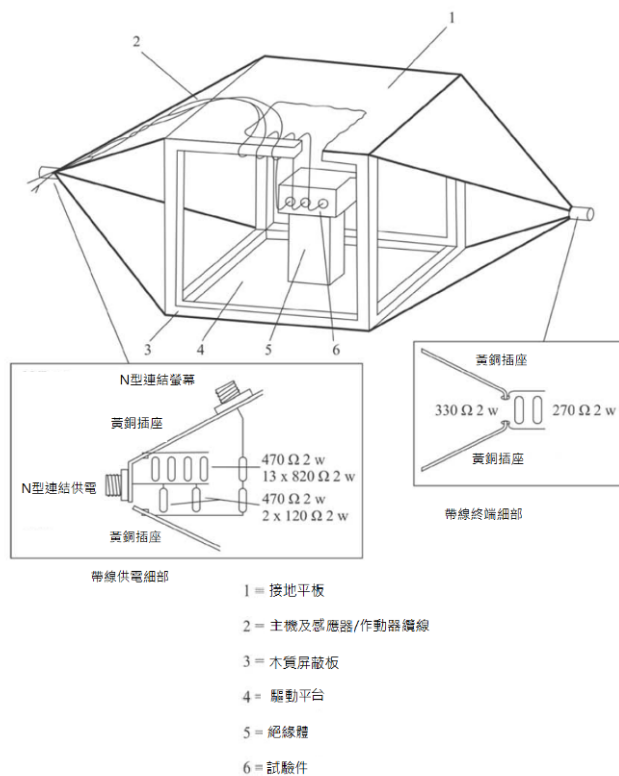


All dimensions
in millimetres

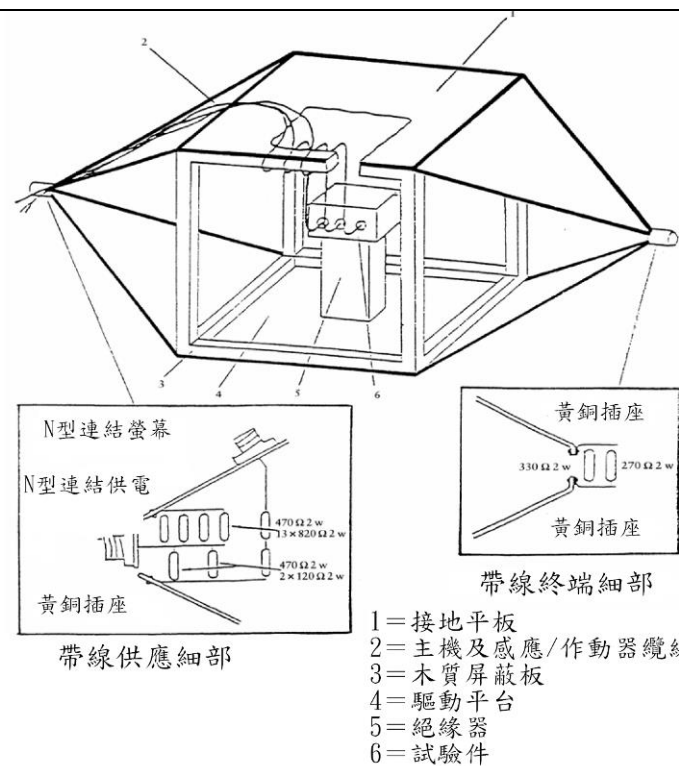
Figure 2: 800 mm stripline dimensions



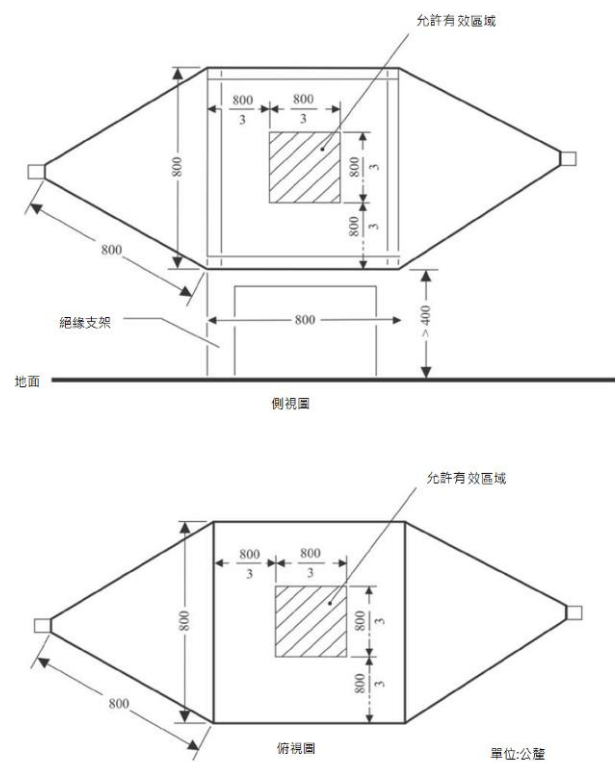
All dimensions
in millimetres



圖一八：八〇〇公釐帶線試驗

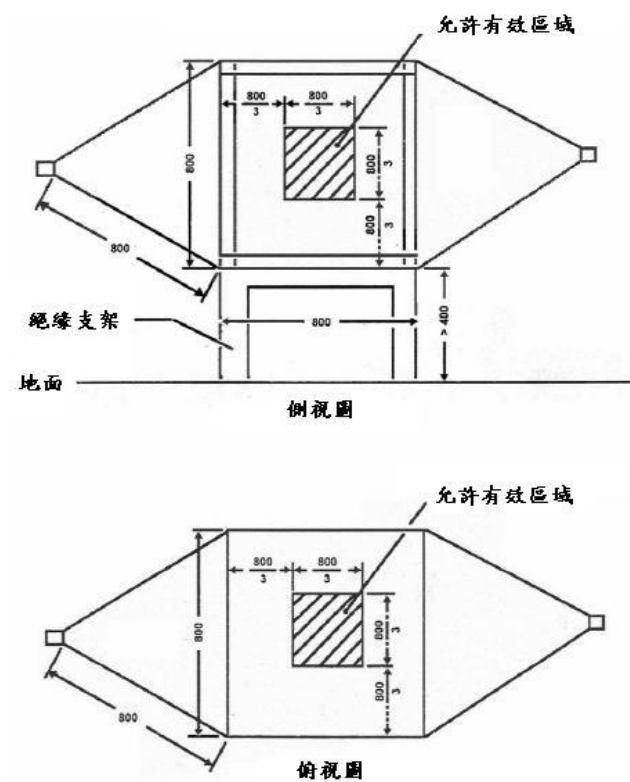


圖一四：八〇〇公釐帶線測試



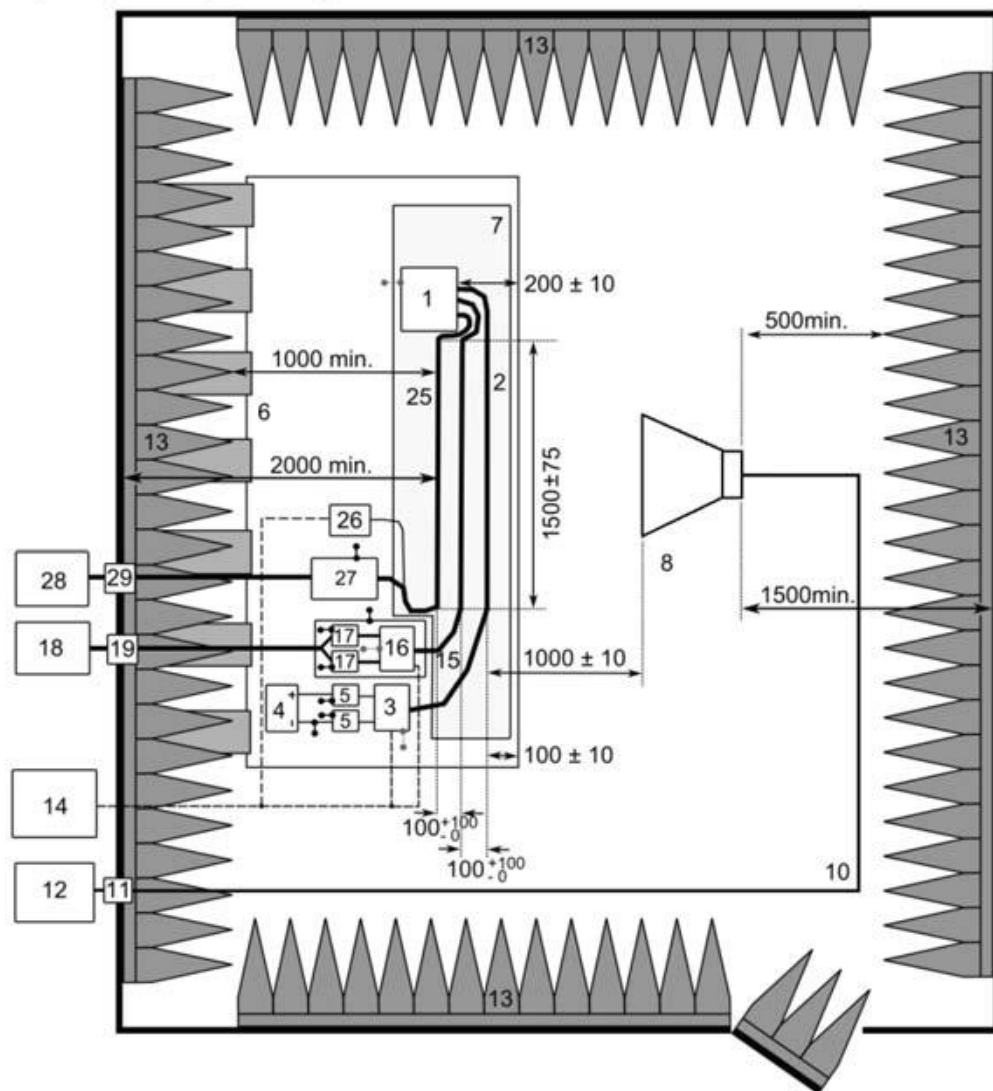
圖一九：八〇〇公釐帶線尺度

Annex 9 - Appendix 3-new-E



圖一五：八〇〇公釐帶線尺度

Top view (Vertical polarization)

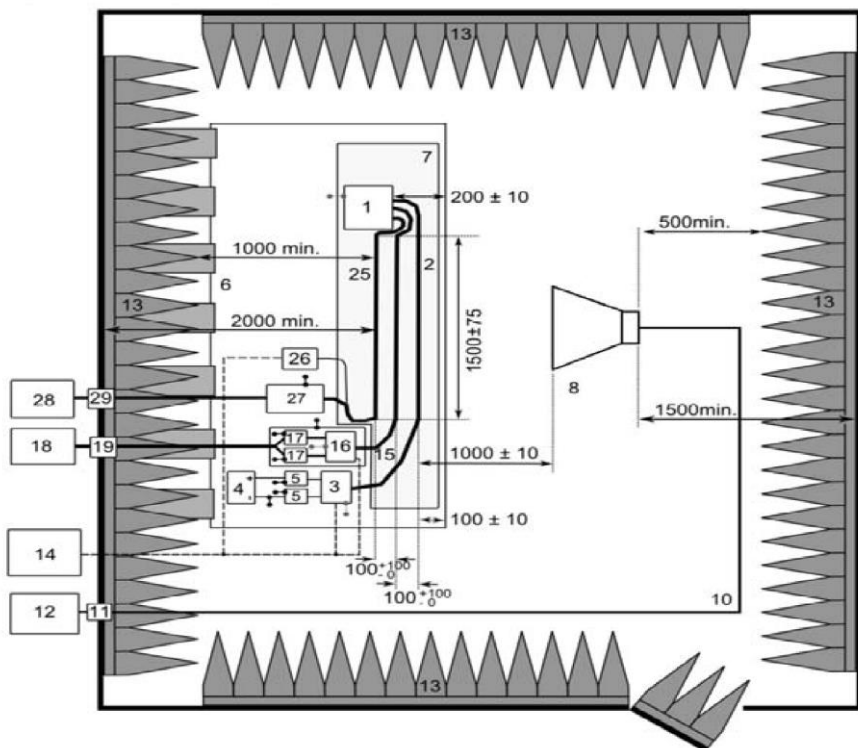


Legend:

- 1 ESA (grounded locally if required in test plan)
- 2 LV Test harness
- 3 LV Load simulator (placement and ground connection according to CISPR 25)

paragraph 6.4.2.5) 4 Power supply (location optional) 5 LV Artificial network (AN) 6 Ground plane (bonded to shielded enclosure) 7 Low relative permittivity support ($\epsilon_r < 1.4$) 8 Horn antenna 10 High-quality coaxial cable e.g. double-shielded (50 ohms) 11 Bulkhead connector 12 RF signal generator and amplifier 13 RF absorber material 14 Stimulation and monitoring system 15 HV harness 16 HV load simulator 17 HV AN 18 HV power supply 19 HV feed-through 25 AC/DC charger harness 26 AC/DC load simulator (e.g. PLC) 27 50 microhenry LISN (AC) or HVAN (DC) 28 AC/DC power supply 29 AC/DC feed-through	
Annex 9 - Appendix 3-new-C	

上視圖(垂直極化)



說明:

- 1.ESA (如果試驗計劃需要則予以接地)
- 2.低壓試驗導線
- 3.低壓負載模擬器 (根據 CISPR 25 第 6.4.2.5 條款安置和接地連接)
- 4.電源供應 (位置可選)
- 5.低壓模擬網路
- 6.接地平面 (連接到屏蔽圍體)
- 7. 保持相對低的介電常數 ($\epsilon_r < 1.4$)
- 8.喇叭型天線
- 10.高品質同軸電纜, 如雙層屏蔽 (50Ω)
- 11.隔板連接器

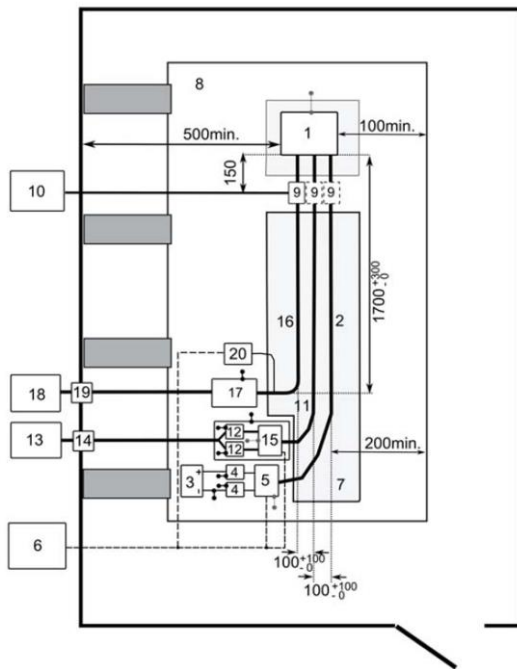
12.RF 訊號產生器及放大器 13.RF 吸波材料 14.激勵與監控系統 15.高壓導線 16.高壓負載模擬器 17.高壓模擬網路 18.高壓電源供應 19.高壓饋通 25.交流/直流充電器導線 26.交流/直流負載模擬器（如 PLC） 27.50 μH 的 LISN（交流）或 HVAN（直流） 28.交流/直流電源供應 29.交流/直流饋通 圖二 0：對於ESA涉及在REESS充電模式連結電網的配置	
Annex 9 - Appendix 4-new-E BCI test Test configuration for ESAs involved in "REESS charging mode coupled to the power grid". The test shall be performed according to ISO 11452-4.	

10 RF signal amplifier and generator

- 11 HV DC harness
- 12 HV AN
- 13 HV DC load
- 14 HV DC feed-through
- 15 HV DC load simulator
- 16 HV AC/DC charger harness
- 17 50 microhenry LISN (AC) or HV AN (DC)
- 18 HV AC/DC power supply
- 19 HV AC/DC feed-through
- 20 HV AC/DC load simulator (e.g. PLC)

Annex 9 - Appendix 4-new-C

上視圖(如替代方法)



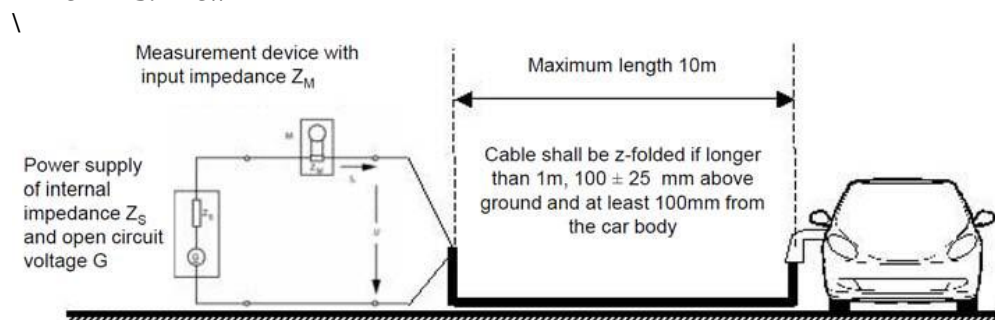
說明:

1.ESA (如果試驗計劃需要則予以接地)

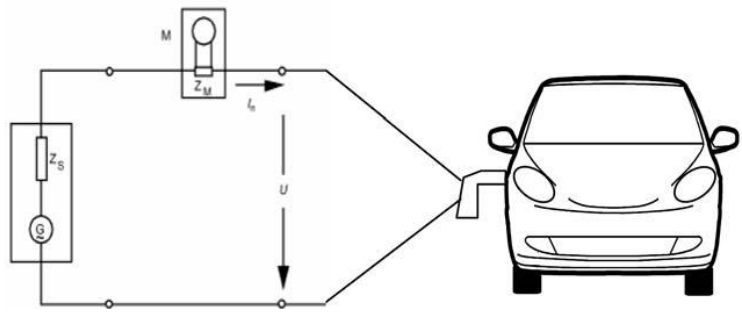
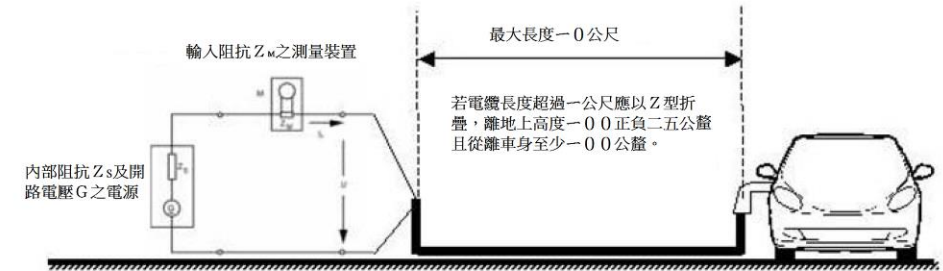
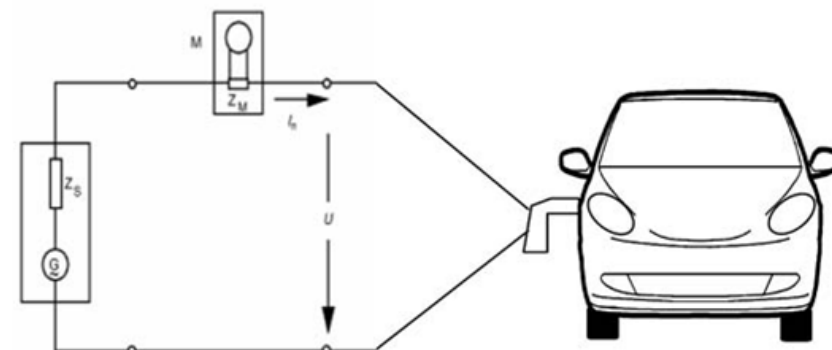
2.低壓試驗導線

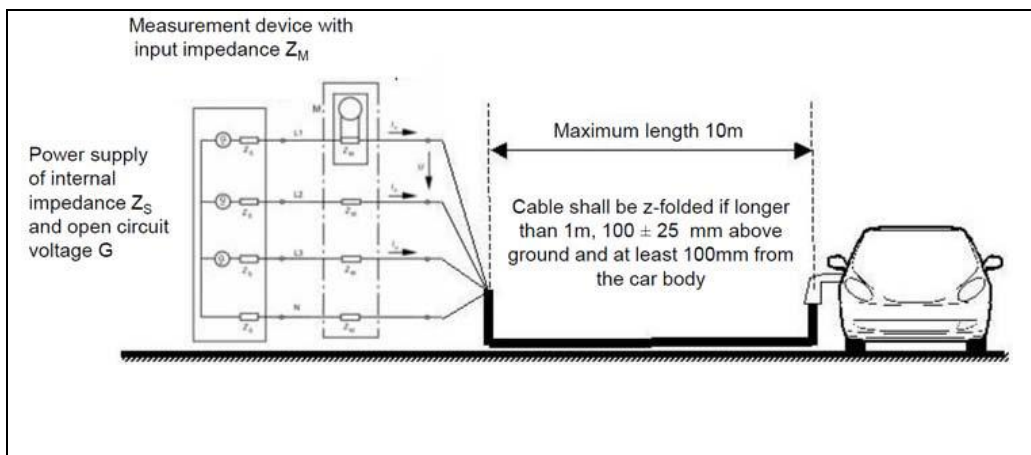
- 3.低壓供應
 - 4.低壓 LISN
 - 5.低壓負載模擬器
 - 6.激勵與監控系統
 - 7.保持相對低的介電常數
 - 8.接地平面
 - 9.注入探針
 10. RF 信號放大器及產生器
 - 11.高壓直流導線
 - 12.高壓模擬網路
 - 13.高壓直流負載
 - 14.高壓直流饋通
 - 15.高壓直流負載模擬器
 - 16.高壓交流/直流充電器導線
 17. $50\ \mu H$ 的 LISN (交流) 或 HVAN (直流)
 - 18.高壓交流/直流電源供應
 - 19.高壓交流/直流饋通
 - 20.高壓交流/直流電源負載模擬器(如 (如PLC))
- 圖二一：對於所有ESA涉及在REESS充電模式連結電網的配置

Annex 11-3.1-new-E

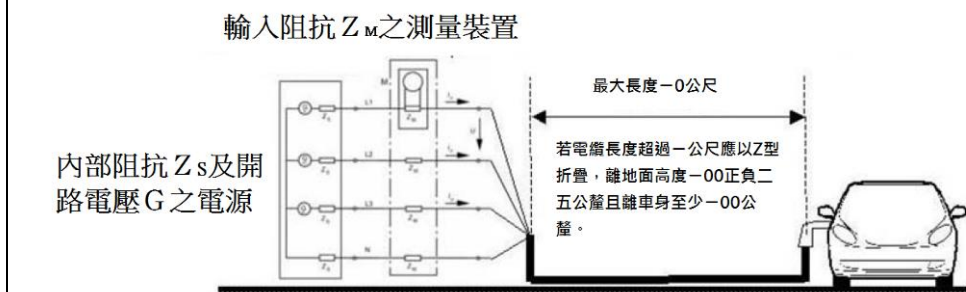


Annex 11-3.2-old-E

	Measurement device with input impedance Z_M Power supply of internal impedance Z_s and open circuit voltage G 
Annex 11-3.1-new-C  輸入阻抗 Z_M 之測量裝置 最大長度—0公尺 若電纜長度超過一公尺應以Z型折疊，離地上高度—0.0正負二五公釐且從離車身至少—0.0公釐。 內部阻抗 Z_s 及開路電壓 G 之電源 <u>圖二二：車輛處於 REESS 充電模式連結電網之配置-單相充電之試驗配置圖示</u>	Annex 11-3.2-old-C 輸入阻抗 Z_M 之測量裝置  內部阻抗 Z_s 及開路電壓 G 之電源 <u>圖一六：車輛處於 RESS 充電模式下連結電源介面之配置-單相充電之試驗配置圖示</u>
Annex 11-3.3-new-E	Annex 11-3.3-old-E

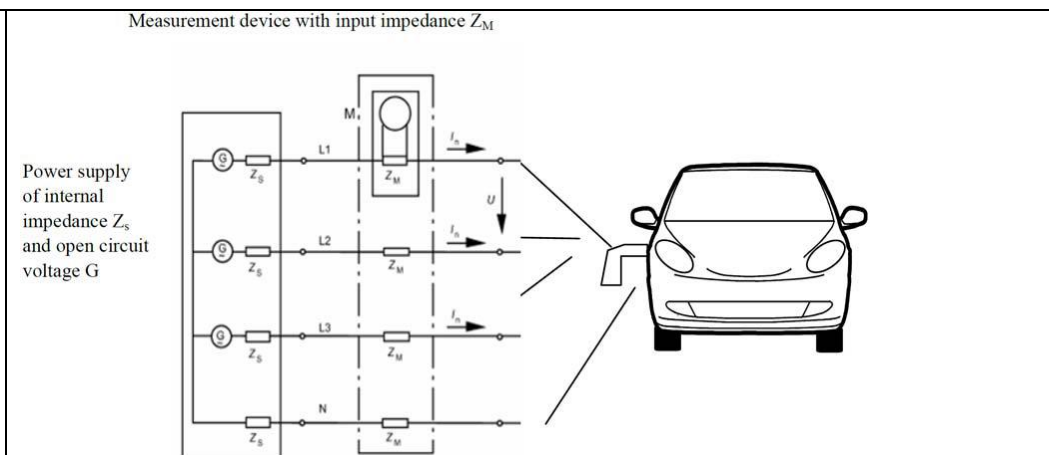


Annex 11-3.3-new- C

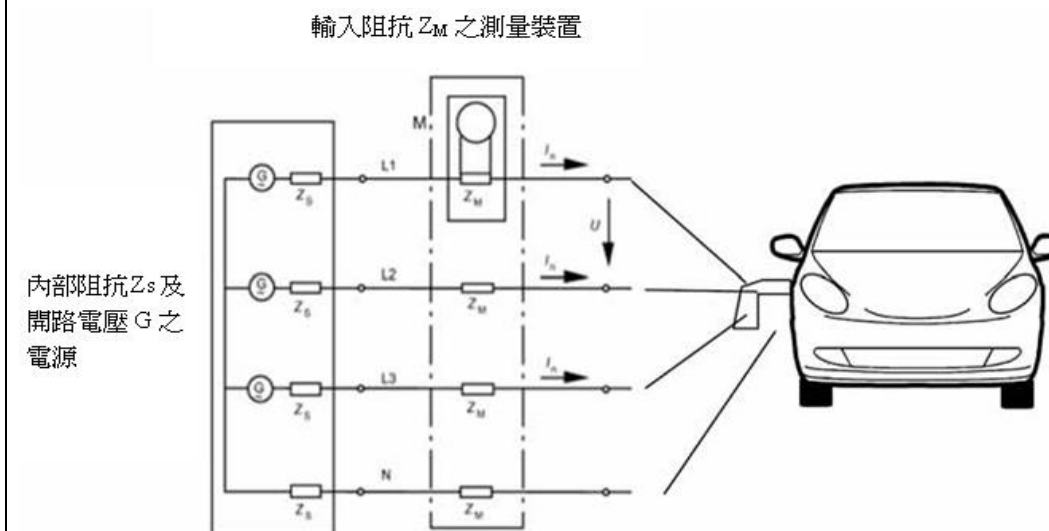


圖二三：車輛處於 REESS 充電模式連結電網之配置-三相充電之試驗配置圖示

※輸入阻抗為 Z_M 之測量裝置
 ※內部阻抗 Z_s 及開路電壓 G 之電源



Annex 11-3.3-old- C



圖一七：車輛處於 RESS 充電模式下連結電源介面之配置-三相充電之試驗配置圖示

※輸入阻抗為 Z_M 之測量裝置
 ※內部阻抗 Z_s 及開路電壓 G 之電源

Annex 12-3.3-new-E

Figure 1a: Vehicle in configuration "REESS charging mode coupled to the power grid" - Single phase test set-up

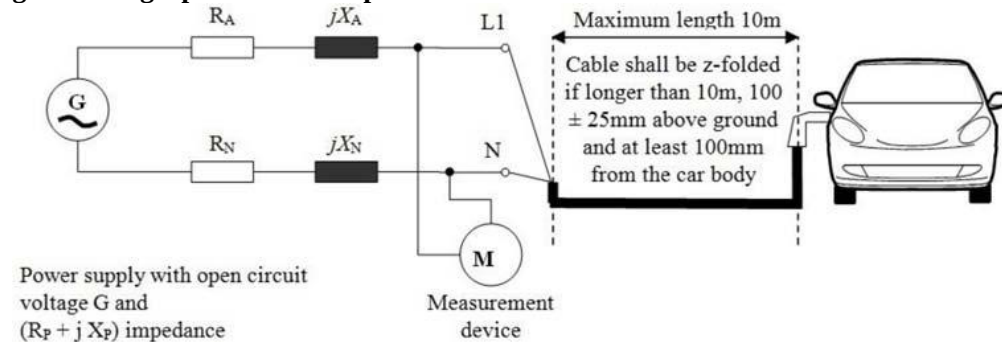
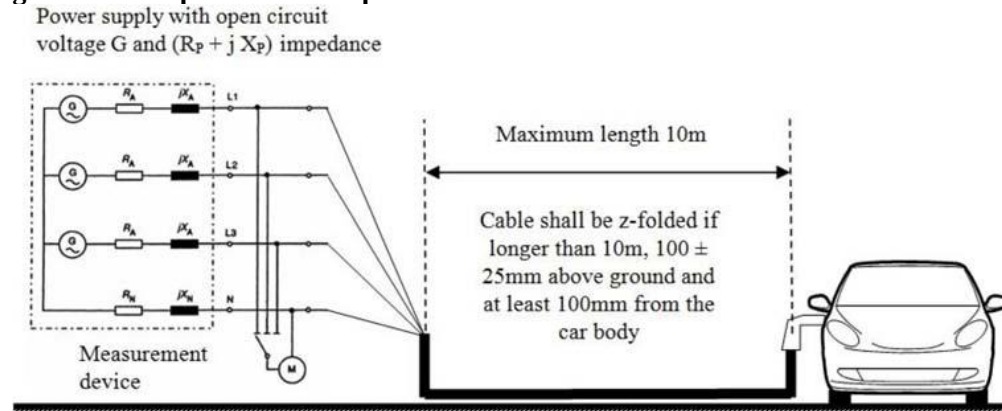


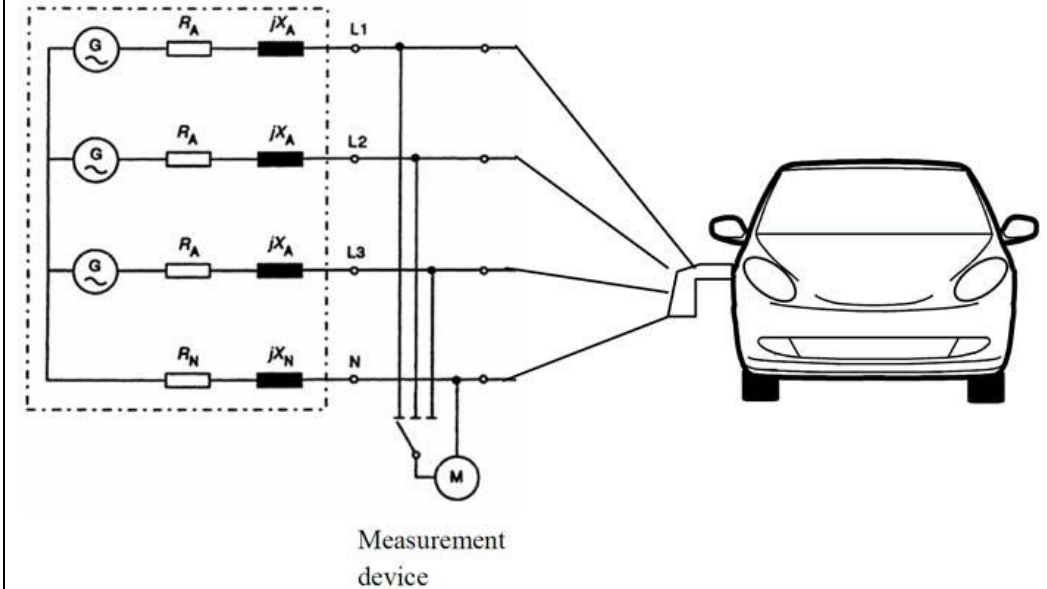
Figure 1b: Vehicle in configuration "REESS charging mode coupled to the power grid" - Three phase test set-up

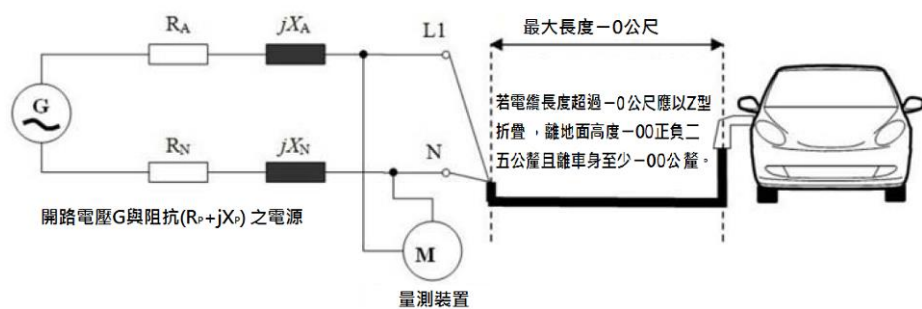


Annex 12 - Appendix 1

Figure 1: Vehicle in configuration "REESS charging mode coupled to the power grid"

Power supply with open circuit voltage G and $(R_P + j X_P)$ impedance

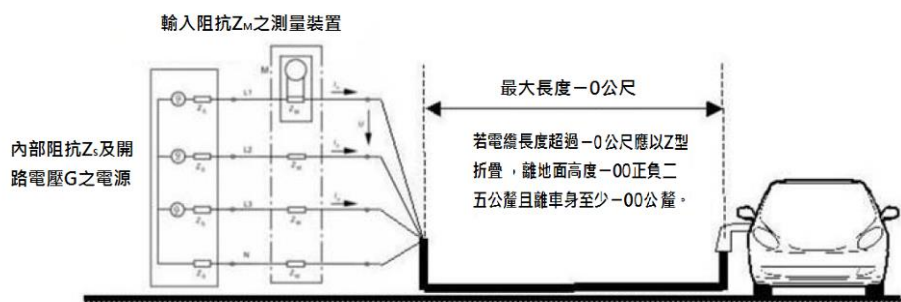




圖二四之一：車輛處於 REESS 充電模式連結電網之配置-單相試驗設定

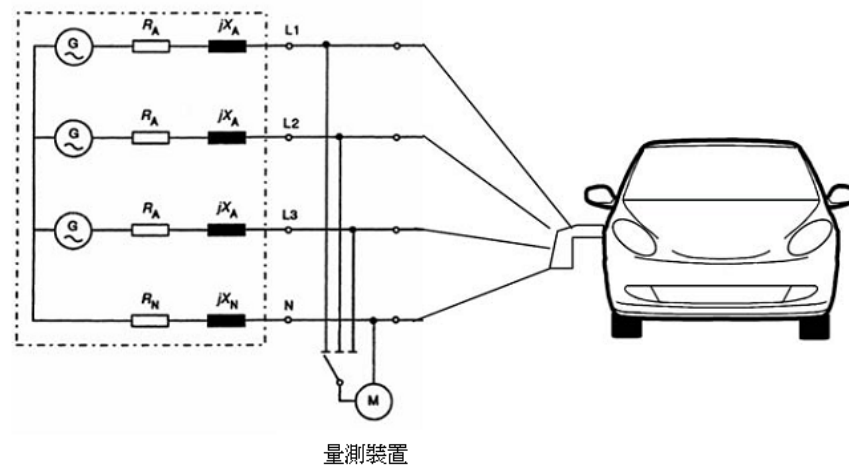
※開路電壓 G ，阻抗為 $(R_p + jX_p)$ 之電源

※量測裝置



圖二四之二：車輛處於 REESS 充電模式連結電網之配置-三相試驗設定

開路電壓 G 與阻抗 $(R_p + jX_p)$ 之電源



圖一八：車輛處於 RESS 充電模式下連結電源介面之配置

※開路電壓 G ，阻抗為 $(R_p + jX_p)$ 之電源

※量測裝置

Figure 1: Vehicle in configuration "REESS charging mode coupled to the power grid"

Example of test setup for vehicle with plug located on vehicle side (AC powered without communication)

Figure 1a

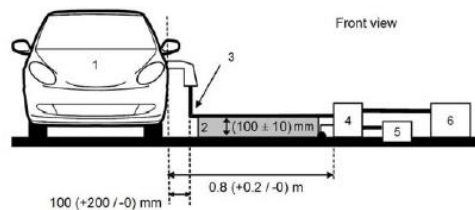
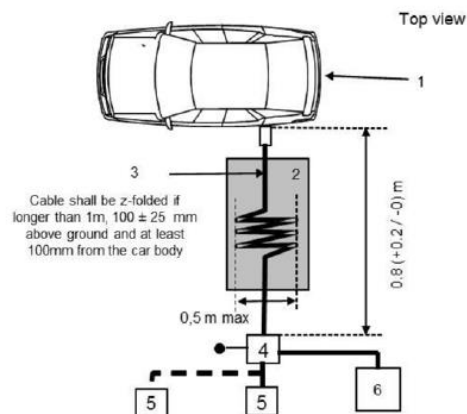


Figure 1b



Legend

- 1 Vehicle under test
- 2 Insulating support
- 3 Charging cable
- 4 Artificial Network(s) grounded (for AC or DC power lines)
- 5 Power mains socket
- 6 Measuring receiver

Vehicle in configuration "REESS charging mode coupled to the power grid"

Example of test setup for vehicle with plug located front / rear of vehicle (AC powered without communication)

Annex 14 - Appendix 1

Figure 1: Vehicle in configuration "REESS charging mode coupled to the power grid"

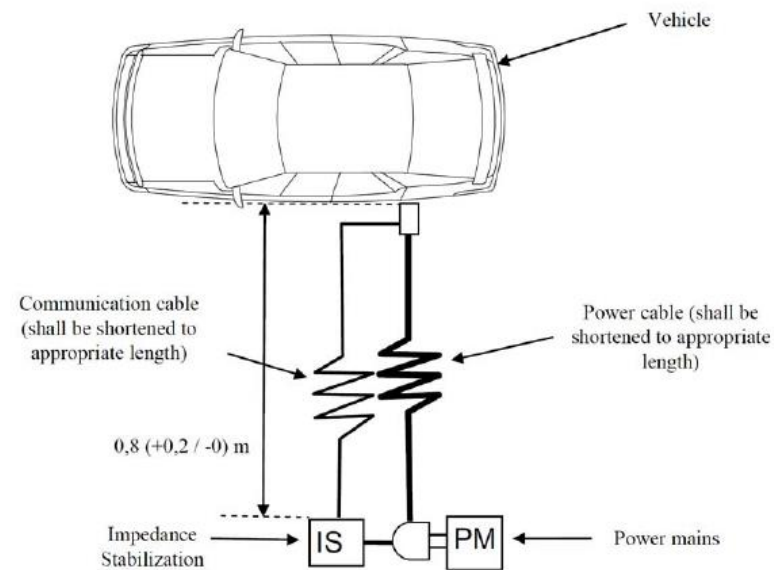


Figure 1c

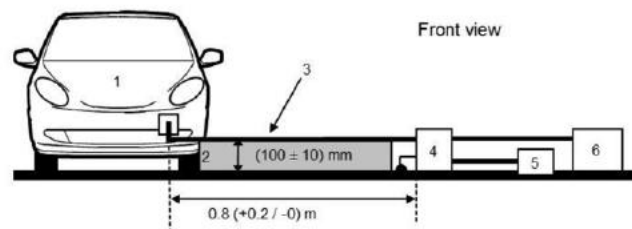
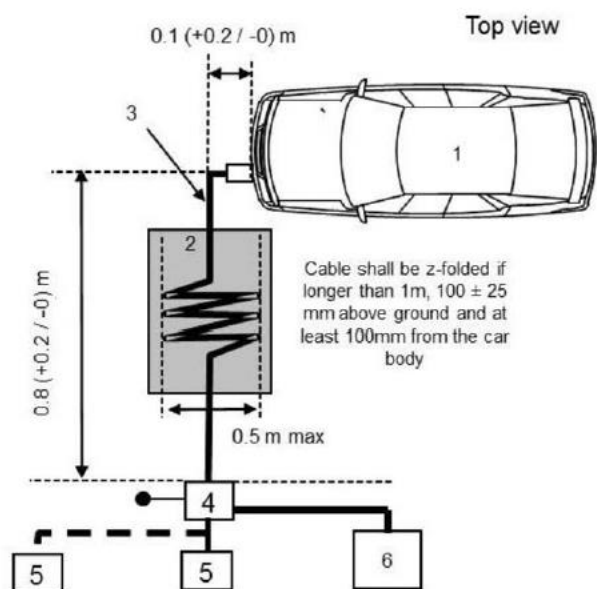


Figure 1d

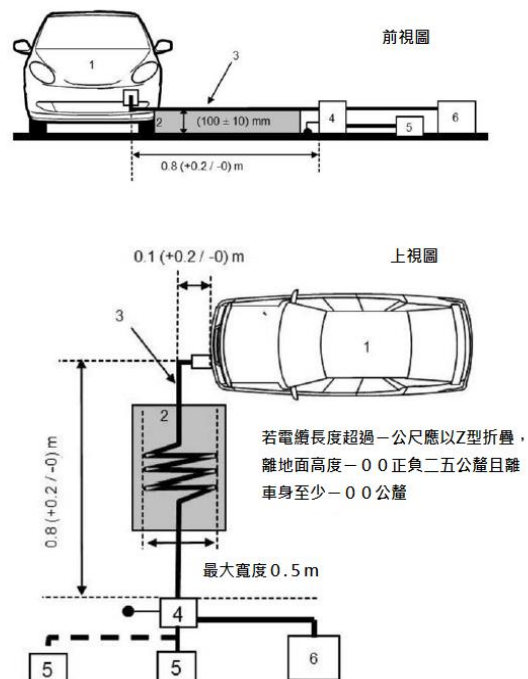


Legend

- 1 Vehicle under test
- 2 Insulating support
- 3 Charging cable
- 4 Artificial Network(s) grounded (for AC or DC power lines)
- 5 Power mains socket
- 6 Measuring receiver

圖二五之一：車輛處於 REESS 充電模式連結電網之配置
車輛插頭位於車輛側面的位置試驗設置範例（交流電源不具有通訊設
施）。

Annex 13-3.2-new-C



說明:

1. 待測車輛
2. 絕緣支撐
3. 充電電纜
4. 模擬網路接地(供交流或直流電源線)

5. [電源插座](#)
6. [量測接收器](#)

[圖二五之二：車輛處於 REESS 充電模式連結電網之配置](#)
[車輛插頭位於車輛前/後的位置試驗設置範例（交流電源不具有通訊設施）。](#)

Annex 13-3.4-new-E

Table 1: Spectrum analyser parameters

Frequency range MHz	Peak detector		Quasi-peak detector		Average detector	
	RBW at -3 dB	Scan time	RBW at -6 dB	Scan time	RBW at -3 dB	Scan time
0.15 to 30	9/10 kHz	10 s/MHz	9 kHz	200 s/MHz	9/10 kHz	10 s/MHz

Note:

If a spectrum analyser is used for peak measurements, the video bandwidth shall be at least three times the resolution bandwidth (RBW)

Table 2: Scanning receiver parameters

Frequency range MHz	Peak detector			Quasi-peak detector			Average detector		
	BW at -6 dB	Step size ^a	Dwell time	BW at -6 dB	Step size ^a	Dwell time	BW at -6 dB	Step size ^a	Dwell time
0.15 to 30	9 kHz	5 kHz	50 ms	9 kHz	5 kHz	1 s	9 kHz	5 kHz	50 ms

^a For purely broadband disturbances, the maximum frequency step size may be increased up to a value not greater than the bandwidth value.

Annex 13-3.4-new-C

[表一三：頻譜分析儀參數](#)

頻率範圍 MHz	峰值檢波器		準峰值檢波器		均值檢波器	
	解析頻寬在-3dB	掃描時間	解析頻寬在-6dB	掃描時間	解析頻寬在-3dB	掃描時間
0.15-30	9/10 kHz	10 s/MHz	9 kHz	200 s/MHz	9/10 kHz	10 s/MHz

[備註：](#)

[如果頻譜分析儀被以峰值的測量，視訊頻寬應至少有三次解析頻寬（RBW）。](#)

[表一四：掃描接收機參數](#)

<u>頻率 範圍 MHz</u>	<u>峰值檢波器</u>			<u>準峰值檢波器</u>			<u>均值檢波器</u>			
	<u>頻寬 在 -6dB</u>	<u>步長^a</u>	<u>停留 時間</u>	<u>頻寬 在 -6dB</u>	<u>步長^a</u>	<u>停留 時間</u>	<u>頻寬 在 -6dB</u>	<u>步長^a</u>	<u>停留 時間</u>	
<u>0.15- 30</u>	<u>9 kHz</u>	<u>5 kHz</u>	<u>50 ms</u>	<u>9 kHz</u>	<u>5 kHz</u>	<u>1 s</u>	<u>9kHz</u>	<u>5 kHz</u>	<u>50ms</u>	
^a <u>對於純粹的頻寬干擾，最大頻率步長值可以增大到不大於頻寬值。</u>										
Annex 14-3.3-new1-E										Annex 14-3.3-old-E

Figure 1: Vehicle in configuration "REESS charging mode coupled to the power grid"

Example of test setup for vehicle with plug located on vehicle side (AC or DC powered with communication)

Figure 1a

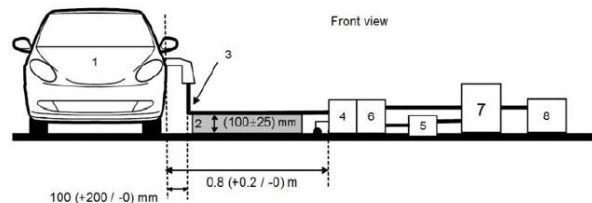
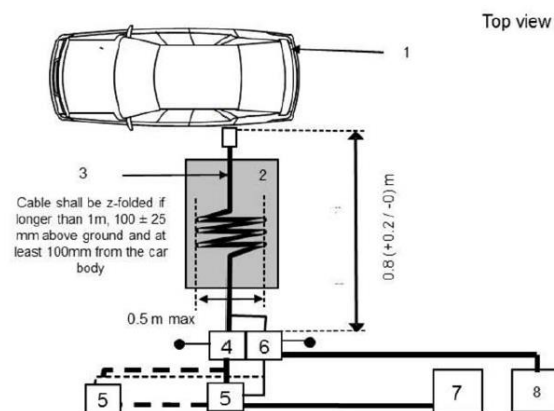


Figure 1b



Legend

- 1 Vehicle under test
 - 2 Insulating support
 - 3 Charging / communication cable
 - 4 AC or DC Artificial Network(s) grounded (for AC or DC power lines)
 - 5 Power mains socket
 - 6 Impedance Stabilization(s) grounded (for communication lines)
 - 7 Charging Station
 - 8 Measuring receiver
- Vehicle in configuration "REESS charging mode coupled to the power grid"
Example of test set-up for vehicle with plug located front/rear of vehicle (AC or DC powered with communication)

Annex 14 - Appendix 1

Figure 1: Vehicle in configuration "REESS charging mode coupled to the power grid"

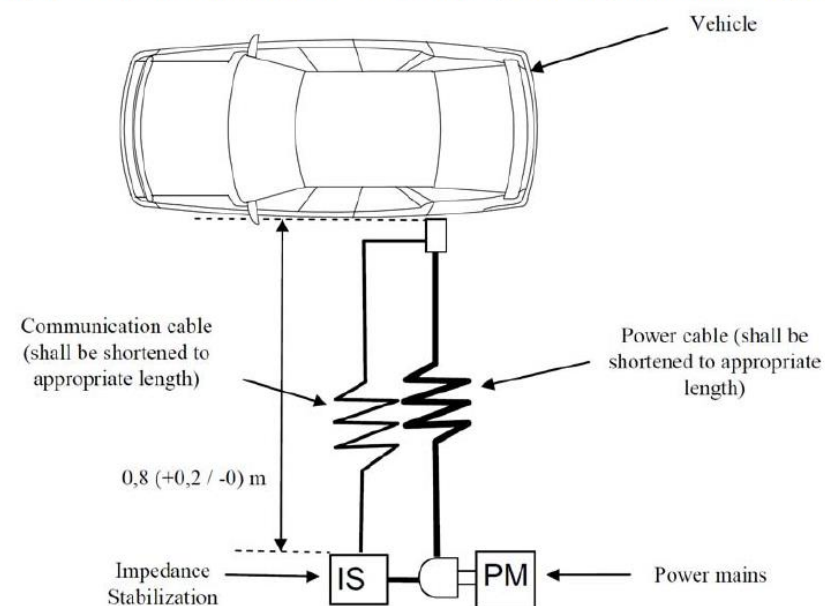


Figure 1c

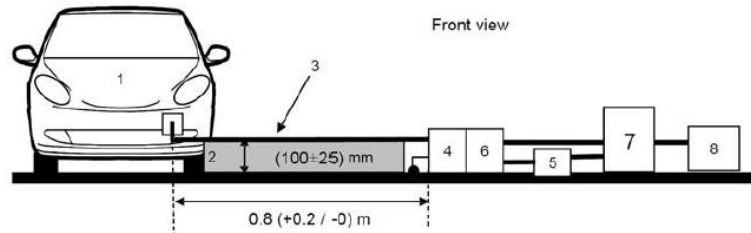
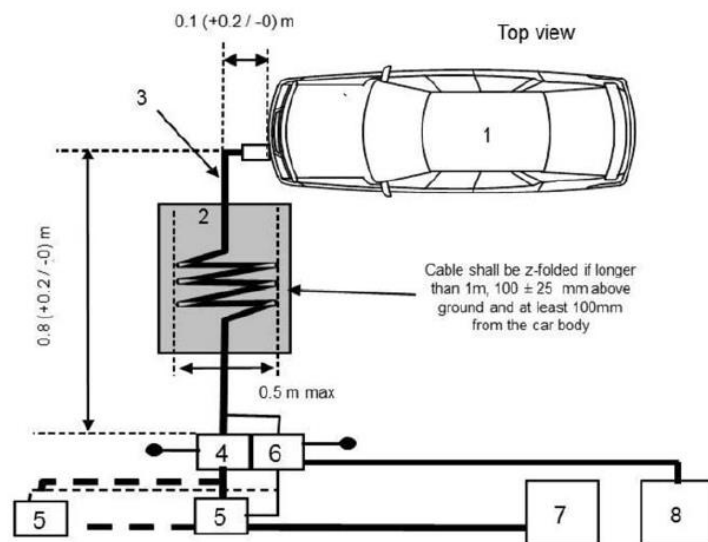


Figure 1d

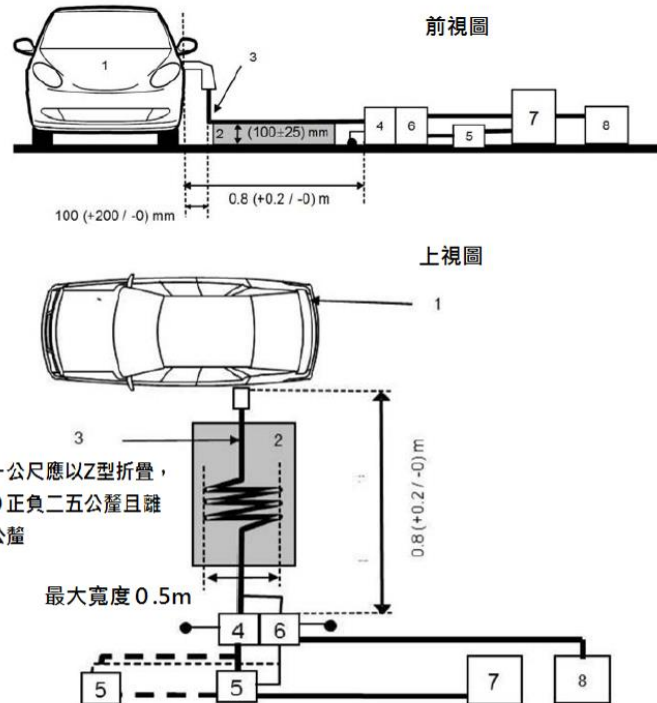


Legend

- 1 Vehicle under test
- 2 Insulating support
- 3 Charging / communication cable
- 4 AC or DC Artificial Network(s) grounded (for AC or DC power lines)
- 5 Power mains socket
- 6 Impedance Stabilization(s) grounded (for communication lines)
- 7 Charging Station
- 8 Measuring receiver

Annex 14-3.3-new1-C

Annex 14-3.3-old-E

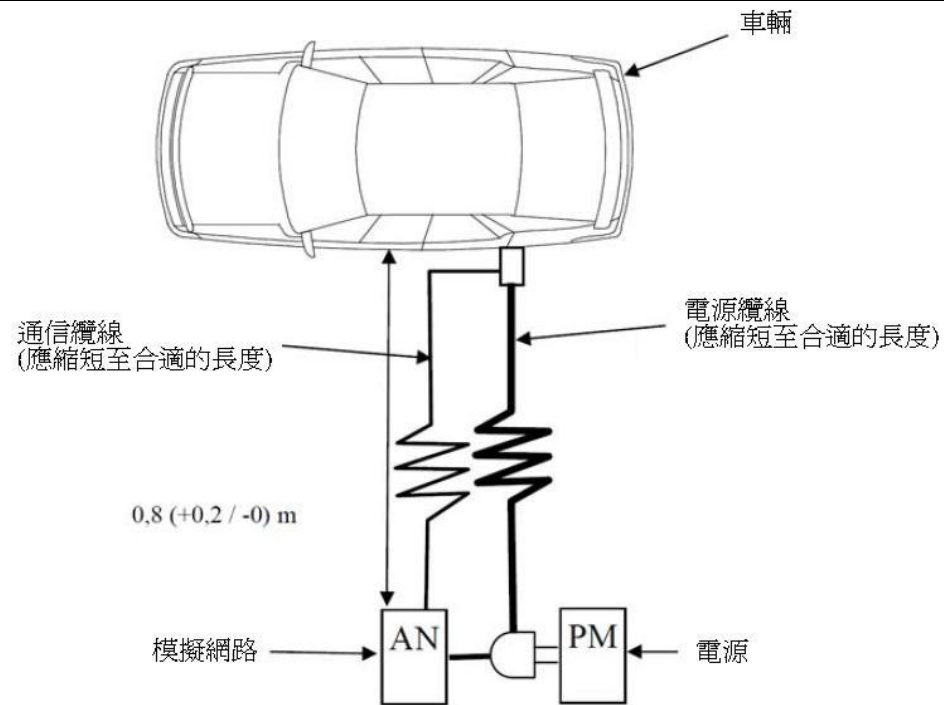


說明:

1. 待測車輛
2. 絕緣支撐
3. 充電/通訊電纜
4. 交流或直流模擬網路接地(供交流或直流電源線)
5. 電源插座
6. 阻抗穩定器接地 (供通訊線)
7. 充電站
8. 量測接收器

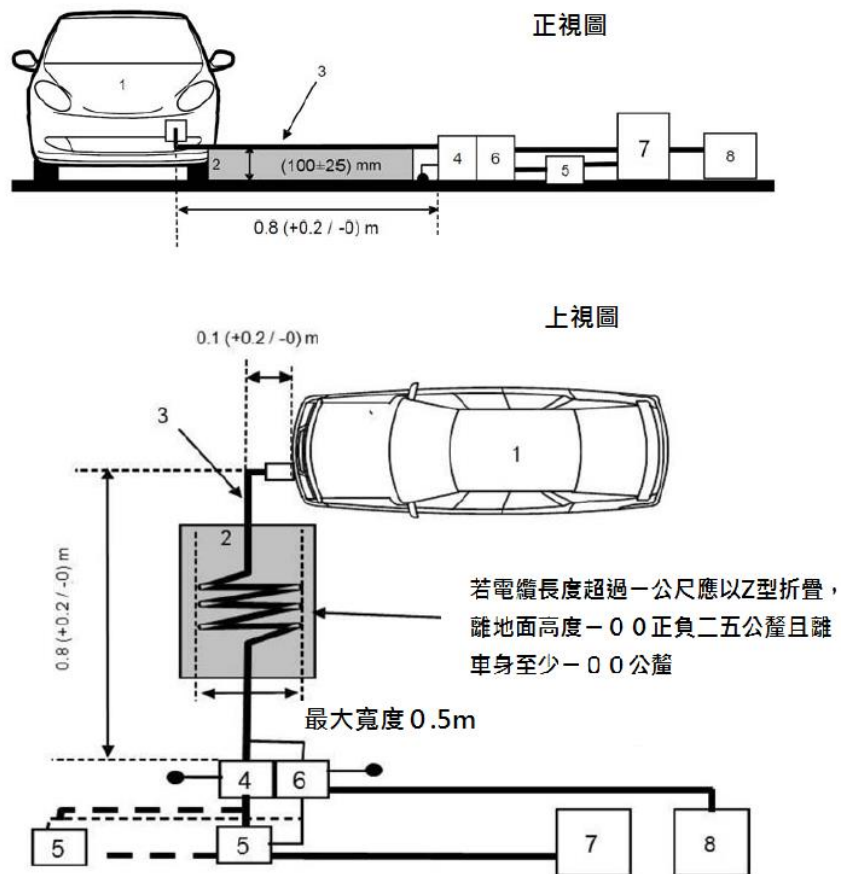
圖二六之一：車輛處於 REESS 充電模式連結電網之配置

車輛插頭位於車輛前/後的位置試驗設置範例 (交流或直流電源具有通訊



圖二0：車輛處於 RESS 充電模式下連結電源介面之配置

設施)。



說明:

1. 待測車輛
2. 絕緣支撐
3. 充電/通訊電纜
4. 交流或直流模擬網路接地(供交流或直流電源線)
5. 電源插座

6. 阻抗穩定器接地（供通訊線） 7. 充電站 8. 量測接收器 圖二六之二：車輛處於 REESS 充電模式連結電網之配置 車輛插頭位於車輛側面的位置試驗設置範例（交流或直流電源具有通訊設施）。	
Annex 14-3.3-new2-E Example of test setup for vehicle with plug located on vehicle side (AC or DC powered with communication)	無

Figure 2a

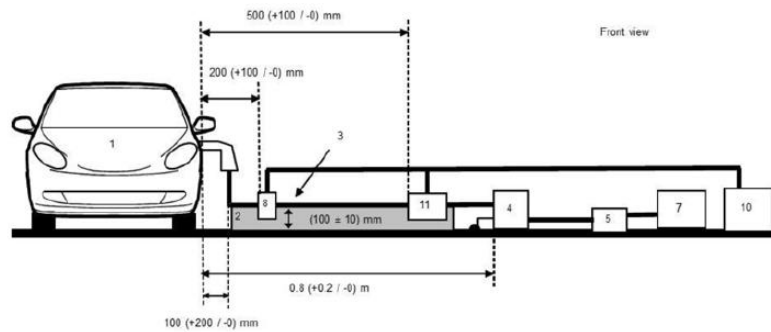
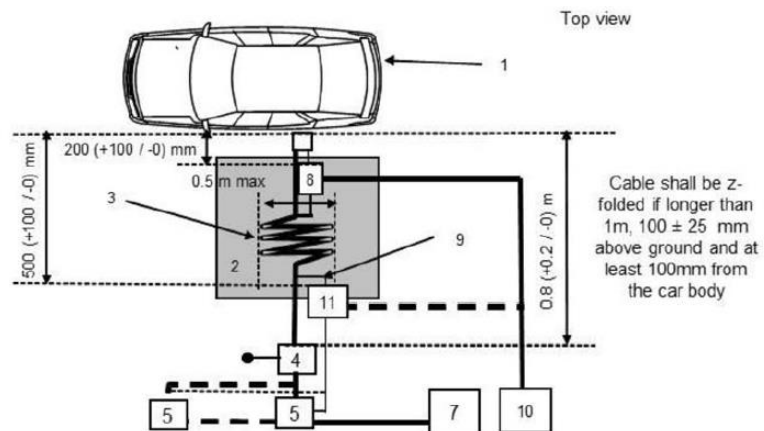


Figure 2b



Legend

- 1 Vehicle under test
- 2 Insulating support
- 3 Charging / communication cable
- 4 AC or DC Artificial Network(s) grounded (for AC or DC power lines)
- 5 Power mains socket
- 7 Charging Station
- 8 Current probe
- 9 Communication lines
- 10 Measuring receiver
- 11 Capacitive voltage probe

Alternative measurement for vehicle in configuration "REESS charging mode coupled in the power grid"

Example of test setup for vehicle with plug located front / rear of vehicle (AC or DC powered with communication)

Figure 2c

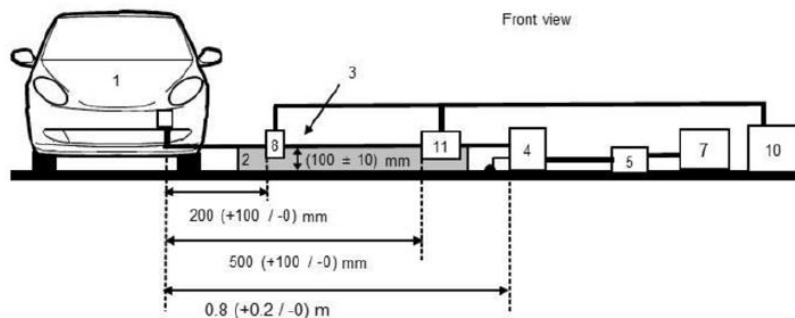
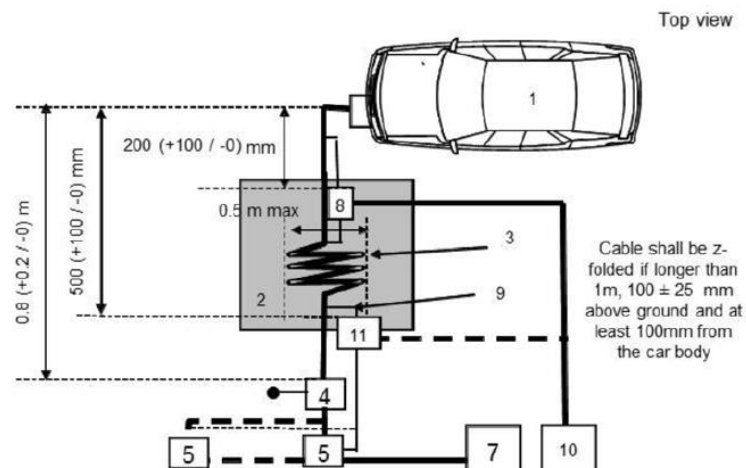


Figure 2d

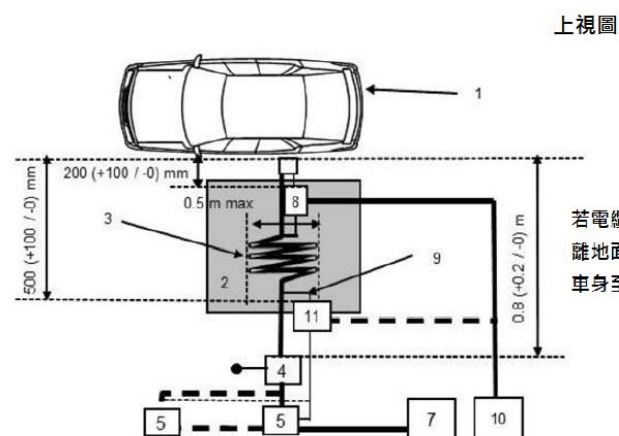
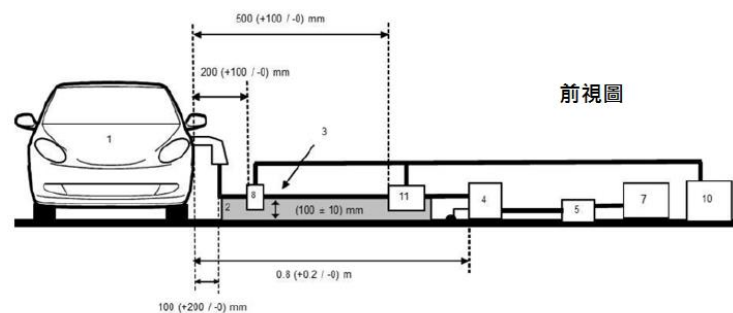


Legend

- 1 Vehicle under test
- 2 Insulating support
- 3 Charging / communication cable
- 4 AC or DC Artificial Network(s) grounded (for AC or DC power lines)
- 5 Power mains socket

- 7 Charging Station
- 8 Current probe (or capacitive voltage probe)
- 9 Communication lines
- 10 Measuring receiver
- 11 Capacitive voltage probe

Annex 14-3.3-new2-C



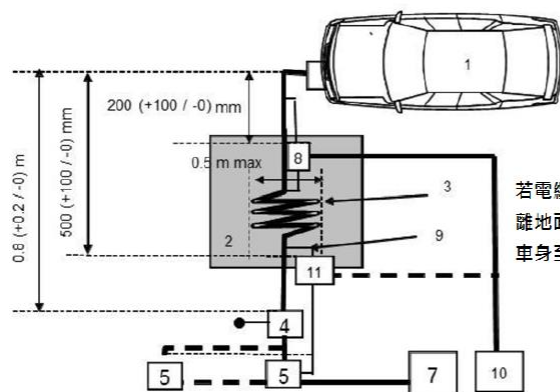
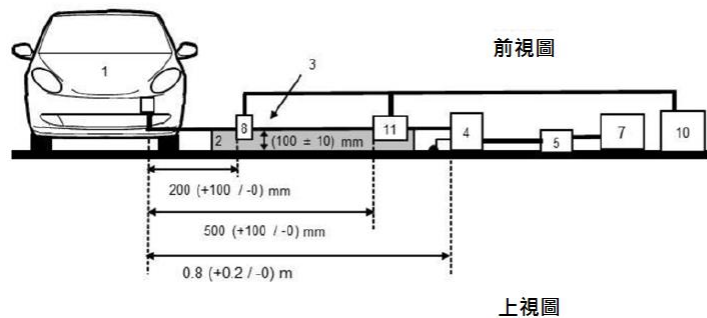
若電纜長度超過一公尺應以Z型折疊，
離地面高度-0.0正負二五公釐且離
車身至少-0.0公釐

說明:

1. 待測車輛
2. 絕緣支撐
3. 充電/通訊電纜

4. 交流或直流模擬網路接地(供交流或直流電源線)
5. 電源插座
7. 阻抗穩定器接地（供通訊線）
8. 電流探針
9. 通訊線
10. 量測接收器
11. 電容電壓探針

圖二七之一：車輛處於 REESS 充電模式連結電網之配置替待量測方式
車輛插頭位於車輛側面的位置試驗設置範例（交流或直流電源具有通訊
設施）。



若電纜長度超過一公尺應以Z型折疊，
離地面高度 -0.0 ± 0.025 公尺且離
車身至少 -0.0 公尺

說明:

1.待測車輛

2.絕緣支撐

3.充電/通訊電纜

4.交流或直流模擬網路接地(供交流或直流電源線)

5.電源插座

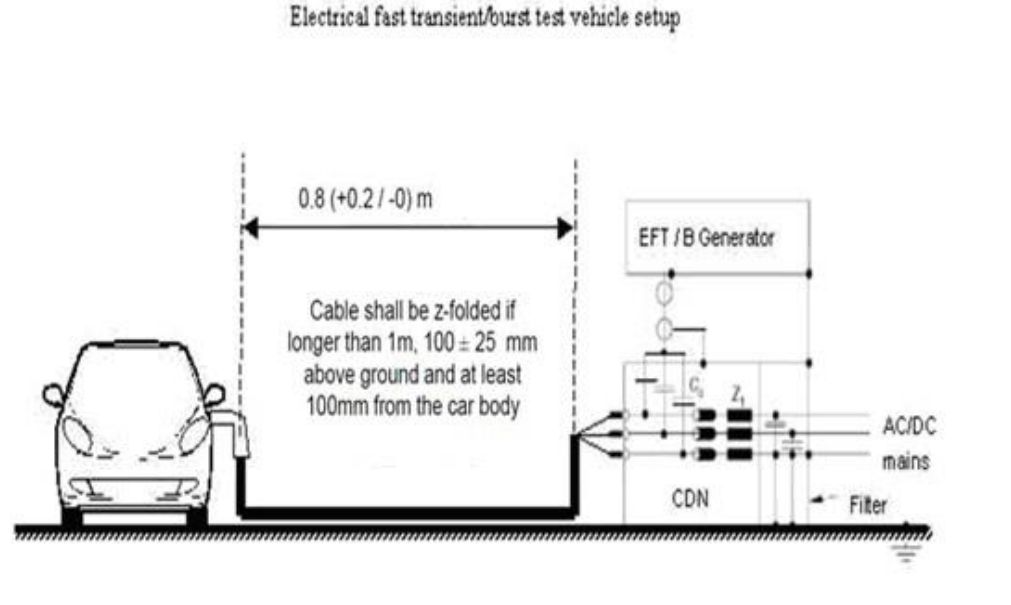
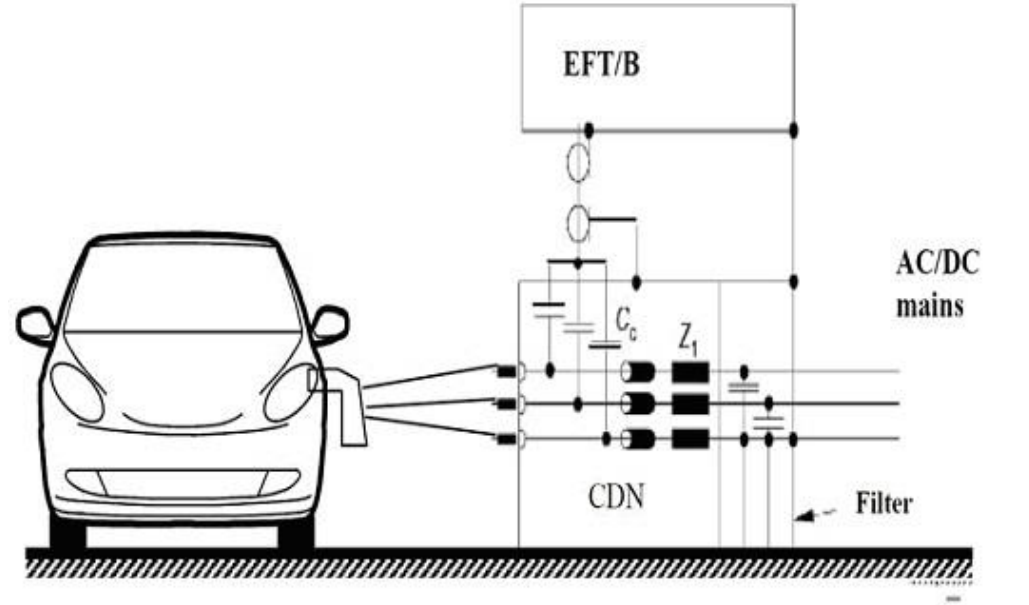
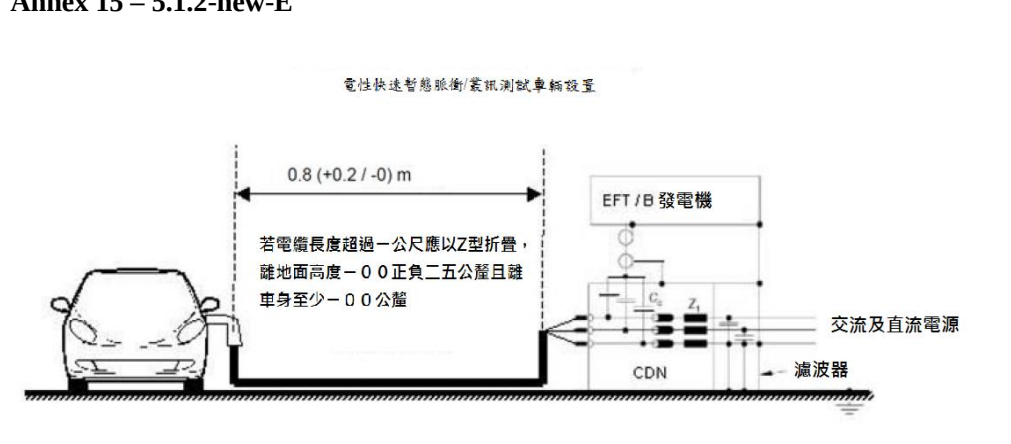
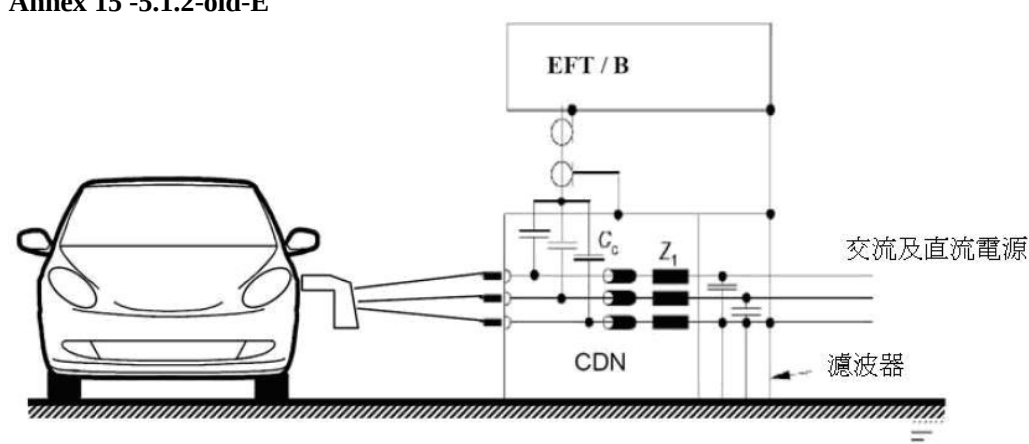
7.阻抗穩定器接地（供通訊線）

8.電流探針

9.通訊線

10.量測接收器

<u>11.電容電壓探針</u> <u>圖二七之二：車輛處於 REESS 充電模式連結電網之配置替待量測方式</u> <u>車輛插頭位於車輛前/後的位置試驗設置範例（交流或直流電源具有通訊設施）。</u>									
Annex15-2.1.2-new-E <table border="1"> <thead> <tr> <th>"REESS charging mode" vehicle test conditions</th><th>Failure criteria</th></tr> </thead> <tbody> <tr> <td>The REESS shall be in charging mode. The state of charge (SOC) of the traction battery shall be kept between 20 per cent and 80 per cent of the maximum SOC during the whole time duration of the measurement (this may lead to the measurement being split into different time slots with the need to discharge the vehicle's traction battery before starting the next time slot). If the current consumption can be adjusted, then the current shall be set to at least 20 per cent of its nominal value.</td><td>Vehicle sets in motion</td></tr> </tbody> </table>	"REESS charging mode" vehicle test conditions	Failure criteria	The REESS shall be in charging mode. The state of charge (SOC) of the traction battery shall be kept between 20 per cent and 80 per cent of the maximum SOC during the whole time duration of the measurement (this may lead to the measurement being split into different time slots with the need to discharge the vehicle's traction battery before starting the next time slot). If the current consumption can be adjusted, then the current shall be set to at least 20 per cent of its nominal value.	Vehicle sets in motion	Annex15-2.1.2-old-E <table border="1"> <thead> <tr> <th>"REESS in charging mode" vehicle test conditions</th><th>Failure criteria</th></tr> </thead> <tbody> <tr> <td>The REESS shall be in charging mode. The REESS state of charge shall be agreed in between the manufacturer and the Technical Service.</td><td>Vehicle sets in motion</td></tr> </tbody> </table>	"REESS in charging mode" vehicle test conditions	Failure criteria	The REESS shall be in charging mode. The REESS state of charge shall be agreed in between the manufacturer and the Technical Service.	Vehicle sets in motion
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Annex 15 – 5.1.2-new-E	Annex 15 -5.1.2-old-E								

Electrical fast transient/burst test vehicle setup  0.8 (+0.2/-0) m Cable shall be z-folded if longer than 1m, 100 ± 25 mm above ground and at least 100mm from the car body EFT / B Generator AC/DC mains CDN Filter	 EFT/B AC/DC mains CDN Filter
Annex 15 – 5.1.2-new-E 電性快速暫態脈衝/震訊測試車輛設置  0.8 (+0.2/-0) m 若電纜長度超過一公尺應以Z型折疊，離地面高度-0.0正負二五公釐且離車身至少-0.0公釐 EFT / B 發電機 交流及直流電源 CDN 濾波器 圖二八：車輛處於 REESS 充電模式以交流及直流電源線連結電網之配置	Annex 15 -5.1.2-old-E  EFT / B 交流及直流電源 CDN 濾波器 圖二一：車輛處於 REESS 充電模式下以交流及直流電源線連結電源介面之配置
Annex16 2.1.2-new-E	Annex16 2.1.2-old-E

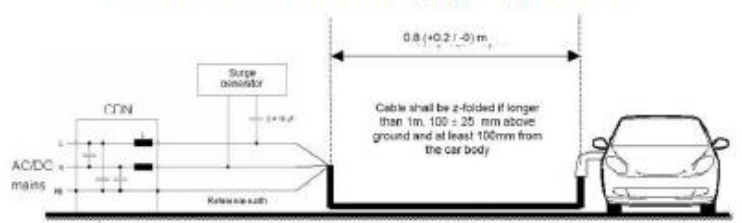
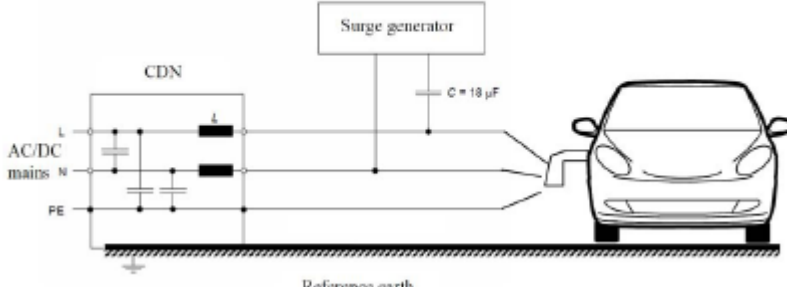
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Figure 2: Vehicle in configuration "REESS charging mode coupled to the power grid" - Coupling between each line and earth for DC or AC (single phase) power lines

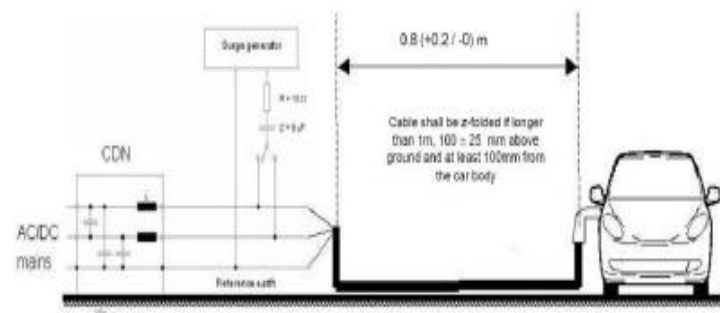


Figure 2: Vehicle in configuration "REESS charging mode coupled to the power grid" - Coupling between each line and earth for DC or AC (single phase) power lines

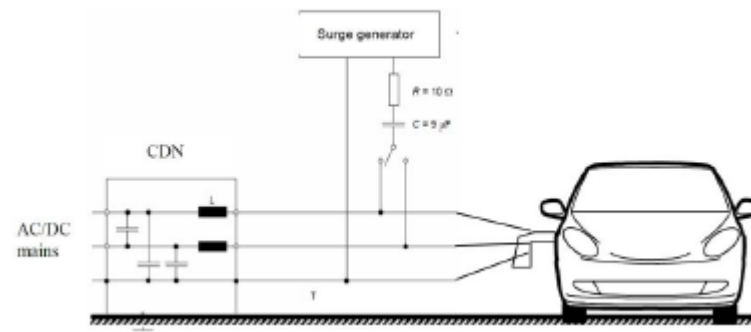


Figure 3: Vehicle in configuration "REESS charging mode coupled to the power grid" - Coupling between lines for AC (three phases) power lines

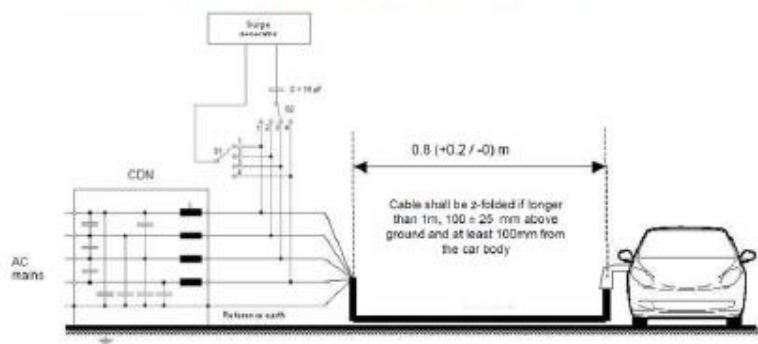


Figure 3: Vehicle in configuration "REESS charging mode coupled to the power grid" - Coupling between lines for AC (three phases) power lines

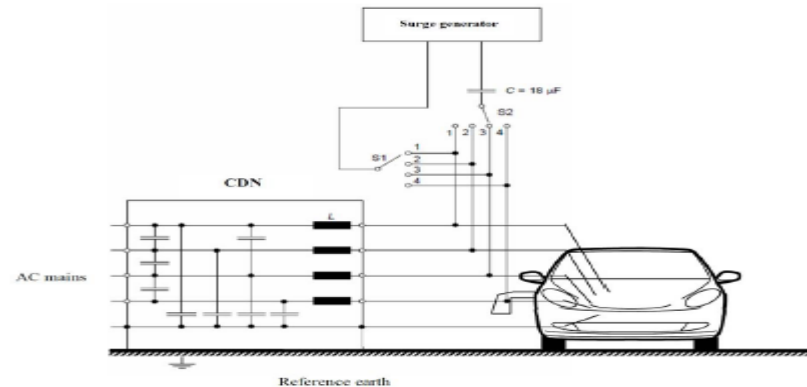
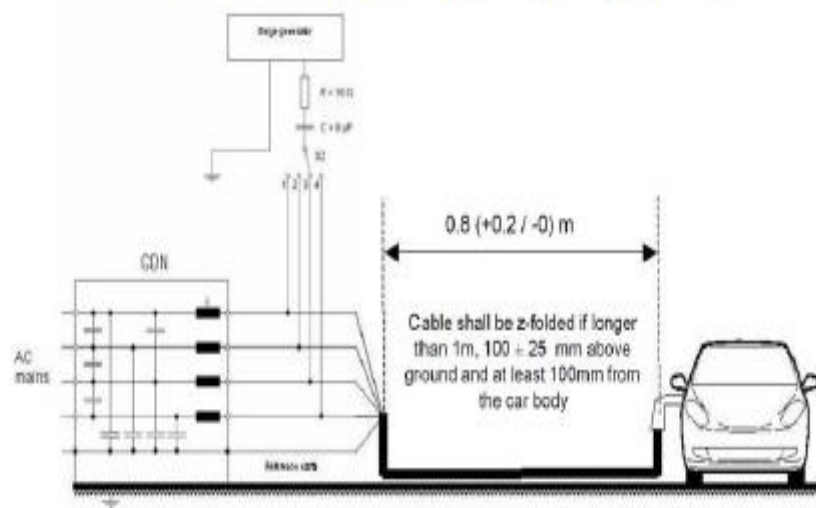


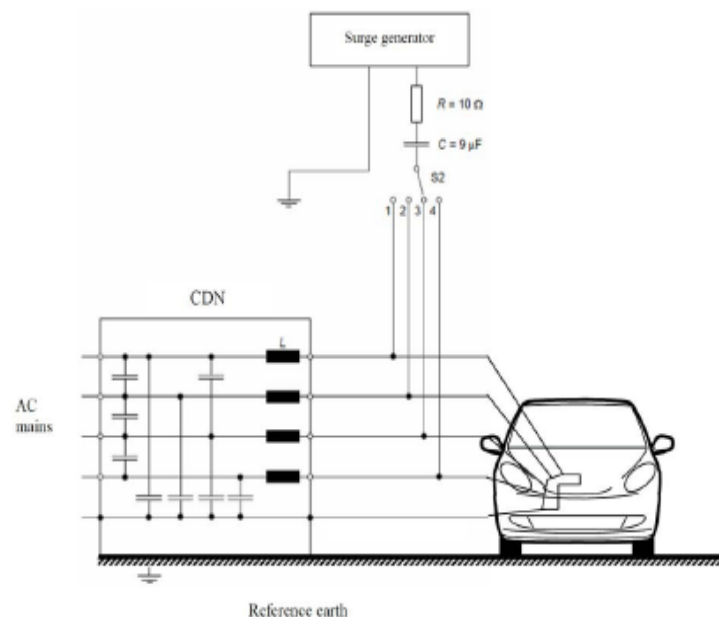
Figure 4: Vehicle in configuration "REESS charging mode coupled to the power grid" - Coupling

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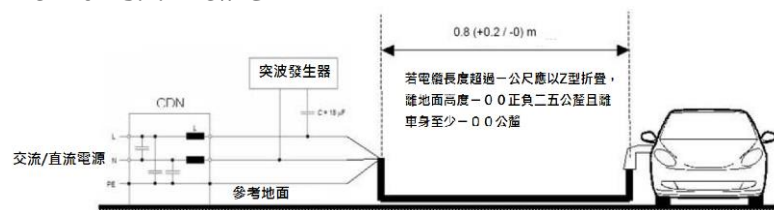
between each line and earth for AC (three phases) power lines



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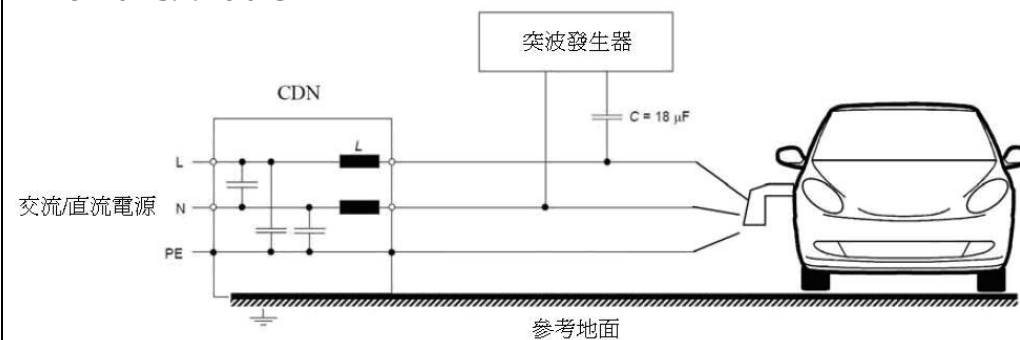


Annex 16 – 5.1.2-new-C

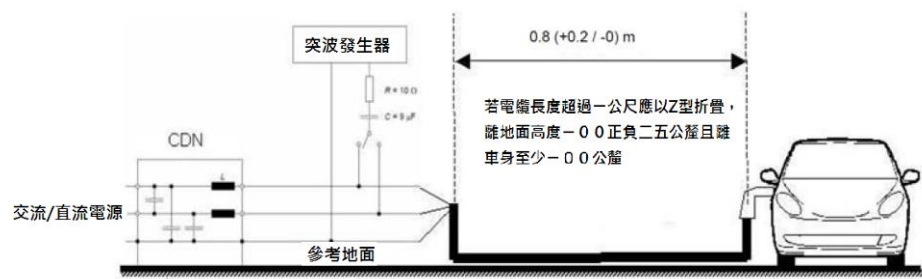


圖二九:車輛處於 REESS 充電模式連結電網之配置-直流或交流(單相)
電源線之間加以連結

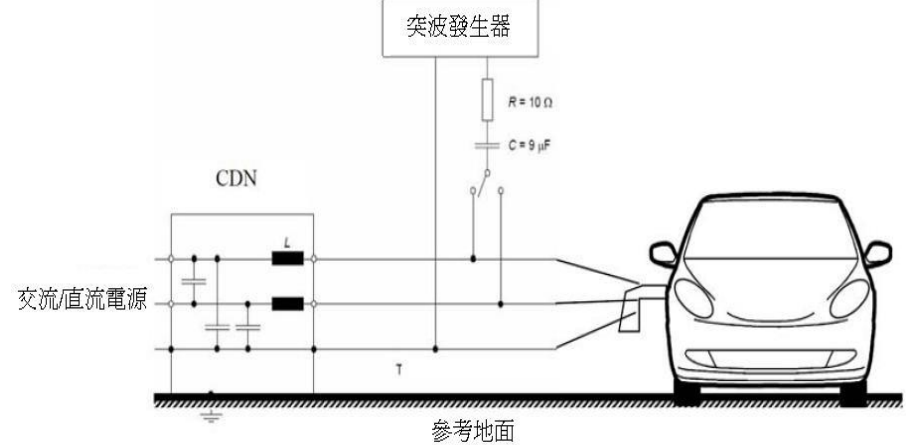
Annex 16 – 5.1.2-old-C



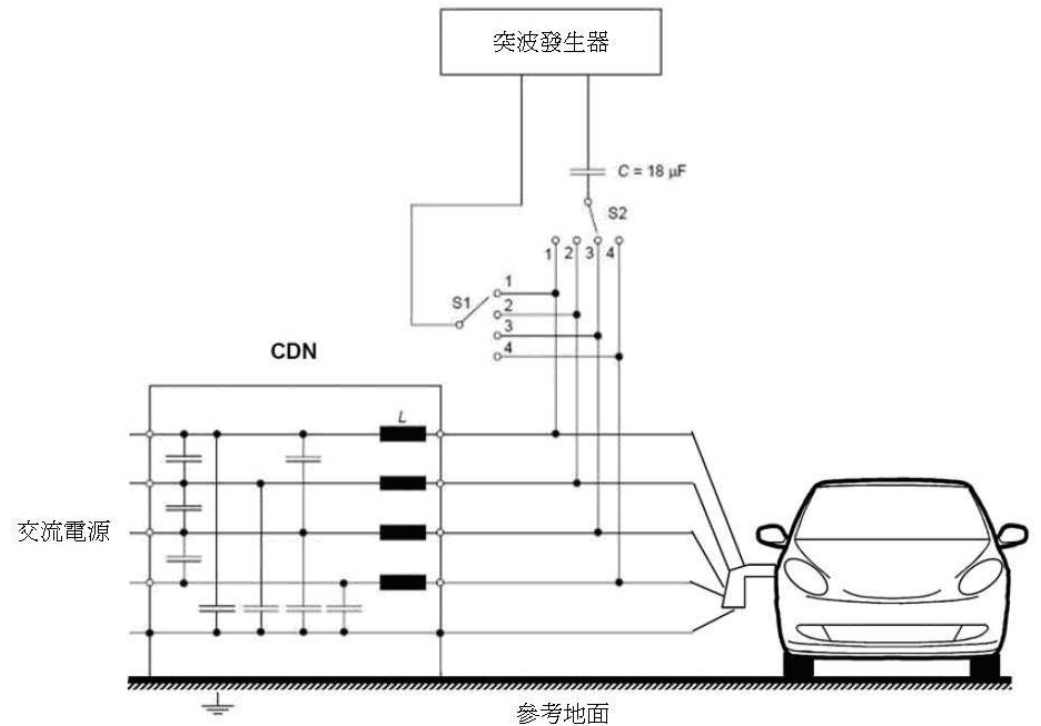
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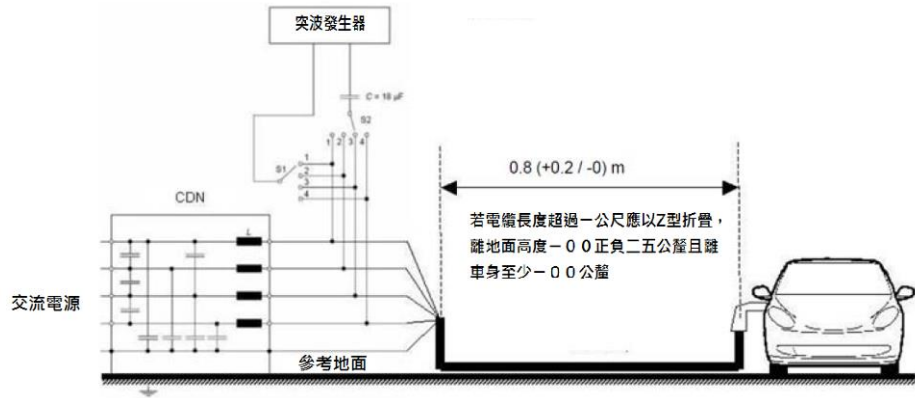


圖三〇：車輛處於 REESS 充電模式連結電網之配置-直流或交流（單相）
電源線與接地線之間加以連結



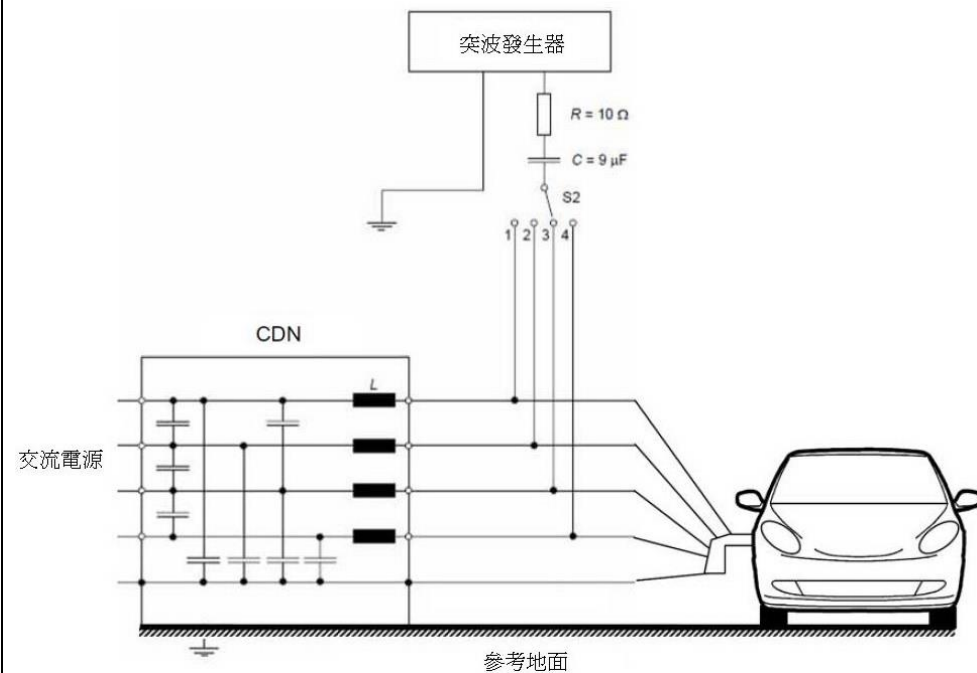
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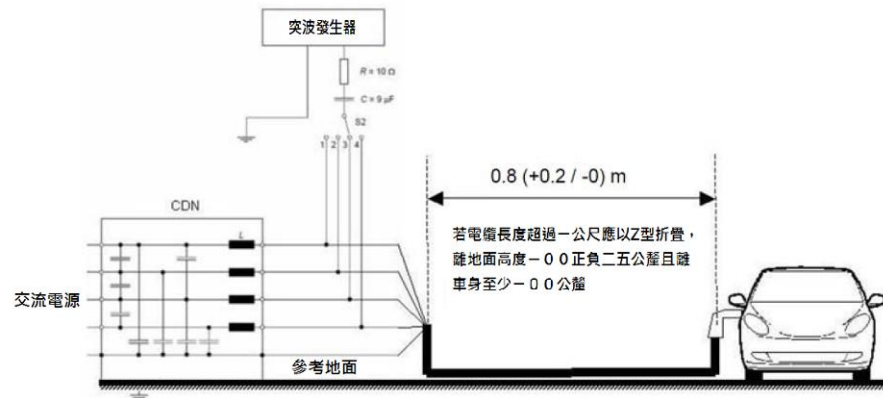


圖三一：車輛處於 REESS 充電模式連結電網之配置-交流（三相）電源線之間加以連結

圖二四：車輛處於 RESS 充電模式下連結電源介面之配置-交流（三相）電源線之間加以連結



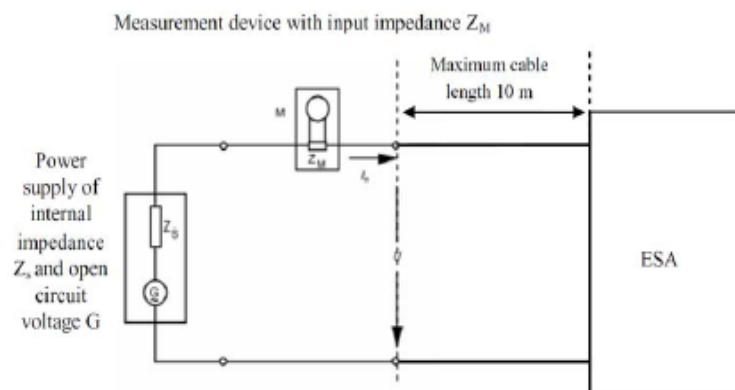
圖二五：車輛處於 RESS 充電模式下連結電源介面之配置-交流（三相）電源線與接地線之間加以連結



圖三二：車輛處於 REESS 充電模式連結電網之配置-交流（三相）電源
線與接地線之間加以連結

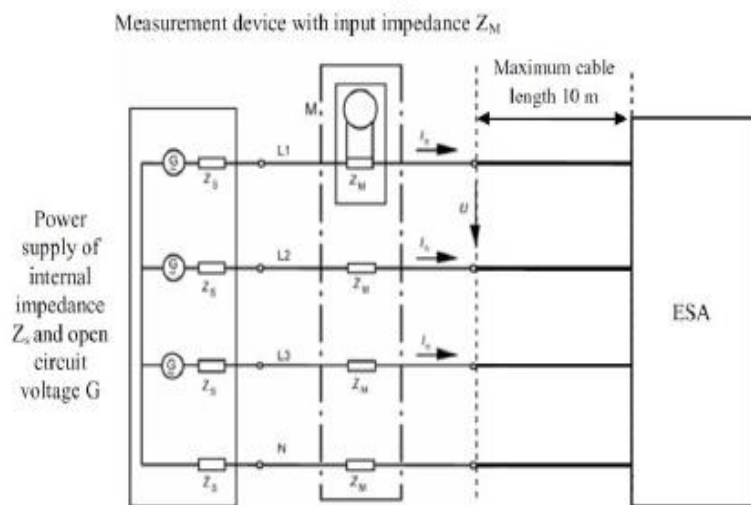
Annex 17 – 3.2-new-E

Figure 1: ESA in configuration "REESS charging mode coupled to the power grid" - Single phase test set-up



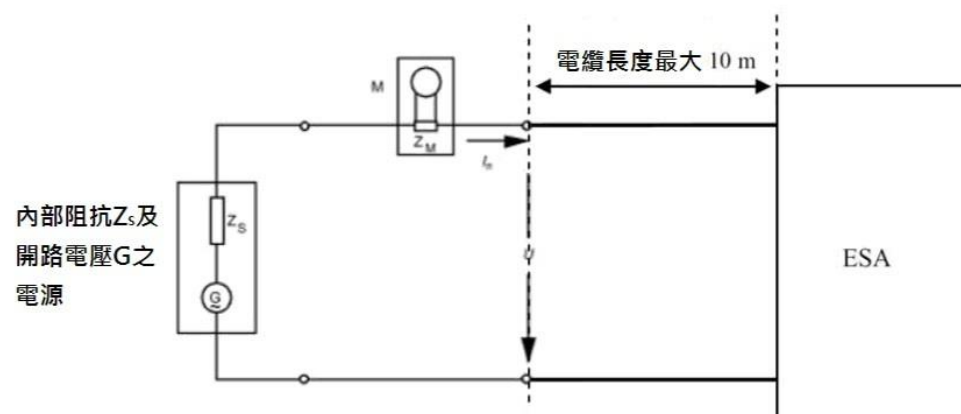
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Figure 2: ESA in configuration "REESS charging mode coupled to the power grid" - Three-phase-test set-up

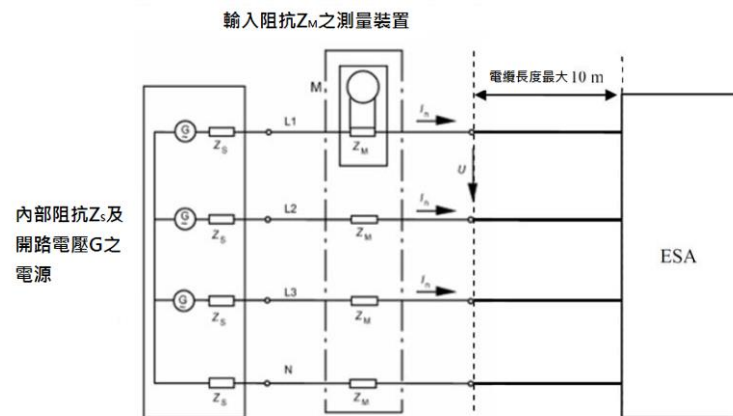


Annex 17 – 3.2-new-C

輸入阻抗 Z_M 之測量裝置



圖三三：ESA 處於 REESS 充電模式連結電網之配置-單相充電之試驗配置圖示

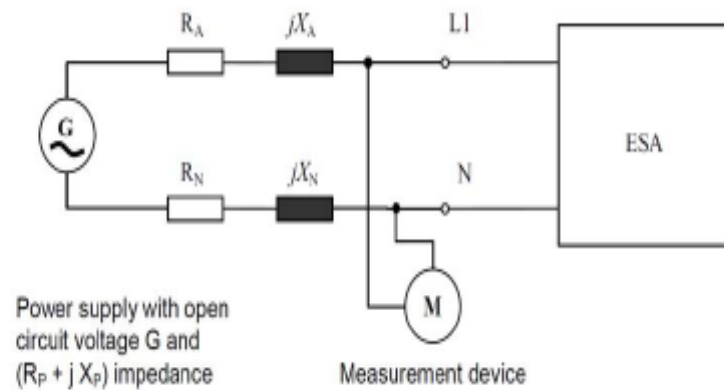


圖三四：ESA 處於 REESS 充電模式連結電網之配置-三相充電之試驗配置圖示

※輸入阻抗為 Z_M 之測量裝置
 ※內部阻抗 Z_S 及開路電壓 G 之電源

Annex18 –3.3-new-E

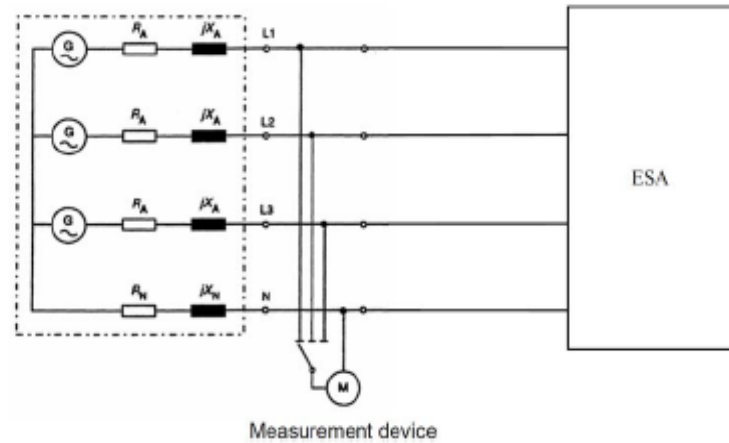
Figure 1a: ESA in configuration "REESS charging mode coupled to the power grid" - Single phase test set-up



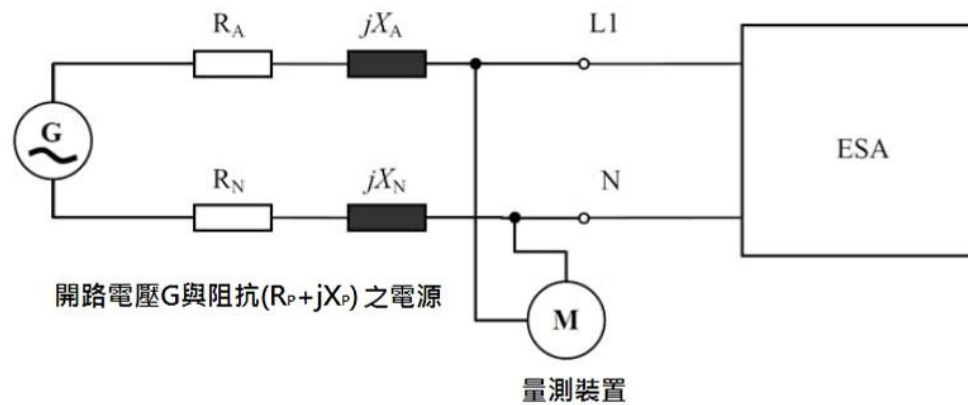
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Figure 1b: ESA in configuration "REESS charging mode coupled to the power grid" - Three-phase test set-up

Power supply with open circuit voltage G and $(R_p + j X_p)$ impedance

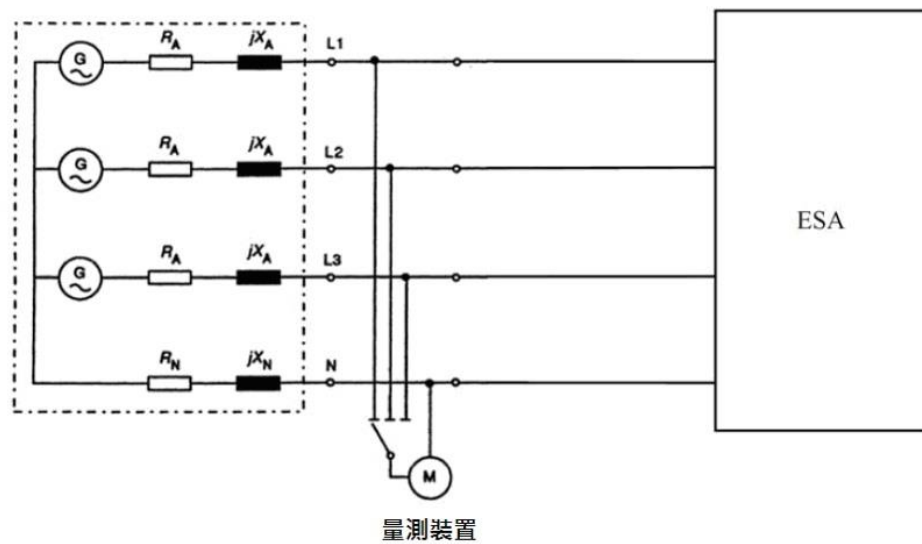


Annex18 -3.3-new-C



圖三五之一：ESA 處於 REESS 充電模式連結電網之配置
 ※開路電壓 G ，阻抗為 $(R_p + j X_p)$ 之電源
 ※量測裝置

開路電壓 G 與阻抗 (R_o+jX_o) 之電源

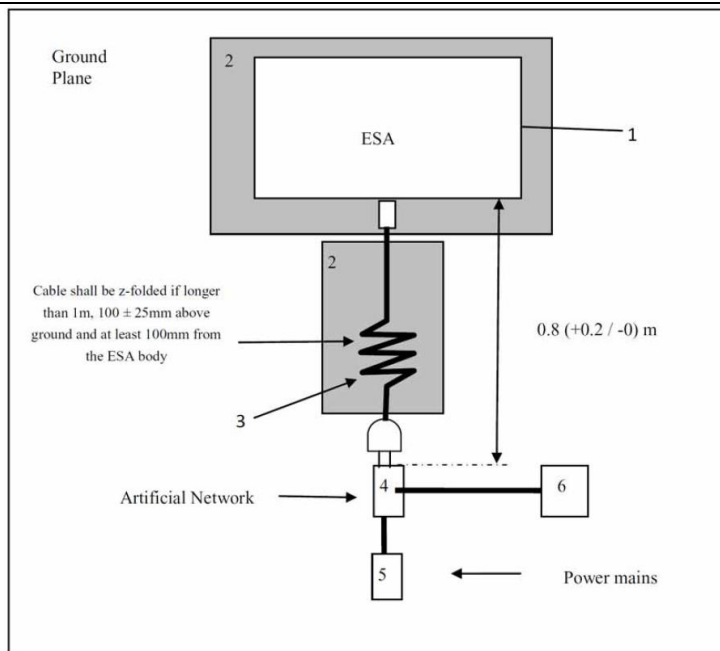


圖三五之二:ESA 處於 REESS 充電模式連結電網之配置-三相試驗設定

Annex 19-3.3-new-E

Figure 1: ESA in configuration "REESS charging mode coupled to the power grid"

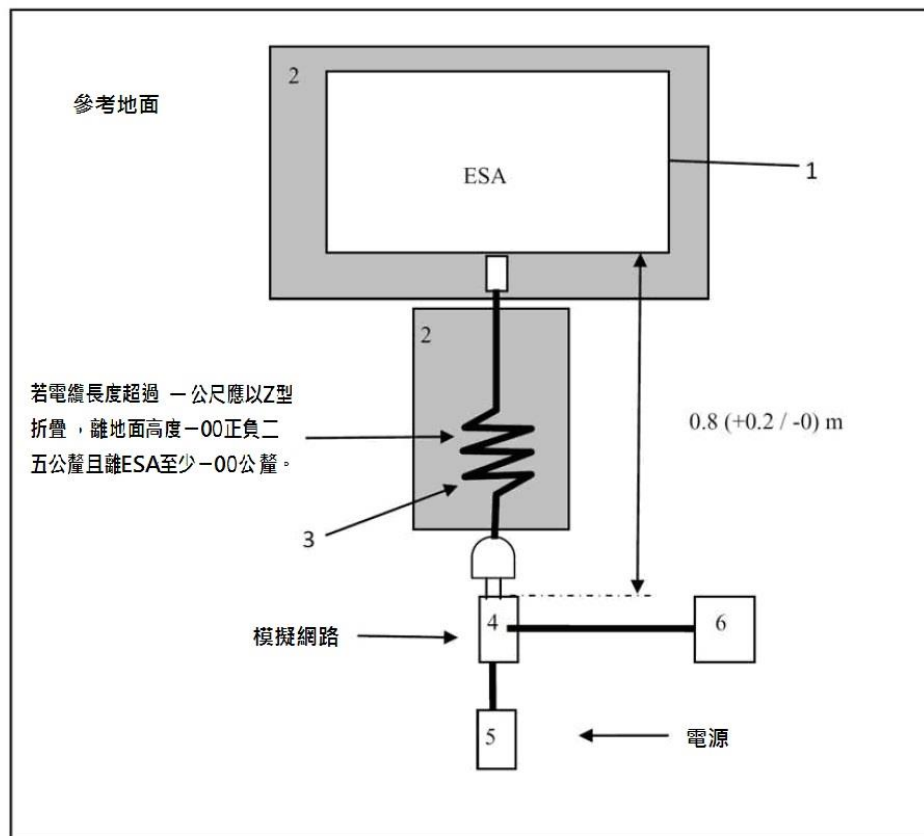
無



Legend

- 1 ESA under test
- 2 Insulating support
- 3 Charging cable
- 4 AC or DC Artificial Network(s) grounded
- 5 Power mains socket
- 6 Measuring receiver

Annex 19-3.3-new- C



說明:

1.待測 ESA

2.絕緣支撐

3.充電電纜

4.交流或直流模擬網路接地

5.電源插座

6.量測接收器

圖三六：ESA 處於 REESS 充電模式連結電網之配置

Annex 19

3.4

Table 1: Spectrum analyser parameters

Frequency range MHz	Peak detector		Quasi-peak detector		Average detector	
	RBW at -3 dB	Scan time	RBW at -6 dB	Scan time	RBW at -3 dB	Scan time
0.15 to 30	9/10 kHz	10 s / MHz	9 kHz	200 s / MHz	9/10 kHz	10 s / MHz

Note:

If a spectrum analyser is used for peak measurements, the video bandwidth shall be at least three times the resolution bandwidth (RBW)

Table 2: Scanning receiver parameters

Frequency range MHz	Peak detector			Quasi-peak detector			Average detector		
	BW at -6 dB	Step size ^a	Dwell time	BW at -6 dB	Step size ^a	Dwell time	BW at -6 dB	Step size ^a	Dwell time
0.15 to 30	9 kHz	5 kHz	50 ms	9 kHz	5 kHz	1 s	9 kHz	5 kHz	50 ms

^a For purely broadband disturbances, the maximum frequency step size may be increased up to a value not greater than the bandwidth value.

Note:

For emissions generated by brush commutator motors without an electronic control unit, the maximum step size may be increased up to five times the bandwidth.

表一五：頻譜分析儀參數

頻率 範圍 MHz	峰值檢波器		準峰值檢波器		均值檢波器	
	解析頻寬 在-3dB	掃描 時間	解析頻寬 在-6dB	掃描 時間	解析頻寬 在-3dB	掃描時 間
0.15-3 0	9/10 kHz	10 s/MH z	9 kHz	200 s/MH z	9/10 kHz	10 s/MHz

備註：

如果頻譜分析儀被以峰值的測量，視訊頻寬應至少有三次解析頻寬（RBW）。

產生放射

表一六：掃描接收機參數

<u>頻 率 範 圍 MH z</u>	<u>峰值檢波器</u>			<u>準峰值檢波器</u>			<u>均值檢波器</u>		
	<u>頻 寬 在 -6d B</u>	<u>步 長^a</u>	<u>停 留 時 間</u>	<u>頻 寬 在 -6d B</u>	<u>步 長^a</u>	<u>停留 時間</u>	<u>頻寬 在 -6dB</u>	<u>步 長^a</u>	<u>停留 時間</u>
<u>0.15 -30</u>	<u>9 kHz</u>	<u>5 kHz</u>	<u>50 ms</u>	<u>9 kHz</u>	<u>5 kHz</u>	<u>1 s</u>	<u>9kHz</u>	<u>5 kHz</u>	<u>50ms</u>

^a對於純粹的頻寬干擾，最大頻率步長值可以增大到不小於頻寬值。

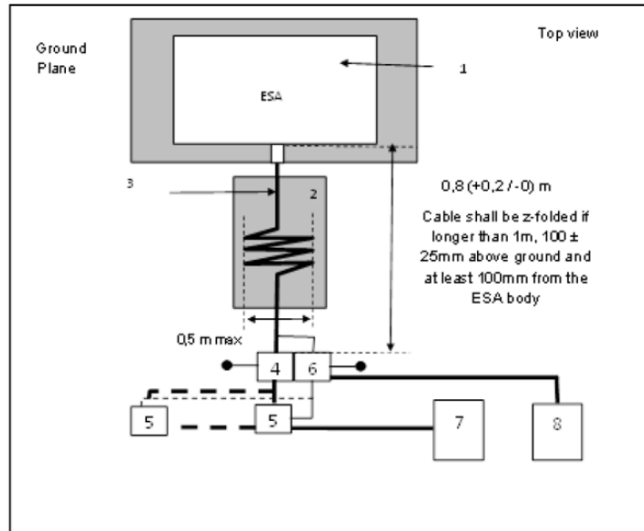
備註：

由無電子控制元件的電刷整流器馬達之放射產生器，其最大步長可能增長到五倍寬頻。

Annex20-3.3-new-E

無

Figure 1: ESA in configuration "REESS charging mode coupled to the power grid"

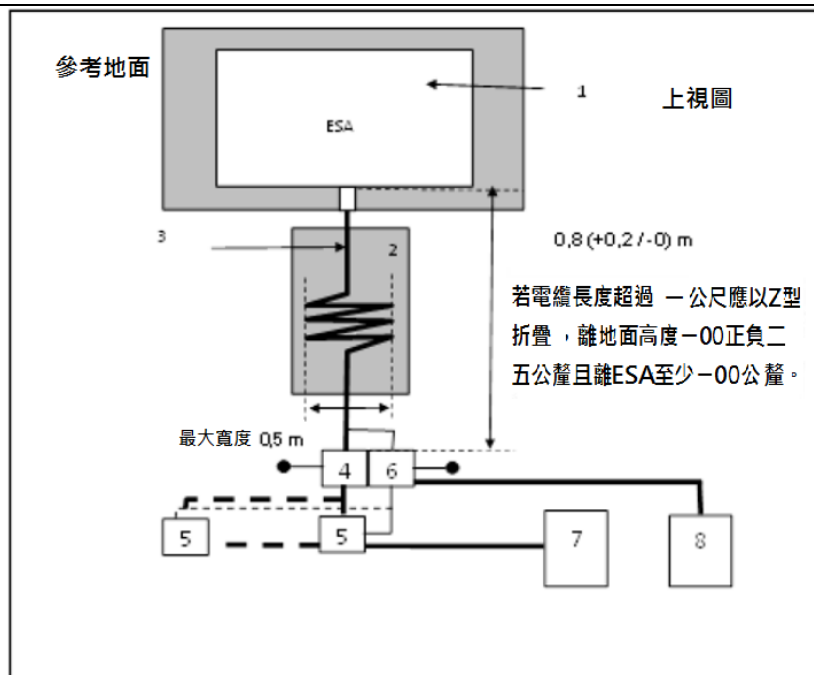


1

Legend

- 1 ESA under test
- 2 Insulating support
- 3 Charging / communication cable
- 4 AC or DC Artificial Network(s) grounded
- 5 Power mains socket
- 6 Impedance Stabilization(s) grounded
- 7 Charging Station
- 8. Measuring receiver

Annex20-3.3-new-C



說明:

1.待測 ESA

2.絕緣支撐

3.充電/通訊電纜

4.交流或直流模擬網路接地

5.電源插座

6.阻抗穩定器接地

7.充電站

8.量測接收器

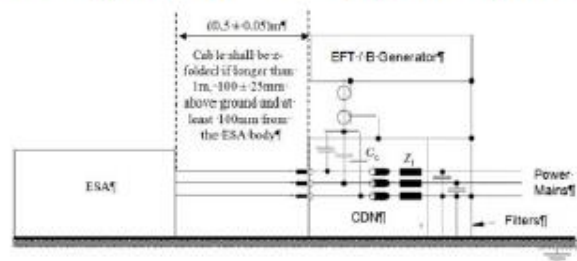
圖三七：ESA 處於 REESS 充電模式連結電網之配置

Annex 21-2.1-new-E
2.1 Basic ESA conditions

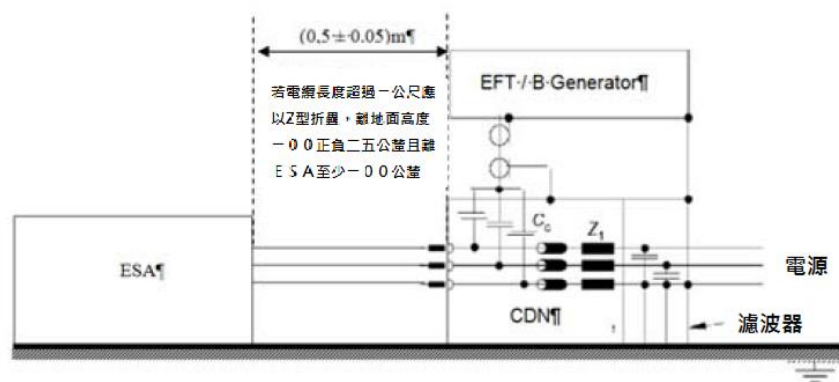
無

<table border="1"> <thead> <tr> <th>"REESS charging mode" ESA test conditions</th><th>Failure criteria</th></tr> </thead> <tbody> <tr> <td> ESA shall be in configuration "REESS charging mode coupled to the power grid". The state of charge (SOC) of the traction battery shall be kept between 20 per cent and 80 per cent of the maximum SOC during the whole time duration of the measurement (this may lead to the measurement being split into different time slots with the need to discharge the vehicle's traction battery before starting the next time slot). If the current consumption can be adjusted, then the current shall be set to at least 20 per cent of its nominal value. </td><td> Incorrect charging condition (e.g. over-current, overvoltage) </td></tr> </tbody> </table>	"REESS charging mode" ESA test conditions	Failure criteria	ESA shall be in configuration "REESS charging mode coupled to the power grid". The state of charge (SOC) of the traction battery shall be kept between 20 per cent and 80 per cent of the maximum SOC during the whole time duration of the measurement (this may lead to the measurement being split into different time slots with the need to discharge the vehicle's traction battery before starting the next time slot). If the current consumption can be adjusted, then the current shall be set to at least 20 per cent of its nominal value.	Incorrect charging condition (e.g. over-current, overvoltage)	
"REESS charging mode" ESA test conditions	Failure criteria				
ESA shall be in configuration "REESS charging mode coupled to the power grid". The state of charge (SOC) of the traction battery shall be kept between 20 per cent and 80 per cent of the maximum SOC during the whole time duration of the measurement (this may lead to the measurement being split into different time slots with the need to discharge the vehicle's traction battery before starting the next time slot). If the current consumption can be adjusted, then the current shall be set to at least 20 per cent of its nominal value.	Incorrect charging condition (e.g. over-current, overvoltage)				
Annex 21-2.1-new-C <table border="1"> <thead> <tr> <th><u>“REESS 充電模式” ESA 試驗狀態</u></th><th><u>失效準則</u></th></tr> </thead> <tbody> <tr> <td> <u>ESA 應處於 REESS 充電模式連結電網之配置。主電池之電量(SOC)，於量測時整個持續時間內應保持在最大充電狀態的百分之二0至百分之八0之間(其可能導致應分別量測不同的時段(time slots)與開始下一個時段之前需要對車輛主電池進行放電)。如電流消耗可被調整，則電流應至少為標稱值之百分之二0。</u> </td><td> <u>不正確的充電狀態（如，過大電流，過大電壓）</u> </td></tr> </tbody> </table>	<u>“REESS 充電模式” ESA 試驗狀態</u>	<u>失效準則</u>	<u>ESA 應處於 REESS 充電模式連結電網之配置。主電池之電量(SOC)，於量測時整個持續時間內應保持在最大充電狀態的百分之二0至百分之八0之間(其可能導致應分別量測不同的時段(time slots)與開始下一個時段之前需要對車輛主電池進行放電)。如電流消耗可被調整，則電流應至少為標稱值之百分之二0。</u>	<u>不正確的充電狀態（如，過大電流，過大電壓）</u>	
<u>“REESS 充電模式” ESA 試驗狀態</u>	<u>失效準則</u>				
<u>ESA 應處於 REESS 充電模式連結電網之配置。主電池之電量(SOC)，於量測時整個持續時間內應保持在最大充電狀態的百分之二0至百分之八0之間(其可能導致應分別量測不同的時段(time slots)與開始下一個時段之前需要對車輛主電池進行放電)。如電流消耗可被調整，則電流應至少為標稱值之百分之二0。</u>	<u>不正確的充電狀態（如，過大電流，過大電壓）</u>				
Annex 21 - 5.1.2-new-E	無				

Figure 1: ESA in configuration "REESS charging mode coupled to the power grid"



Annex 21 - 5.1.2-new-C



圖三八：ESA 處於 REESS 充電模式以電源線連結電網之配置

Annex 22-2.1.2-new-E

"REESS charging mode" ESA test conditions	Failure criteria
ESA shall be in configuration "REESS charging mode coupled to the power grid". The state of charge (SOC) of the traction battery shall be kept between 20 per cent and 80 per cent of the maximum SOC during the whole frequency range measurement (this may lead to split the measurement in different sub-bands with the need to discharge the vehicle's traction battery before starting the next sub-bands). If the test is not performed with a REESS the ESA should be tested at rated current. If the current consumption can be adjusted, then the current shall be set to at least 20 per cent of its nominal value.	Incorrect charging condition (e.g. over-current, overvoltage)

無

Annex 22-2.1.2-new-C

<u>“REESS 充電模式” 車輛試驗狀態</u>	<u>失效準則</u>
<u>ESA 應處於 REESS 充電模式連結電網之配置。主電池之電量(SOC)，於量測時整個頻率範圍內應保持在最大充電狀態的百分之二0至百分之八0之間(其可能導致應分別量測不同的副頻(sub-bands)與開始下一個副頻之前需要對車輛主電池進行放電)。若未與 REESS 一起執行試驗的 ESA，則應在額定電流進行試驗。如電流消耗可被調整，則電流應至少為標稱值之百分之二0。</u>	<u>不正確的充電狀態（如，過大電流，過大電壓）</u>

Annex 22 -5.1.2-new-E

Figure 2: ESA in configuration "REESS charging mode coupled to the power grid" - Coupling between lines for DC or AC (single phase) power lines.

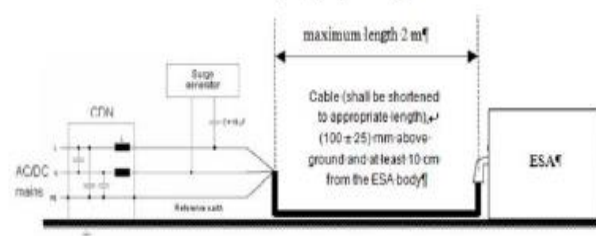


Figure 3: ESA in configuration "REESS charging mode coupled to the power grid" - Coupling between each line and earth for DC or AC (single phase) power lines

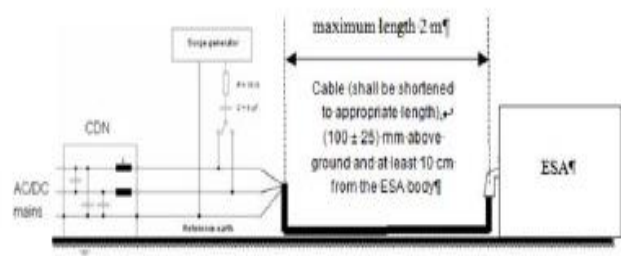


Figure 4: ESA in configuration "REESS charging mode coupled to the power grid" - Coupling between lines for AC (three phases) power lines

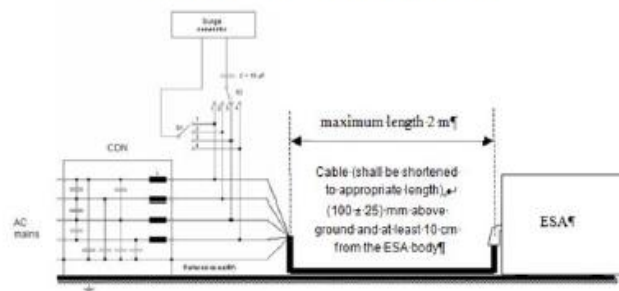
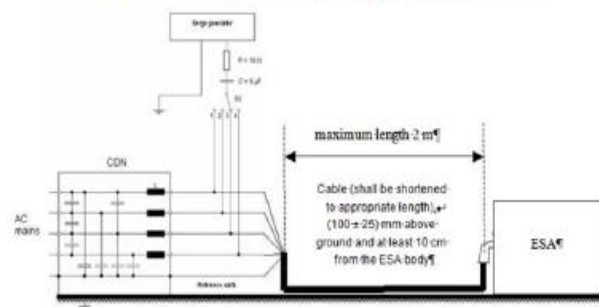
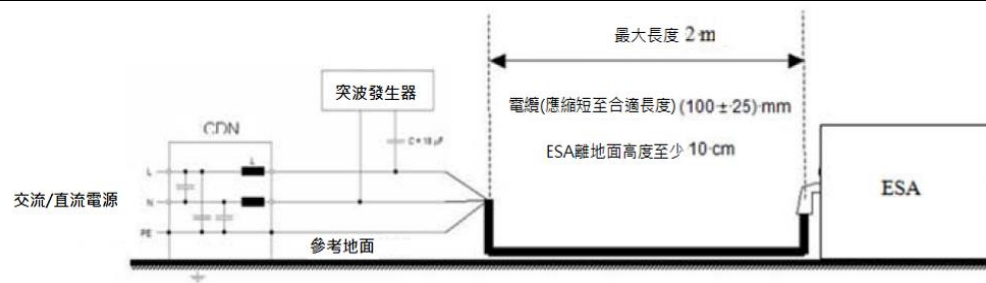
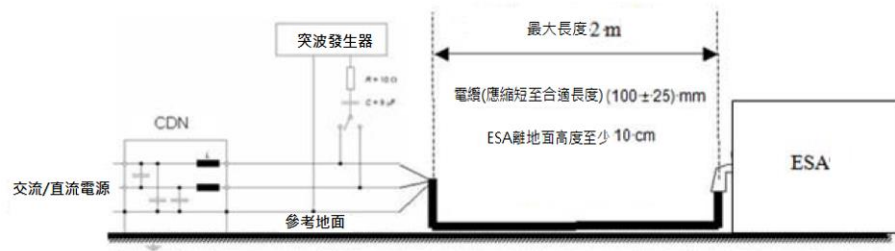


Figure 5: ESA in configuration "REESS charging mode coupled to the power grid" - Coupling between each line and earth for AC (three phases) power lines

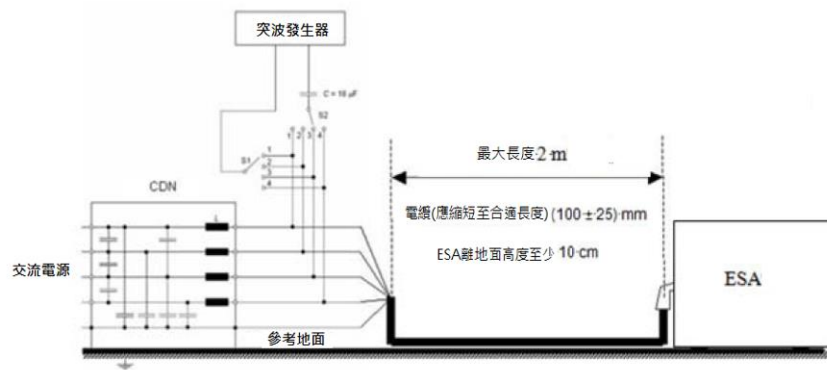




圖三九:ESA 處於 REESS 充電模式連結電網之配置-直流或交流(單相)
電源線之間加以連結

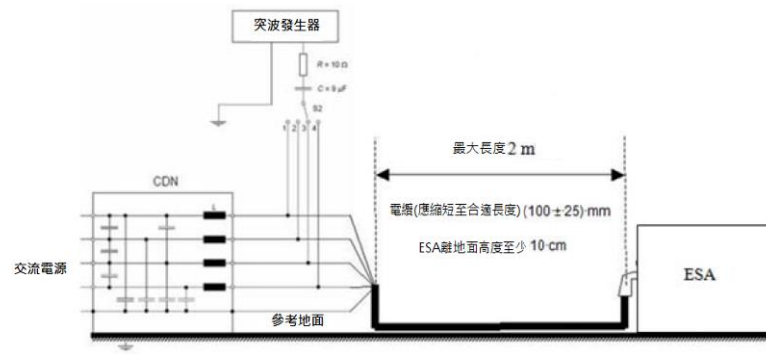


圖四〇:ESA 處於 REESS 充電模式連結電網之配置-直流或交流(單相)
電源線與接地線之間加以連結



圖四一:ESA 處於 REESS 充電模式連結電網之配置-交流(三相)電源

線之間加以連結



圖四二：ESA 處於 REESS 充電模式連結電網之配置-交流（三相）電源
線與接地線之間加以連結

基準實施日期列表

項目		實施日期	適用範圍	修正案送部日期
二、車輛規格規定	座椅應裝設三點式安全帶	一〇四年一月一日起	新型式 M1 及總重量小於三・五公噸之新型式 M2 類車輛之座椅應裝設三點式安全帶。新型式 N、M3 及總量大於三・五公噸之新型式 M2 類車輛之前排兩側座椅應裝設三點式安全帶，其餘座椅應裝設三點式或二點式安全帶。側向式及後向式座椅應裝設至少二點式安全帶	104 年 2 月 4 日公告
		一〇八年一月一日起	各型式 M1 及總重量小於三・五公噸之各型式 M2 類車輛之座椅應裝設三點式安全帶。各型式 N、M3 及總量大於三・五公噸之各型式 M2 類車輛之前排兩側座椅應裝設三點式安全帶，其餘座椅應裝設三點式或二點式安全帶。側向式及後向式座椅應裝設至少二點式安全帶	
	駕駛座配備安全帶提醒裝置	一〇二年一月一日起	新型式 M1 類車輛駕駛座及中華民國一〇四年一月一日起，各型式 M1 類車輛駕駛座應配備安全帶提醒裝置。車輛申請者在其他種類車輛的駕駛座配備安全帶提醒系統，亦可依此規定申請認證	
	新增 L2 及 L5 類之三輪機車	一〇〇年一二月九日起	新增 L2 及 L5 類之三輪機車	
	大客車設有自行車停放區（草案）	公告後實施	甲類、乙類、丙類及丁類大客車，設有自行車停放區者須符合本項規定	99 年 4 月 12 日送部
	雙節式大客車規格規定	一〇一年二月七日起	M2 及 M3 類之雙節式大客車應符合本項規定	100 年 4 月 14 日送部 100 年 2 月 7 日公告
	單層開放式大客車及市區雙層公車之車身各部規格規定	公告後實施	單層開放式大客車及市區雙層公車應符合本項規定	101 年 7 月 16 日送部 103 年 12 月 29 日公告
	車內影像顯示設備	一〇二年一月一日起	中華民國一〇二年一月一日起，各型式 L、M 及 N 類裝有車內影像顯示設備之車輛，應符合本項規定。	101 年 1 月 3 日送部 101 年 9 月 26 日公告
	電動車輛低速警示音系統	一〇四年一月一日起	新型式之 M 及 N 類電動車輛(含複合動力車輛)	102 年 11 月 1 日公告
		一〇六年一月一日起	各型式之 M 及 N 類電動車輛(含複合動力車輛)	
	乘載安全資訊相關規定	一〇四年一月一日起	總重量小於或等於二・五公噸之新型式 M1 類車輛	103 年 5 月 23 日送部
		一〇五年一月一日起	總重量小於或等於二・五公噸之各型式 M1 類車輛	103 年 8 月 22 日公告

項目		實施日期	適用範圍	修正案送部日期
	小客貨兩用車載貨空間	一〇六年七月一日起	新型式之小客貨兩用車	103 年 9 月 30 日公告
	大客車第一個側向式座椅前方之車輛部件規定	一〇六年一月一日起	新型式大客車	103 年 8 月 27 日送部
		一〇八年一月一日起	各型式大客車	104 年 2 月 4 日公告
三之一、車輛燈光與標誌檢驗規定：自九十五年七月一日起實施		九十五年七月一日起	新型式之 M2、M3、N2、N3 及 O 類車輛應符合本項 4.、6.及 7.之規定	99 年 11 月 9 日送部 102 年 3 月 20 日公告
		九十七年七月一日起	各型式之 M2、M3、N2、N3 及 O 類車輛，應符合本項 4.、6.及 7.之規定，惟其後霧燈得為選配並可就 4.5.1 或 4.5.2 之規定擇一符合	
		九十七年七月一日起	新型式之 M2、M3、N2、N3 及 O 類車輛，其後霧燈應符合本項 4.5.1 之規定	
		九十九年七月一日起	各型式之 M2、M3、N2、N3 及 O 類車輛，其後霧燈應符合本項 4.5.1 之規定	
		九十五年七月一日起	新型式之 L1 及 L3 類車輛，其氣體放電式頭燈，應符合本項 5.之規定	
		九十七年七月一日起	各型式之 L1 及 L3 類車輛，其氣體放電式頭燈，應符合本項 5.之規定	
		九十七年一月一日起	新型式之 M1 及 N1 類車輛，其車輛燈光與標誌，應符合本項 4.、6.及 7.之規定，惟其後霧燈僅能適用 4.5.1 之規定	
		九十九年一月一日起	各型式之 M1 及 N1 類車輛，其車輛燈光與標誌，應符合本項 4.、6.及 7.之規定，惟其後霧燈僅能適用 4.5.1 之規定	
		九十八年一月一日起	新型式之 L1 及 L3 類車輛，其車輛燈光與標誌，應符合本項 5.至 7.之規定	
		一〇〇年一月一日起	各型式之 L1 及 L3 類車輛，其車輛燈光與標誌，應符合本項 5.至 7.之規定	
三之二、車輛燈光與標誌檢驗規定：自一〇〇年一月一日起實施		一〇〇年一月一日起	新型式之 M、N 及 O 類車輛，其車輛燈光與標誌，應符合本項 4.及 6.至 8.之規定	102 年 3 月 20 日公告
		一〇二年一月一日起	各型式之 M、N 及 O 類車輛，已符合本基準項次「三之一」之規定且其車輛燈光與標誌配備適路性前方照明系統及/或緊急煞車訊號者，另應符合本項之適路性前方照明系統及/或緊急煞車訊號之相關規定	
		一〇〇年一月一日起	新型式之 L1 及 L3 類車輛，其車輛燈光與標誌，應符合本項 5.至 8.之規定 各型式之 L2 及 L5 類車輛，其車輛燈光與標誌，應符合本項 5.至 8.之規定	
三之三、車輛燈光與標誌檢驗規定		一〇二年一月一日起	新型式之 M、N 及 O 類車輛，其車輛燈光與標誌，應符合本項 4.及 6.至 8.之規定，符合本基準項次「三之二」規定之 M、N 及 O 類車輛，亦視同符合本項規定	103 年 5 月 23 日送部

項目	實施日期	適用範圍	修正案送部日期
	一〇四年一月一日起	新型式之 L1、L2、L3 及 L5 類車輛，其車輛燈光與標誌，應符合本項 5.至 8.之規定	103 年 8 月 22 日公告
	一〇六年一月一日起	1. 各型式之 L1、L2、L3 及 L5 類車輛，其車輛燈光與標誌，應符合本項 5.至 8.之規定 2. 各型式之 L1、L2、L3 及 L5 類車輛，已符合本基準項次「三之二」規定者且其近光頭燈燈泡光源主要總目標發光量超過二〇〇〇 流明者及/或近光頭燈為 HID 光源者及/或配備晝行燈者，另應分別符合本項 5.2.5 及/或 5.2.6 及/或 6.12.3~6.12.7 之相關規定	
三之四、車輛燈光與標誌檢驗規定	一〇六年一月一日起	新型式之 M、N 及 O 類車輛，其車輛燈光與標誌，應符合本項 4.及 6.至 8.之規定。符合本基準項次「三之三」規定者，亦視同符合本項規定	103 年 5 月 23 日送部
	一〇七年一月一日起	新型式之 M1、N1 類車輛，其車輛燈光與標誌，應符合本項 4.及 6.至 8.之規定（不得選擇 4.2.6.6.2 及 4.2.6.6.3 規定）。符合本基準項次「三之三」規定者，亦視同符合本項規定。	103 年 8 月 22 日公告
	一〇八年一月一日起	新型式之 M2、M3、N2、N3 類車輛，其車輛燈光與標誌，應符合本項 4.及 6.至 8.之規定（不得選擇 4.2.6.6.2 及 4.2.6.6.3 規定）。符合本基準項次「三之三」規定之 M 及 N 類車輛，亦視同符合本項規定。	
	一〇六年一月一日起	新型式之 L1、L2、L3 及 L5 類車輛，符合本基準項次「三之三」規定者，亦視同符合本項規定。	103 年 8 月 27 日送部 104 年 2 月 4 日公告
	一〇七年一月一日起	使用於 M、N 類車輛之車外迎賓燈應符合 6.19.2 之規定。	
	一〇六年一月一日起	除曳引車以外，總重量逾七・五公噸之新型式 N2 類及 N3 類車輛，其全長逾六公尺及/或全寬逾二・一公尺者，應裝設符合本項 6.18 規定之反光標識。	
	一〇七年一月一日起	除曳引車以外，總重量逾七・五公噸之各型式 N2 類車輛，其全長逾六公尺及/或全寬逾二・一公尺者，應裝設符合本項 6.18 規定之反光標識。	
	一〇八年一月一日起	除曳引車以外，各型式 N3 類車輛，其全長逾六公尺及/或全寬逾二・一公尺者，應裝設符合本項 6.18 規定之反光標識。	
四、靜態煞車	九十九年一月一日起	總重量不超過七五〇 公斤之拖車，得免裝設煞車系統。	98 年 12 月 25 公告
七、左右兩側防止捲入裝置與後方安全防護裝置(或保險槓)	九十六年一月三十一日起	除曳引車以外之 N2 及 N3 類車輛、O2、O3、O4 類車輛	102 年 3 月 20 日公告
	九十三年一月一日起	新登記檢驗領照之曳引車	
七之一、左右兩側防止捲入裝置與後方安全防護裝置(或保險槓)(草案)	〇年〇月〇日起	中華民國一〇〇 年七月一日起，新型式之 N2、N3、O2、O3、O4 類車輛及中華民國一〇二年一月一日起，各型式之 N2、N3、O2、O3、O4 類車輛，應符合本項規定。	99 年 12 月 30 日報部
八、汽車傾斜穩定度規定	八十九年一月一日起	三・五公尺以上汽車	97 年 06 月 11 公告
	九十六年七月一日起	車高三・四公尺以上之新型式大客車	

項目	實施日期	適用範圍	修正案送部日期
	九十七年一月一日起	車高三・四公尺以上之各型式大客車	
九、喇叭音量	九十年七月一日起	汽車、機車	102 年 3 月 20 日公告
九之一、聲音警告裝置(喇叭)安裝規定：自九十五年七月一日起實施	九十五年七月一日起	新型式之M及N類車輛	100 年 12 月 9 日公告
	九十七年七月一日起	各型式之M及N類車輛	
	九十六年一月一日起	各型式之 L1 及 L3 類車輛	
	九十八年一月一日起	各型式之 L1、L2、L3 及 L5 類車輛，其聲音警告裝置之安裝，應符合本項規定；且應使用符合本基準規定之聲音警告裝置	
十、載重計安裝規定	九十年七月一日起	裝載砂石、土方之傾卸式半拖車及二十噸以上傾卸式大貨車等車輛	97 年 06 月 11 公告
十一、轉彎及倒車警報裝置安裝規定	九十年七月一日起	裝載砂石、土方之傾卸式大貨車及傾卸式半拖車等車輛	97 年 06 月 11 公告
十二、機車排氣系統隔熱防護裝置	九十一年一月一日起	機車	102 年 3 月 20 日公告
十三、機車腳架穩定性與耐久性規定	九十三年一月一日起	L1 及 L3 類車輛	102 年 3 月 20 日公告
十四、機車客座扶手規定	九十四年一月一日起	L1、L2、L3 及 L5 類車輛	102 年 3 月 20 日公告
十五、載重計	九十年七月一日起	裝載砂石、土方之傾卸式半拖車及二十噸以上傾卸式大貨車等車輛	96 年 01 月 31 公告
十六、行車紀錄器	公告日起	總聯結重量及總重量在二十公噸以上之 M 及 N 類車輛	96 年 01 月 31 公告
	九十年一月一日起	八公噸以上未滿二十公噸之 M 及 N 類車輛	
	九十六年七月一日起	新型式之八公噸以下大客車	
	九十七年一月一日起	各型式之八公噸以下大客車	
十八、小型汽車置放架之靜態強度	九十八年十二月二十五日起	於適用型式及其範圍認定原則增訂「安裝位置」相同之規定。	98 年 12 月 25 公告

項目	實施日期	適用範圍	修正案送部日期
十九、車輛內裝材料難燃性能要求	九十一年一月一日起	幼童專用車、校車、大客車、小客車及小客貨兩用車之新車型	99 年 5 月 14 日送部 99 年 08 月 16 公告
	九十三年一月一日起	幼童專用車、校車、大客車、小客車及小客貨兩用車之各車型	
十九之一、車輛內裝材料難燃性能要求	一〇八年一月一日起	新型式之幼童專用車、校車、大客車、小客車及小客貨兩用車輛	103 年 8 月 27 日送部
	一一〇年一月一日起	各型式已符合本基準項次「十九」規定之甲類大客車與乙類大客車，其電纜、及引擎室內與任何獨立加熱空間內之隔離材料難燃性能，另應符合本項之 6.2 規定	104 年 2 月 4 日公告
二十之一、反光識別材料：自九十五年七月一日起實施	九十五年七月一日起	使用於幼童專用車及校車車身左右兩側與後方車身標示之倒三角形黃色部分之新型式反光識別材料	96 年 09 月 17 公告
	九十七年七月一日起	使用於幼童專用車及校車車身左右兩側與後方車身標示之倒三角形黃色部分之各型式反光識別材料	
	九十五年七月一日起	使用於除前述車輛（幼童專用車及校車）外之 M、N 及 O 類車輛之新型式反光識別材料	
	九十七年七月一日起	使用於除前述車輛（幼童專用車及校車）外之 M、N 及 O 類車輛之各型式反光識別材料	
二十之二、反光識別材料：自一〇〇年一月一日起實施	一〇〇年一月一日起	使用於幼童專用車及校車車身左右兩側與後方車身標示之倒三角形黃色部分之新型式反光識別材料	98 年 03 月 02 公告
	一〇二年一月一日起	使用於幼童專用車及校車車身左右兩側與後方車身標示之倒三角形黃色部分之已符合本基準項次「二十之一」規定之各型式反光識別材料，另應符合本項 7.7 及 7.8 之規定	
	一〇〇年一月一日起	使用於除前述車輛（幼童專用車及校車）外之 M、N 及 O 類車輛之新型式反光識別材料	
	一〇二年一月一日起	使用於除前述車輛外之 M、N 及 O 類車輛之各型式反光識別材料已符合本基準項次「二十之一」之規定者，另應符合本項 7.7 及 7.8 之規定	
二十一、聲音警告裝置(喇叭)	九十五年七月一日起	使用於M及N類車輛之新型式聲音警告裝置	100 年 12 月 9 日公告
	九十七年七月一日起	使用於M及N類車輛之各型式聲音警告裝置	
	九十六年一月一日起	使用於 L3 類車輛之新型式聲音警告裝置	
	九十八年一月一日起	使用於 L2、L3 及 L5 類車輛之各型式聲音警告裝置	
二十二、速率計	九十五年七月一日起	新型式之 M1、N1、L1 及 L3 類車輛	100 年 12 月 9 日公告

項目	實施日期	適用範圍	修正案送部日期
	九十七年七月一日起	各型式之 M1、N1、L1 及 L3 類車輛	
	九十七年一月一日起	新型式之 M2、M3 及 N2、N3 類車輛	
	九十九年一月一日起	各型式之 M1、N1、L1、L2、L3 及 L5 類車輛	
二十三、間接視野裝置安裝規定	九十五年七月一日起	新型式之 L1 和 L3 類車輛	102 年 3 月 20 日公告
	九十七年七月一日起	各型式之 L1、L2、L3 及 L5 類車輛，其間接視野裝置(照後鏡)安裝應符合本項規定，且應使用符合本基準規定之間接視野裝置(照後鏡)	
	一〇〇年一月一日起	新型式之 M 類和 N 類車輛	
	一〇二年一月一日起	各型式之 M 類和 N 類車輛，其間接視野裝置安裝應符合本項規定，且應使用符合本基準規定之間接視野裝置	
二十四、機車控制器標誌	九十五年七月一日起	新型式之 L1 及 L3 類車輛	102 年 3 月 20 日公告
	九十七年七月一日起	各型式之 L1、L2、L3 及 L5 類車輛	
二十四之一、機車控制器標誌	一〇六年一月一日起	新型式之 L1、L2、L3 及 L5 類車輛，符合本基準項次「二十四」規定之既有型式 L1、L2、L3 及 L5 類車輛，亦視同符合本項規定。	103 年 8 月 27 日送部 104 年 2 月 4 日公告
二十五、安全玻璃	九十五年七月一日起	使用於 M2 及 M3 類車輛乘室區之新型式安全玻璃(儀表板除外)	98 年 9 月 17 日送部 99 年 08 月 16 公告
	九十七年七月一日起	使用於 M2 及 M3 類車輛乘室區之各型式安全玻璃(儀表板除外)	
	九十五年七月一日起	使用於 M1 及 N 類車輛之新型式前擋風玻璃，應符合本項規定中「厚度測定」、「耐衝擊性試驗」、「耐貫穿性試驗」、「人頭模型衝擊試驗」及「可見光透過率試驗」之規定	
	九十七年七月一日起	使用於 M1 及 N 類車輛之各型式前擋風玻璃，應符合本項規定中「厚度測定」、「耐衝擊性試驗」、「耐貫穿性試驗」、「人頭模型衝擊試驗」及「可見光透過率試驗」之規定	
	九十七年一月一日起	使用於 M1 及 N 類車輛乘室區之新型式安全玻璃(儀表板除外)	
	九十九年一月一日起	使用於 M1 及 N 類車輛乘室區之各型式安全玻璃(儀表板除外)	
二十五之一、安全玻璃：自一〇〇年一月一日起實施	一〇〇年一月一日起	使用於 M 及 N 類車輛乘室區之新型式安全玻璃(儀表板除外)	98 年 9 月 17 日送部 99 年 08 月 16 公告

項目	實施日期	適用範圍	修正案送部日期
二十五之二、安全玻璃	一〇五年一月一日起	使用於L類車輛部份或全部車身構造，M及N類車輛乘室區之新型式安全玻璃(儀表板除外)	103年8月27日送部 104年2月4日公告
二十六、安全帶	九十五年七月一日起	使用於M及N類車輛之新型式安全帶	99年5月14日送部 100年9月20日公告
	九十七年七月一日起	使用於M及N類車輛之各型式安全帶	
二十六之一、安全帶	一〇六年一月一日起	使用於M及N類車輛之新型式安全帶，符合本基準項次「二十六」規定之既有型式安全帶，亦視同符合本項規定。	103年8月27日送部 104年2月4日公告
二十七、間接視野裝置	九十五年七月一日起	使用於L1及L3類車輛之新型式間接視野裝置(照後鏡)	102年3月20日公告
	九十七年七月一日起	使用於L1、L2、L3及L5類車輛之各型式間接視野裝置(照後鏡)，應符合本項規定	
	一〇〇年一月一日起	使用於M及N類車輛之新型式間接視野裝置	
	一〇二年一月一日起	使用於M及N類車輛之各型式間接視野裝置，應符合本項規定	
二十八、輪胎	九十五年七月一日起	使用於M、N及O類車輛之新型式輪胎	96年01月31公告
	九十七年七月一日起	使用於M、N及O類車輛之各型式輪胎	
二十八之一、輪胎：自一〇二年一月一日起實施	一〇二年一月一日起	使用於M、N、O及L類車輛之新型式輪胎應符合本項規定	99年5月14日送部 102年3月20日公告
	一〇四年一月一日起	使用於M1、O1及O2類車輛之各型式失壓續跑輪胎及速度超過三〇〇公里/小時之輪胎，應符合本項規定	
	一〇四年一月一日起	使用於L類車輛之各型式輪胎，應符合本項規定	
二十九、燈泡	九十五年七月一日起	M、N及O類車輛其車輛型式安全審驗相關燈具所使用之新型式燈泡	100年12月9日公告
	九十七年七月一日起	M、N及O類車輛其車輛型式安全審驗相關燈具所使用之各型式燈泡	
	九十八年一月一日起	L1及L3類車輛其車輛型式安全審驗相關燈具所使用之新型式燈泡	

項目	實施日期	適用範圍	修正案送部日期
	一〇〇年一月一日起	L1、L2、L3 及 L5 類車輛其車輛型式安全審驗相關燈具所使用之各型式燈泡	
三十、氣體放電式頭燈	九十五年七月一日起	使用於 M、N、L1 及 L3 類車輛之新型式氣體放電式頭燈	98 年 9 月 17 日送部 99 年 08 月 16 公告
	九十七年七月一日起	使用於 M、N、L1 及 L3 類車輛之各型式氣體放電式頭燈	
三十之一、氣體放電式頭燈：自一〇〇年一月一日起實施	一〇〇年一月一日起	使用於 M、N 及 L3 類車輛之新型式氣體放電式頭燈以及 L5 類車輛各型式氣體放電式頭燈	100 年 12 月 9 日公告
	一〇二年一月一日起	使用於 M、N 及 L3 類車輛之各型式氣體放電式頭燈，已符合本基準項次「三十」之規定且裝設額外光源及/或具備轉彎光型者，另應符合本項之裝設額外光源及/或具備轉彎光型之相關規定	
	一〇四年一月一日起	新型式之 M、N 及 L3 類車輛之「6.配光性能穩定性試驗」其試驗電壓應符合 6.1.2 之規定。	
三十之二、氣體放電式頭燈	一〇六年一月一日起	1.使用於 M、N、L3 及 L5 類車輛之新型式氣體放電式頭燈及使用氣體放電式光源之分散式光學系統，應符合本項規定。 2.符合本基準項次「三十之一」規定之既有型式氣體放電式頭燈，亦視同符合本項規定。	103 年 5 月 23 日送部 103 年 8 月 22 日公告
	一〇七年一月一日起	1.使用於 L 類車輛之新型式類型 E 對稱光型頭燈，應符合條文 10.之規定。且應使用符合本基準中「燈泡」規定之氣體放電式光源。 2.符合本基準項次「三十之一」規定之既有型式類型 E 對稱光型頭燈，亦視同符合本項規定。	
三十一、方向燈	九十五年七月一日起	使用於 M、N 及 O 類車輛之新型式方向燈	102 年 3 月 20 日公告
	九十七年七月一日起	使用於 M、N 及 O 類車輛之各型式方向燈，應符合本項規定，且應使用符合本基準中「燈泡」規定之燈泡	
	九十八年一月一日起	使用於 L1 及 L3 類車輛之新型式方向燈	
	一〇〇年一月一日起	使用於 L1、L2、L3 及 L5 類車輛之各型式方向燈，應符合本項規定，且應使用符合本基準中「燈泡」規定之燈泡	
三十二、前霧燈	九十五年七月一日起	使用於 M 及 N 類車輛之新型式前霧燈	100 年 12 月 9 日公告
	九十七年七月一日起	使用於 M 及 N 類車輛之各型式前霧燈，應符合本項規定，且應使用符合本基準中「燈泡」規定之燈泡	
	九十六年一月一日起	使用於 L3 類車輛之新型式前霧燈	
	九十八年一月一日起	使用於 L3 及 L5 類車輛之各型式前霧燈，應符合本項規定，且應使用符合本基準中「燈泡」規定之燈泡	

項目	實施日期	適用範圍	修正案送部日期
三十二之一、前霧燈：自一〇二年一月一日起實施	一〇二年一月一日起	新型式之 L、M、N 類車輛	99 年 5 月 14 日送部 102 年 3 月 20 日公告
	一〇六年一月一日起	各型式之 L、M、N 類車輛	
	一〇四年一月一日起	新型式之 L、M 及 N 類車輛之「7.配光性能穩定性試驗」其試驗電壓應符合 7.1.2 之規定。	
三十二之二、前霧燈	一〇六年一月一日起	M、N、L3 類車輛所使用之新型式 B 類及 F3 類前霧燈，應符合本項規定，且應使用符合本基準各章節規定之光源。符合本基準項次「三十二之一」規定之 M、N、L3 類車輛，亦視同符合本項規定。	101 年 3 月 8 日送部 102 年 3 月 20 日公告
三十三、倒車燈	九十五年七月一日起	使用於 M、N 及 O 類車輛之新型式倒車燈	98 年 9 月 17 日送部 102 年 3 月 20 日公告
	九十七年七月一日起	使用於 M、N 及 O 類車輛之各型式倒車燈，其倒車燈應符合本項規定，且應使用符合本基準中「燈泡」規定之燈泡	
三十四、車寬燈(前位置燈)	九十五年七月一日起	使用於 M、N 及 O 類車輛之新型式車寬燈(前位置燈)	102 年 3 月 20 日公告
	九十七年七月一日起	使用於 M、N 及 O 類車輛之各型式車寬燈(前位置燈)，應符合本項規定，且應使用符合本基準中「燈泡」規定之燈泡	
	九十八年一月一日起	使用於 L1 及 L3 類車輛之新型式車寬燈(前位置燈)	
	一〇〇年一月一日起	使用於 L1、L2、L3 及 L5 類車輛之各型式車寬燈(前位置燈)，應符合本項規定，且應使用符合本基準中「燈泡」規定之燈泡	
三十五、尾燈(後位置燈)	九十五年七月一日起	使用於 M、N 及 O 類車輛之新型式尾燈(後位置燈)	102 年 3 月 20 日公告
	九十七年七月一日起	使用於 M、N 及 O 類車輛之各型式尾燈(後位置燈)，應符合本項規定，且應使用符合本基準中「燈泡」規定之燈泡	
	九十八年一月一日起	使用於 L1 及 L3 類車輛之新型式尾燈(後位置燈)	
	一〇〇年一月一日起	使用於 L1、L2、L3 及 L5 類車輛之各型式尾燈(後位置燈)，應符合本項規定，且應使用符合本基準中「燈泡」規定之燈泡	
三十六、停車燈	九十五年七月一日起	使用於 M、N 及 O 類車輛之新型式停車燈	98 年 9 月 17 日送部 99 年 08 月 16 公告
	九十七年七月一日起	使用於 M、N 及 O 類車輛之各型式停車燈，應符合本項規定，且應使用符合本基準中「燈泡」規定之燈泡	
三十七、煞車燈	九十五年七月一日起	使用於 M、N 及 O 類車輛之新型式煞車燈	102 年 3 月 20 日公告

項目	實施日期	適用範圍	修正案送部日期
	九十七年七月一日起	使用於 M、N 及 O 類車輛之各型式煞車燈，應符合本項規定，且應使用符合本基準中「燈泡」規定之燈泡	
	九十八年一月一日起	使用於 L1 及 L3 類車輛之新型式煞車燈	
	一〇〇年一月一日起	使用於 L1、L2、L3 及 L5 類車輛之各型式煞車燈，應符合本項規定，且應使用符合本基準中「燈泡」規定之燈泡	
三十八、第三煞車燈	九十五年七月一日起	使用於 M、N 及 O 類車輛之新型式第三煞車燈	99 年 5 月 14 日送部 102 年 3 月 20 日公告
	九十七年七月一日起	使用於 M、N 及 O 類車輛之各型式第三煞車燈，應符合本項規定，且應使用符合本基準中「燈泡」規定之燈泡	
三十九、輪廓邊界標識燈	九十五年七月一日起	使用於 M、N 及 O 類車輛之新型式輪廓邊界標識燈	99 年 5 月 14 日送部 102 年 3 月 20 日公告
	九十七年七月一日起	使用於 M、N 及 O 類車輛之各型式輪廓邊界標識燈，應符合本項規定，且應使用符合本基準中「燈泡」規定之燈泡	
四十、側方標識燈	九十五年七月一日起	使用於 M、N 及 O 類車輛之新型式側方標識燈	98 年 03 月 02 公告
	九十七年七月一日起	使用於 M、N 及 O 類車輛之各型式側方標識燈，應符合本項規定，且應使用符合本基準中「燈泡」規定之燈泡	
四十之一、側方標識燈：自一〇〇年一月一日起實施	一〇〇年一月一日起	使用於 M、N 及 O 類車輛之新型式側方標識燈，應符合本項規定，且應使用符合本基準中「燈泡」規定之燈泡	98 年 9 月 17 日送部 102 年 3 月 20 日公告
	一〇二年一月一日起	使用於 M、N 及 O 類車輛之各型式側方標識燈，已符合本基準項次「四十」之規定且發光顏色為紅色者，另應符合本項之紅色側方標識燈光度與照射角度規定	
四十一、反光標誌(反光片)	九十五年七月一日起	使用於 M、N 及 O 類車輛之新型式反光標誌	99 年 11 月 9 日送部 100 年 9 月 20 日公告
	九十七年七月一日起	使用於 M、N 及 O 類車輛之各型式反光標誌	
	九十八年一月一日起	使用於 L1 及 L3 類車輛之新型式反光標誌	
	一〇〇年一月一日起	使用於 L1 及 L3 類車輛之各型式反光標誌	
四十一之一、反光標誌(反光片)：自一〇〇年一月一日起實施	一〇〇年一月一日起	使用於 M、N、O、L1、L2、L3 及 L5 類車輛之新型式反光標誌	100 年 12 月 9 日公告
四十二、動態煞車：自九十六年一月一日起實施	九十六年一月一日起	新型式之 L1 及 L3 類車輛	99 年 11 月 9 日送部 100 年 9 月 20 日公

項目	實施日期	適用範圍	修正案送部日期
	九十八年一月一日起	各型式之 L1 及 L3 類車輛	告
	九十七年一月一日起	新型式之 M1、N 類及 O 類車輛	
	九十九年一月一日起	除 O3、O4 類全拖車外之各型式之 M1、N 類及 O 類車輛	
	九十七年一月一日起	新型式之 M2 及 M3 類車輛	
	九十八年一月一日起	各型式之 M2 及 M3 類車輛	
	九十八年十二月二十五日起	同一申請者同一年度同型式規格之 M1 或 N1 類車輛申請少量車型安全審驗且總數未逾二十輛或機關、學校進口自行使用之 N2、N3 類及丙、丁類大客車，得免符合本項「動態煞車」規定中第二煞車系統性能及能量儲存裝置測試。	
	一〇〇年一月一日起	各型式 O3、O4 類全拖車車輛	
	一〇〇年一月一日起	新型式之 M、N 及 O 類非電動車輛。 各型式之 L2 及 L5 類車輛，其動態煞車應符合本項規定	102 年 3 月 20 日公告
四十二之一、動態煞車：自一〇〇年一月一日起實施	一〇〇年七月一日起	新型式之 M、N 及 O 類電動車輛	
	一〇二年七月一日起	各型式之 M、N 及 O 類電動車輛，配備電力再生煞車系統者	
	一〇二年一月一日起	各型式之 M、N 及 O 類車輛已符合本基準項次「四十二」之規定，配備自動煞車或選擇性煞車者，另應符合本項 5.1.12 之規定；配備緊急煞車信號功能者，另應符合本項 5.1.13 及 6.1.21 之規定	
	一〇〇年一月一日起	同一申請者同一年度同型式規格之 M1 或 N1 類車輛申請少量車型安全審驗且總數未逾二十輛或機關、學校進口自行使用之 N2、N3 類及丙、丁類大客車，得免符合本項「動態煞車」規定中第二煞車系統性能及能量儲存裝置測試。	
四十二之二、動態煞車：自一〇二年一月一日起實施	一〇二年一月一日起	新型式之 M、N、O 及 L 類車輛	102 年 3 月 20 日公告
	一〇四年一月一日起	各型式之 L 類車輛	
四十二之三、動態煞車	一〇七年一月一日起	新型式之 M1、N1、O1、O2、L3 及 L5 類車輛	102 年 9 月 9 日送部 103 年 01 月 03 日公

項目	實施日期	適用範圍	修正案送部日期
	一〇九年一月一日起	1.各型式之 M1 及 N1 類車輛；已符合本基準項次「四十二之二」規定之既有型式 O1、O2、L3 及 L5 類車輛，亦視同符合本項規定。 2.可行駛狀態之車重大於一七三五公斤之 M1 及 N1 類車輛，得就 5.6.車輛穩定性電子式控制系統（ESC）或 6.9 車輛穩定性電子式控制功能（VSF）之規定擇一符合。	告
	一〇八年一月一日起	1.新型式之 M2、M3、N2 及 N3 類車輛； 2.下述新型式車輛得免配備有 6.9 車輛穩定性電子式控制功能（VSF）；惟若有配備 VSF，則該功能應符合本項 6.9 規定： (1)逾三軸之 M2、M3、N2 及 N3 類車輛。 (2)逾三軸或未配備氣壓式懸吊之 O3 及 O4 類車輛。 (3)G 類車輛、液壓傳動系統亦使用於煞車及輔助功能之液壓傳動車輛、設有立位之大客車、雙節式大客車及總重量介於三．五至七．五公噸之 N2 類曳引車。	
	一〇九年一月一日起	1.新型式之 O3 及 O4 類車輛 2.下述新型式車輛得免配備有 6.9 車輛穩定性電子式控制功能（VSF）；惟若有配備 VSF，則該功能應符合本項 6.9 規定： (1)逾三軸之 M2、M3、N2 及 N3 類車輛。 (2)逾三軸或未配備氣壓式懸吊之 O3 及 O4 類車輛。 (3)G 類車輛、液壓傳動系統亦使用於煞車及輔助功能之液壓傳動車輛、設有立位之大客車、雙節式大客車及總重量介於三．五至七．五公噸之 N2 類曳引車。	
	一一〇年一月一日起	1.各型式 M2、M3、N2 及 N3 類車輛 2.已符合本基準項次「四十二之二」規定之下述既有型式車輛，亦視同符合本項規定： (1)逾三軸且未配備有 VSF 之 M2、M3、N2、N3、O3 及 O4 類車輛。 (2)未配備氣壓式懸吊且未配備有 VSF 之 O3 及 O4 類車輛。 (3)G 類車輛。 (4)液壓傳動系統亦使用於煞車及輔助功能之液壓傳動車輛。 (5)設有立位之大客車。 (6)雙節式大客車。 (7)總重量介於三．五至七．五公噸之 N2 類曳引車。	

項目	實施日期	適用範圍	修正案送部日期
	一一一年一月一日起	1.各型式之 O3 及 O4 類車輛 2.已符合本基準項次「四十二之二」規定之下述既有型式車輛，亦視同符合本項規定： (1)逾三軸且未配備有 VSF 之 M2、M3、N2、N3、O3 及 O4 類車輛。 (2)未配備氣壓式懸吊且未配備有 VSF 之 O3 及 O4 類車輛。 (3)G 類車輛。 (4)液壓傳動系統亦使用於煞車及輔助功能之液壓傳動車輛。 (5)設有立位之大客車。 (6)雙節式大客車。 (7)總重量介於三・五至七・五公噸之 N2 類曳引車。	
四十三、防鎖死煞車系統	九十七年一月一日起	若配備防鎖死煞車系統之新型式之 M1 及 N1 車輛	102 年 3 月 20 日公告
	九十九年一月一日起	若配備防鎖死煞車系統之各型式之 M1 及 N1 車輛	
	九十八年一月一日起	若配備防鎖死煞車系統之新型式之 L1 及 L3 車輛	
	一〇〇年一月一日起	若配備防鎖死煞車系統之各型式之 L1、L3 及 L5 車輛	
	一〇〇年一月一日起	若配備防鎖死煞車系統之超過四軸之新型式 M2、M3、N2 及 N3 車輛	
	一〇二年一月一日起	若配備防鎖死煞車系統之超過四軸之各型式 M2、M3、N2 及 N3 車輛	
	一〇〇年一月一日起	新型式之 O3、O4 類車輛和不超過四軸之 M2、M3、N2、N3 類車輛，應配備防鎖死煞車系統	
	一〇二年一月一日起	各型式之 O3、O4 類車輛和不超過四軸之 M2、M3、N2、N3 類車輛，應配備防鎖死煞車系統	
四十三之一、防鎖死煞車系統：自一〇二年一月一日起實施	一〇二年一月一日起	新型式之 O3、O4 類車輛和不超過四軸之 M2、M3、N2、N3 類車輛，應配備防鎖死煞車系統	102 年 3 月 20 日公告
	一〇四年一月一日起	各型式之 O4 類車輛，已符合本基準項次「四十三」規定者，另應符合本項 4.2 之規定	
	一〇二年一月一日起	若配備防鎖死煞車系統之新型式之 M1、N1、L1、L3、L5 車輛及超過四軸之 M2、M3、N2 及 N3 車輛	
	一〇四年一月一日起	各型式超過四軸之 M2、M3、N2 及 N3 車輛，已符合本基準項次「四十三」規定且配備整合式持久煞車系統者，另應符合本項 5.1.6 之規定	
	一〇六年一月一日起	各型式之 L1 及 L3 類車輛，若配備防鎖死煞車系統，則應符合本項規定。	

項目	實施日期	適用範圍	修正案送部日期
	一〇二年一月一日起	同一申請者同一年度同型式規格之 M1 或 N1 類車輛，申請少量車型安全審驗且總數未逾二十輛或機關、學校進口自行使用之 N2、N3 類及丙、丁類大客車，得免符合本項「防鎖死煞車系統」規定中能量消耗試驗及抓地力利用率試驗測試。	
四十四、轉向控制系駕駛人碰撞保護	九十七年一月一日起	總重量小於一・五公噸之新型式 M1 和 N1 類車輛	100 年 9 月 20 日公告
	九十九年一月一日起	總重量小於一・五公噸之各型式 M1 和 N1 類車輛	
四十四之一、轉向控制系駕駛人碰撞保護：自一〇〇年一月一日起實施	一〇〇年一月一日起	新型式非電動 M1 和總重量小於一・五公噸之新型式 N1 非電動類車輛	99 年 2 月 1 日送部 102 年 3 月 20 日公告
	一〇二年一月一日起	總重量大於一・五公噸之各型式 M1 類非電動車輛	
	一〇一年一月一日起	新型式 M1 類電動車輛和總重量小於一・五公噸之新型式 N1 類電動車輛	
	一〇三年一月一日起	各型式 M1 類電動車輛和總重量小於一・五公噸之各型式 N1 類車輛	
四十五、側方碰撞乘員保護	九十七年一月一日起	座椅 R 點距地高度小於七〇〇公釐之新型式 M1 及 N1 類車輛	102 年 3 月 20 日公告
	九十九年一月一日起	座椅 R 點距地高度小於七〇〇公釐之各型式 M1 及 N1 類車輛	
四十五之一、側方碰撞乘員保護：自一〇三年一月一日起實施	一〇三年一月一日起	座椅 R 點距地高度小於七〇〇公釐 M1 及 N1 類車輛	99 年 2 月 1 日送部 102 年 3 月 20 日公告
四十六、前方碰撞乘員保護	九十七年一月一日起	總重量小於二・五公噸之新型式 M1 類車輛	102 年 3 月 20 日公告
	九十九年一月一日起	總重量小於二・五公噸之各型式 M1 類車輛	
四十六之一、前方碰撞乘員保護：自一〇三年一月一日起實施	一〇三年一月一日起	總重量小於二・五公噸 M1 類車輛	100 年 10 月 14 日送部 102 年 3 月 20 日公告
四十七、轉向系統	九十七年一月一日起	新型式之 M、N、及 O 類車輛	97 年 06 月 11 公告
	九十九年一月一日起	各型式之 M、N、及 O 類車輛	

項目	實施日期	適用範圍	修正案送部日期
四十八、安全帶固定裝置	九十七年一月一日起	新型式之M及N類車輛	102年3月20日公告
	九十九年一月一日起	各型式之M及N類車輛	
	九十七年一月一日起	安全帶固定裝置之適用型式及其範圍認定原則，應符合以下規定： 2.1.1 車種代號相同 2.1.2 廠牌及車輛型式系列相同 2.1.3 底盤車廠牌相同 2.1.4 底盤車申請者宣告之底盤車型式系列相同 2.1.5 若以底盤車代替完成車執行本項全部或部分檢測時，其適用型式及其範圍認定原則： 2.1.5.1 底盤車廠牌相同 2.1.5.2 底盤車申請者宣告之底盤車型式系列相同	
	九十八年一月一日起	安全帶固定裝置之適用型式及其範圍認定原則，應符合以下規定： 2.2.1 廠牌相同 2.2.2 固定點數量相同 2.2.3 固定裝置結構、尺寸及材質相同 2.2.4 與固定裝置各固定點接合之固定方式、結構(含接合固定之鈹件厚度)及材質相同	
四十八之一、安全帶固定裝置：自一〇四年一月一日起實施	一〇四年一月一日起	新型式之M及N類車輛	98年9月17日送部 102年3月20日公告
四十八之二、安全帶固定裝置	一〇五年一月一日起	新型式之M及N類車輛	102年9月9日送部 103年01月03日公告
	一〇八年一月一日起	各型式之M1類車輛；已符合本基準項次「四十八之一」規定者，另應符合本項7.之規定。	
	一〇六年一月一日起	新型式之M及N類車輛，其側向式及後向式座椅之安全帶固定裝置	103年8月27日送部 104年2月4日公告
	一〇八年一月一日起	各型式之M及N類車輛，其側向式及後向式座椅之安全帶固定裝置。已符合本基準項次「四十八之一」規定之使用於後向式座椅之安全帶固定裝置，亦視同符合本項規定。	
四十九、座椅強度	九十七年一月一日起	使用於M及N類車輛之新型式座椅	99年11月9日送部 102年3月20日公告
	九十九年一月一日起	使用於M及N類車輛之各型式座椅	

項目	實施日期	適用範圍	修正案送部日期
四十九之一、座椅強度	一〇六年一月一日起	使用於 M 及 N 類車輛之新型式座椅	103 年 8 月 27 日送部
	一〇八年一月一日起	使用於 M 及 N 類車輛之各型式座椅，符合本基準項次「四十九」規定之既有型式座椅強度，亦視同符合本項規定。	104 年 2 月 4 日公告
五十、頭枕	九十七年一月一日起	使用於 M1、N1 類車輛以及總重量小於三・五公噸之 M2 類車輛外側前座之新型式頭枕	102 年 3 月 20 日公告
	九十九年一月一日起	使用於 M1、N1 類車輛以及總重量小於三・五公噸之 M2 類車輛外側前座之各型式頭枕	
五十之一、頭枕：自一〇二年一月一日起實施	一〇二年一月一日起	下列之頭枕，應符合本項規定：(1.1.1~1.1.2)	102 年 3 月 20 日公告
	一〇四年一月一日起	使用於 M1 及總重量小於三・五公噸之 M2 類車輛後座之各型式頭枕	
五十一、門門／鉸鏈	九十七年一月一日起	使用於 M1 及 N1 類車輛之新型式門門／鉸鏈	99 年 08 月 16 公告
	九十九年一月一日起	使用於 M1 及 N1 類車輛之各型式門門／鉸鏈	
五十一之一、門門與鉸鏈：自一〇二年一月一日起實施	一〇二年一月一日起	使用於 M1 及 N1 類車輛乘員進出門之新型式門門與鉸鏈	99 年 11 月 9 日送部 102 年 3 月 20 日公告
	一〇四年一月一日起	使用於 M1 及 N1 類車輛乘員進出門之各型式門門與鉸鏈已符合本基準項次「五十一」之規定者，其尾門應符合 5.1.3、5.2.3、5.3.3.2.5、5.3.3.2.6、5.5.1.3 之規定	
	一〇六年一月一日起	除 1.1 規定以外，使用於 M1 及 N1 類車輛具有潛在風險使乘員因車輛碰撞而彈出車外之尾門，其新型式門門與鉸鏈	103 年 8 月 27 日送部
	一〇八年一月一日起	除 1.2 規定以外，使用於 M1 及 N1 類車輛具有潛在風險使乘員因車輛碰撞而彈出車外之尾門，其各型式門門與鉸鏈	104 年 2 月 4 日公告
五十二、非氣體放電式頭燈	九十七年一月一日起	使用於 M 及 N 類車輛之新型式非氣體放電式頭燈	99 年 5 月 14 日送部 99 年 08 月 16 公告
	九十九年一月一日起	使用於 M 及 N 類車輛之各型式非氣體放電式頭燈	
	九十八年一月一日起	使用於 L1 及 L3 類車輛之新型式非氣體放電式頭燈	
	一〇〇年一月一日起	使用於 L1 及 L3 類車輛之各型式非氣體放電式頭燈	
五十二之一、非氣體放電式頭燈：自一〇〇年一月一日起實施	一〇〇年一月一日起	使用於 M、N、L1 及 L3 類車輛之新型式非氣體放電式頭燈以及 L2、L5 類車輛之各型式非氣體放電式頭燈	102 年 3 月 20 日公告

項目	實施日期	適用範圍	修正案送部日期
施	一〇二年一月一日起	使用於 M、N、L1 及 L3 類車輛之各型式非氣體放電式頭燈，已符合本基準項次「五十二」之規定且裝設額外光源及/或具備轉彎光型者，另應符合本項之裝設額外光源及/或具備轉彎光型之相關規定	
	一〇四年一月一日起	新型式之 M、N、L1 及 L3 類車輛之「9.配光穩定性試驗」其試驗電壓應符合 9.1.2 之規定。	
五十二之二、非氣體放電式頭燈	一〇六年一月一日起	1.使用於 M 及 N 類車輛之新型式非氣體放電式頭燈，應符合本項規定。 2.符合本基準項次「五十二之一」規定之既有型式非氣體放電式頭燈，亦視同符合本項規定。	103 年 5 月 23 日送部
	一〇七年一月一日起	1.用於 L 類車輛之新型式非氣體放電式頭燈，應符合本項規定，且應使用符合本基準中「燈泡」規定之燈泡。 2.符合本基準項次「五十二之一」規定之既有型式非氣體放電式頭燈，亦視同符合本項規定。	103 年 8 月 22 日公告
五十三、後霧燈	九十七年一月一日起	使用於 M、N 及 O 類車輛之新型式後霧燈	100 年 12 月 9 日公告
	九十九年一月一日起	使用於 M、N 及 O 類車輛之各型式後霧燈，應符合本項規定，且應使用符合本基準中「燈泡」規定之燈泡	
	九十八年一月一日起	使用於 L3 類車輛之新型式後霧燈	
	一〇〇年一月一日起	使用於 L3 及 L5 類車輛之各型式後霧燈，應符合本項規定，且應使用符合本基準中「燈泡」規定之燈泡	
五十四、火災防止規定	九十七年十二月三十一日起	軸距逾四公尺之大客車及軸距未逾四公尺且總重量逾四・五噸之大客車	97 年 06 月 11 公告
五十四之一、火災防止規定	一〇四年一月一日起	軸距逾四公尺及軸距未逾四公尺且總重量逾四・五噸之新型式大客車	102 年 11 月 1 日公告
	一〇六年一月一日起	軸距逾四公尺及軸距未逾四公尺且總重量逾四・五噸之各型式大客車	
五十四之二、火災防止規定	一〇五年一月一日起	軸距逾四公尺及軸距未逾四公尺且總重量逾四・五噸之新型式大客車	102 年 9 月 9 日送部 103 年 01 月 03 日公告
	一〇六年一月一日起	軸距逾四公尺及軸距未逾四公尺且總重量逾四・五噸之各型式大客車	
五十五、大客車車身結構強度	九十七年十二月三十一日起	下述車輛之車身結構強度，應符合本項規定 1.1 軸距逾四公尺之大客車 1.2 軸距未逾四公尺、總重量逾四・五噸且乘員座立位總數逾二十二人（不包括駕駛員）之下列大客車： 1.2.1 僅設座位供載運乘客 1.2.2 設有座位供做載客用途，於走道或其他空間設有立位，而該其他空間不超過相當於二個雙人座椅空間	97 年 06 月 11 公告

項目	實施日期	適用範圍	修正案送部日期
	一〇一年二月七日起	M2 及 M3 類之雙節式大客車應符合本項規定。	100 年 4 月 14 日送部 102 年 3 月 20 日公告
五十六、電磁相容性	一〇〇年一月一日起	新型式之 L、M1 及 N1 類車輛	99 年 2 月 1 日送部 102 年 3 月 20 日公告
	一〇二年一月一日起	各型式之 L、M1 及 N1 類車輛	
五十六之一、電磁相容性：自一〇四年一月一日起實施	一〇二年一月一日起	新型式之 L 類車輛；已符合「五十六、電磁相容性」者，另應符合電磁耐受規定。	103 年 5 月 23 日送部 103 年 8 月 22 日公告
	一〇四年一月一日起	各型式之 L 類車輛；已符合「五十六、電磁相容性」者，另應符合電磁耐受規定。	
	一〇三年一月一日起	新型式之 M、N 及 O 類車輛；已符合「五十六、電磁相容性」者，另應符合電磁耐受規定。	
	一〇五年一月一日起	各型式之 M、N 及 O 類電動車輛	
	一〇五年一月一日起	各型式之 M1、N1 類非電動車輛	
	一〇六年一月一日起	各型式之 M2、M3、N2、N3 類非電動車輛	
	一〇七年一月一日起	各型式之 O 類非電動車輛	
五十六之二、電磁相容性	一〇五年一月一日起	新型式之 L 類車輛；符合車輛安全檢測基準項次「五十六之一、電磁相容性」規定之既有型式 L 類非電動車輛，亦視同符合本項規定。	103 年 5 月 23 日送部 103 年 8 月 22 日公告
	一〇七年一月一日起	各型式之 L 類車輛；符合車輛安全檢測基準項次「五十六之一、電磁相容性」規定之既有型式 L 類非電動車輛，亦視同符合本項規定。	
	一〇六年一月一日起	新型式之 M1 及 N1 類車輛；符合車輛安全檢測基準項次「五十六之一、電磁相容性」規定之既有型式 M1 及 N1 類非電動車輛，亦視同符合本項規定。	
	一〇八年一月一日起	各型式之 M1 及 N1 類車輛；符合車輛安全檢測基準項次「五十六之一、電磁相容性」規定之既有型式 M1 及 N1 類非電動車輛，亦視同符合本項規定。	
	一〇七年一月一日起	新型式之 M2、M3、N2 及 N3 類車輛；符合車輛安全檢測基準項次「五十六之一、電磁相容性」規定之既有型式 M2、M3、N2 及 N3 類非電動車輛，亦視同符合本項規定。	
	一〇九年一月一日起	各型式之 M2、M3、N2 及 N3 類車輛；符合車輛安全檢測基準項次「五十六之一、電磁相容性」規定之既有型式 M2、M3、N2 及 N3 類非電動車輛，亦視同符合本項規定。	
	一〇八年一月一日起	新型式之 O 類車輛；符合車輛安全檢測基準項次「五十六之一、電磁相容性」規定之既有型式 O 類非電動車輛，亦視同符合本項規定。	

項目	實施日期	適用範圍	修正案送部日期
	日起	輛，亦視同符合本項規定。	
	一一〇年一月一日起	各型式之 O 類車輛；符合車輛安全檢測基準項次「五十六之一、電磁相容性」規定之既有型式 O 類非電動車輛，亦視同符合本項規定。	
五十七、小型輕型機車電子控制裝置	九十六年六月一日起	小型輕型機車	102 年 3 月 20 日公告
五十八、小型輕型機車之車架疲勞強度	九十六年七月一日起	小型輕型機車	102 年 3 月 20 日公告
五十九、適路性前方照明系統	一〇〇年一月一日起	使用於 M 及 N 類車輛之新型式適路性前方照明系統	99 年 11 月 9 日送部 102 年 3 月 20 日公告
	一〇二年一月一日起	使用於 M 及 N 類車輛之各型式適路性前方照明系統	
五十九之一、適路性前方照明系統	一〇六年一月一日起	1.使用於 M 及 N 類車輛之新型式適路性前方照明系統，應符合本項規定。 2.符合本基準項次「五十九」規定之 M 及 N 類車輛，亦視同符合本項規定。	102 年 3 月 20 日公告
六十、含視野輔助燈之照後鏡	九十九年一月一日起	使用於 M 及 N 類車輛之照後鏡，如含後方視野輔助燈者，應符合本項規定。	98 年 12 月 15 公告
六十一、機械式聯結裝置安裝規定	一〇〇年一月一日起	除車輛安全檢測基準第十七項所指小型汽車及其附掛拖車以外之新型式 N 及 O 類車輛	99 年 12 月 17 公告
	一〇〇年七月一日起	除車輛安全檢測基準第十七項所指小型汽車及其附掛拖車以外之各型式 N 及 O 類車輛	
六十二、機械式聯結裝置	一〇〇年一月一日起	除車輛安全檢測基準第十七項所指小型汽車及其附掛拖車以外之 N 及 O 類車輛所使用之機械式聯結裝置	99 年 12 月 17 公告
六十三、低地板大客車規格規定	九九年八月十六日起	下述設有立位之新型式低地板大客車： 1.1 軸距逾四公尺之大客車。 1.2 軸距未逾四公尺且總重量逾四・五噸之有設立位大客車。	99 年 7 月 16 日送部 102 年 3 月 20 日公告
六十四、電動汽車之電氣安全：自一〇三年一月一日起實施	一〇三年一月一日起	使用於設計速度大於 25 公里/小時之新型式 M 及 N 類電動車輛	103 年 5 月 23 日送部
	一〇五年一月一日起	使用於設計速度大於 25 公里/小時之各型式 M 及 N 類電動車輛	103 年 8 月 22 日公告
六十五、電動機車高溫擠壓電擊安全防護規範：自九十九年十二月一日起實施	九十九年十二月一日起	新型式之 L 類電動機車	99 年 2 月 1 日送部 102 年 3 月 20 日公告
	一〇一年十二月一日起	各型式之 L 類電動機車	
六十六、燃油箱	一〇三年一月一日起	使用於 M、N 及 O 類車輛之新型式油箱	100 年 12 月 30 日送部

項目	實施日期	適用範圍	修正案送部日期
	一〇五年一月一日起	使用於M、N及O類車輛之各型式油箱	102年3月20日公告
六十七、載運輪椅使用者車輛規定	一〇二年一月一日起	除符合車輛安全檢測基準「低地板大客車規格規定」之低地板大客車以外設有輪椅區之M類車輛，非營業用小客車者，得免符合3.1及4.2.1規定	103年11月20日送部 104年2月9日公告
六十八、胎壓偵測輔助系統	一〇三年十一月一日起	新型式M1類車輛	101年11月5日公告
	一〇五年七月一日起	各型式M1類車輛	
	一〇三年十一月一日起	新型式N1類車輛	
	一〇五年七月一日起	各型式N1類車輛	
六十九、低速輔助照明燈	一〇三年一月一日起	使用於M及N類車輛之低速輔助照明燈	102年3月4日報部 102年5月9日公告
七十〇、大客車設置之自行車置放架靜態強度(草案)	〇年〇月〇日起	設有自行車置放架之M2及M3類車輛	99年4月12日送部
七十〇、行車視野輔助系統(草案)	一〇四年一月一日起	各型式M2及M3類車輛	101年8月9日送部
	〇年〇月〇日起	新型式N2及N3類車輛	
	〇年〇月〇日起	各型式N2及N3類車輛	
七十〇、前方碰撞輔助警示系統(草案)	一〇四年一月一日起	除市區公車以外之新型式M2及M3類車輛	101年9月11日送部
	一〇六年一月一日起	除市區公車以外之各型式M2及M3類車輛	

待公告車輛安全檢測基準增修案規劃表											
項目		參考	草案年	適用車輛		實施日期綜合確認因子			實施年		預定公告年
編號	名稱	UN 版本		基準範圍	增修對象	UN 所訂新型式日期 A 後一年	討論定案後緩 衝期兩年(定 案年+2)	依產品開發技 術難度	新型式	既有型式	
7-1	左右兩側捲入防護與後方突入防護	R73 01 版、R58 02-03 版	103 年 103.11.21	N2、N3、O2、O3 及 O4	---	UN 新型式建議之實施日期為 100.12.9->102(2013)年	103.11.21 ->106(2015 年)	ARTC 代表說明僅能執行部分試驗。	尚未訂定	尚未訂定	基準草案已於 103 年 12 月 26 日報部
23-1	間接視野裝置安裝規定	UN R46 04 版	103 年 103.9.19	M、N 及 L 類	---	UN 新型式建議之實施日期為 103.6.30->105(2016)年	103.9.19 ->106(2015 年)	ARTC 代表說明現已具備檢測能量。	106.1.1	N2、N3 類 ->107.1.1	基準草案已於 103 年 11 月 7 日報部
42-3	動態煞車(煞車輔助系統)	UN R13H00-S14 版	103 年 103.7.30	L、M、N 及 O 類	---	BAS 係屬既有之內容，非 UN 新增訂內容，故無列出 UN 所訂新型式日期後一年之年份。	103.7.30 ->106(2015)年	ARTC 代表說明本項檢測程序實驗室可執行；惟檢測儀器與軟體預計 105 年底前完成建置 (可符合國內法規預定 107 年實施之要望)。	107.1.1	不追溯	基準草案已於 103 年 8 月 27 日報部
	動態煞車(連動式煞車)	EU 168/2013	103 年 103.6.4		L3-A1	EU168/2013 新型式建議之實施日期為 105.1.1 (2016)年	103.6.4 ->106(2015)年	ARTC 代表說明現已具備檢測能量。	L3-A1 ->108.1.1 ²	L3-A1 ->110.1.1 ²	基準草案已於 103 年 8 月 27 日報部
43-2	防鎖死煞車系統	EU 168/2013 及 EU 78/2009 規範	103 年 103.6.4	M、N、O、L1、L3-A1、L3-A2、L3-A3 及 L5 類	---	EU168/2013 新型式建議之實施日期為 105.1.1 (2016)年	103.6.4 ->106(2015)年	ARTC 代表說明現已具備檢測能量。	M1、N1 類 ->107.1.1 L3-A2、L3-A3 ->108.1.1 ² L3-A1 ->108.1.1 ² 其餘車輛同 43-1	M1、N1 類 ->109.1.1 L3-A2、L3-A3 ->110.1.1 ² L3-A1 ->110.1.1 ² 其餘車輛同 43-1	基準草案已於 103 年 8 月 27 日報部
45-2	側方碰撞乘員保護	UN R9503-S4 版	103 年 103.9.24	M1、N1 類	---	主要係新增自動門鎖系統之相關規定 (03-S4 版)，故無列出 UN 所訂新型式日期後一年之年份。	103.9.24 ->106(2015)年	ARTC 代表說明現已具備檢測能量。	106.1.1	108.1.1	基準草案已於 103 年 11 月 7 日報部
46-2	前方碰撞乘員保護	UN R94	103 年	M1	---	主要係新增自動門鎖系統之相關規定 (03-S4 版)，故無列出 UN 所訂新型式日期後一年之年份。	103.9.24	ARTC 代表說明現已具備檢測能量。	106.1.1	108.1.1	基準草案已於 103 年 11 月 7 日報部

待公告車輛安全檢測基準增修案規劃表											
項目		參考	草案年	適用車輛		實施日期綜合確認因子			實施年		預定公告年
編號	名稱	UN 版本		基準範圍	增修對象	UN 所訂新型式日期 A 後一年	討論定案後緩 衝期兩年(定 案年+2)	依產品開發技 術難度	新型式	既有型式	
	員保護	02-S5 版	/103.9.24			鎖系統之相關規定 (02-S5 版),故無列出 UN 所訂新型式日 期後一年之年份。	->106(2015)年	明現已具備檢 測能量。			103 年 11 月 7 日報部
63-1	低地板大客 車規格規定	UN R107 05-S1 版	103 年 /103.9.24	設有立位之 新型式低地 板大客車 (軸距逾四 公尺及未逾 四公尺且總 重量逾四・ 五噸之大客 車)	---	主要係新增嬰幼兒 車區之相關規定 (05-S1 版),故無列出 UN 所訂新型式日 期後一年之年份。	103.9.24 ->106(2015)年	ARTC 代表說 明現已具備檢 測能量。	106.1.1	107.1.1	基準草案已於 103 年 11 月 7 日報部
64-1	電動汽車之 電氣安全	UN R100 02 版	103 年 /103.7.18	M、N 類	---	UN 新型式建議之實 施日期為 105.7.15-> 107(2018)年	103.7.18 ->106(2015)年	除零組件 9.4 機械完整性試 驗;9.5 耐 火;9.9 過熱保 護等 3 項無測 試能量也暫無 建置規劃,其 它項目 ARTC 已具備檢測能 量	尚未訂定	尚未訂定	基準草案已於 103 年 8 月 27 日報部
71	行車視野輔 助系統	--- (非調和 UN 法規 項目)	101 年 /101.7.5	N2、N3、M2 及 M3 類	N2、N3、M2 及 M3 類	---	101+2 ->103(2014)年	ARTC 代表說 明現已具備檢 測能量。	1.M2 及 M3 類; 104.01.01 2.N2 及 N3 類;待 討論	1.M2 及 M3 類; 104.01.01 2.N2 及 N3 類;待 討論	基準草案已於 101 年 8 月 9 日 報部
72	前方碰撞輔 助警示系統	--- (非調和 UN 法規	101 年 /101.8.15	除市區公車 以外之各型 式 M2 及 M3	除市區公車以外之 各型式 M2 及 M3 類 車輛	---	101+2 ->103(2014)年	ARTC 代表說 明現已具備檢 測能量。	104.1.1	106.1.1	基準草案已於 101 年 9 月 11 日報部

待公告車輛安全檢測基準增修案規劃表											
項目		參考	草案年	適用車輛		實施日期綜合確認因子			實施年		預定公告年
編號	名稱	UN 版本		基準範圍	增修對象	UN 所訂新型式日期 A 後一年	討論定案後緩 衝期兩年(定 案年+2)	依產品開發技 術難度	新型式	既有型式	
		項目)		類車輛							
7○	晝行燈 ¹	UN R87 00-S17 版	103 年 /103.10.23	M、N 及 L 類	---	UN 新型式建議之實 施日期為 102.11.13-> 105(2016)年	103.10.23 ->106(2015)年	ARTC 代表說 明現已具備檢 測能量。	106.1.1	108.1.1	基準草案已於 103 年 11 月 7 日報部
7○	LED(發光二 極體)光源 ¹	UN R128 00-S2 版	103 年 /103.10.23	M、N、O 及 L 類	---	UN 新型式建議之實 施日期為 103.6.10-> 105(2016)年	103.10.23 ->106(2015)年	ARTC 未建置 「配光曲線 儀」，初期將 委託工研院來 對應。	106.1.1	108.1.1	基準草案已於 103 年 11 月 7 日報部
7○	緊急煞車輔 助系統 ¹	UN R131 01-S1 版	103 年 /103.5.29	M2、M3、 N2、N3 類	---	UN 新型式建議之實 施日期為 103.2.13-> 105(2016)年	103.5.29 ->106(2015)年	ARTC 代表說 明未具備檢測 能量，保守估 計應可於 104 年第二季前建 置完成。	甲類大客車 ->108.1.1 乙類大客車 ->110.1.1 N2 ->110.1.1 N3 ->108.1.1	甲類大客車 ->110.1.1 乙類大客車 ->112.1.1 N2 ->112.1.1 N3 ->110.1.1	基準草案已於 103 年 9 月 11 日報部
7○	汽車控制器 標誌 ¹	UN R121 00-R1-A3/C1 版	103 年 /103.5.9	M1、N1、 M2、M3 類	---	UN 新型式建議之實 施日期為 102.11.13-> 104(2015)年	103.5.9 ->106(2015)年	ARTC 代表說 明現已具備檢 測能量。	M1、N1 ->107.1.1 M2、M3 ->108.1.1	M1、N1 ->109.1.1 M2、M3 ->110.1.1	基準草案已於 103 年 12 月 26 日報部
7○	客車前方車 外突出限制 ¹	UN R26 03-S2 版	103 年 /103.7.2	M1 類	---	UN 新型式建議之實 施日期為 102.7.15-> 104(2015)年	103.7.2 ->106(2015)年	ARTC 代表說 明現已具備檢 測能量。	107.1.1	109.1.1	基準草案已於 103 年 12 月 26 日報部
7○	車道偏離輔 助警示系統 ¹	UN R130 00 版	103 年 /103.8.6	M2、M3、 N2、N3 類	---	UN 新型式建議之實 施日期為 102.7.9-> 104(2015)年	103.8.6 ->106(2015)年	ARTC 代表說 明現已具備檢 測能量。	108.1.1	110.1.1	基準草案已於 103 年 12 月 26 日報部
7○	車速限制機 能 ¹	UN R89 00-S2 版	103 年 /103.8.28	M1、N1、 M2、M3、 N2、N3 類	---	UN 新型式建議之實 施日期為 100.1.30-> 102(2013)年	103.8.28 ->106(2015)年	ARTC 代表說 明現已具備檢 測能量。	M1、N1(選配) ->107.1.1 M2、M3、N2、N3 ->108.1.1	M1、N1(選配) ->109.1.1 M2、M3、N2、N3 ->110.1.1	基準草案已於 103 年 12 月 26 日報部

待公告車輛安全檢測基準增修案規劃表											
項目		參考	草案年	適用車輛		實施日期綜合確認因子			實施年		預定公告年
編號	名稱	UN 版本		基準範圍	增修對象	UN 所訂新型式日期 A 後一年	討論定案後緩 衝期兩年(定 案年+2)	依產品開發技 術難度	新型式	既有型式	
7○	車輛前方結構之行人碰撞防護性能 ¹	UN R127 01 版	103 年 /103.11.26	M1、N1 類	---	UN 新型式建議之實施日期為 104.1.22->106(2017)年	103.11.26 ->106(2015)年	ARTC 代表說明未具備檢測能量。	尚未訂定	尚未訂定	基準草案已於 103 年 12 月 26 日報部
7○	貨車前方車外突出限制 ¹	UN R61 00-S2 版	103 年 /103.11.6	N 類	---	UN 新型式建議之實施日期為 102.7.15->104(2015)年	103.11.6 ->106(2015)年	ARTC 代表說明現已具備檢測能量。	108.1.1	110.1.1	基準草案已於 103 年 12 月 26 日報部
7○	前方突入防護 ¹	UN R93 00 版	103 年 /103.11.19	N2、N3 類	---	UN 新型式建議之實施日期為 83.2.27->85(1996)年	103.11.19 ->106(2015)年	ARTC 代表說明僅能執行部分試驗。	尚未訂定	尚未訂定	基準草案已於 103 年 12 月 26 日報部

備註：1.國際車輛安全法規調和推動規劃案之基準項目。

2.機車加裝ABS案之實施日期尚待開會討論。