

14 Field of direct application

14 直接應用範圍

14.1 General

14.1 一般

14.1.1 Introduction

14.1.1 介紹

From the test result it is possible to determine a field of direct application for the item of building hardware, which will enable it to be used in a variety of situations without the need for further fire performance assessment.

從測試結果有可能判斷直接應用於建築五金品項的範圍，這使它能用於多種情況而不需要進一步的防火性能評估。

The choice of materials used in the manufacture of the associated construction is important in determining the field of direct application of the item of building hardware.

相關結構的製造所選擇使用的材料，對於判斷建築五金品項的直接應用相當重要。

NOTE For example, from a test on an edge-mounted item of building hardware where the specimen incorporates a high-density timber frame, the field of direct application would be limited to assemblies with a highdensity timber frame with equal or lower charring rate. If a test were performed on an edge-mounted item of building hardware in association with a low density softwood frame then the field of direct application of the item of building hardware would include all timber/cellulosic frames of equal or higher density.

註：例如，從建築五金邊緣安裝品項的測試觀點（測試樣品包含一個高密度木質門樑），直接應用的範圍就會限制在等於或低於炭化率的有高密度木質門樑的組件範圍內。若測試是在一個建築五金的邊緣安裝品項上進行且與低密度軟木門樑結合，則該建築五金品項的直接應用範圍就會包括所有密度相等或更高的木質/纖維板門樑。

The sponsor shall choose suitable materials which will balance his requirements for as wide a field of direct application as possible in terms of construction with the suitability for use over the widest range of fire resistance requirements.

發起人應選擇適當的材料，能夠平衡他就結構方面盡可能廣泛直接應用於範圍的要求，且適合用於最廣泛的防火要求。

The field of direct application which follows is conservative. It will not cover every situation in which the item of building hardware may be used. A field of extended application may need to be determined from the information generated by this test together with the evidence on the door or window assembly being considered. This is particularly important when two or more of the aspects of the design change simultaneously.

後續的直接應用範圍是保守的。不會涵蓋可能使用建築五金品項的每一種情況。擴大應用範圍可能需要依據本測試所產生的資訊，以及所考慮的門窗組件的證據來做判斷。當兩個或更多的設計層面同步發生變化時，這點就特別重要。

Further assessments may be made based on the test report, which takes account of the compensating factors within the specification of materials and changes in dimensions. In all cases the field of direct application is limited to the use of building hardware on door and window assemblies, which have been proven by test to satisfy the criteria in accordance with EN 1634-1.

進一步的評估可能需要依據測試報告，其中考慮到材料規格內的補償因素以及尺寸的修改。在所有情況下，直接應用範圍限制在於門窗組件上使用建築五金，這點已由測試加以證明以滿足依據 EN 1634-1 的標準。

14.1.2 Basis of the field of direct application

14.1.2 直接應用範圍的基礎

The field of direct application is related to the composition of the associated construction. Factors such as known rate of charring of timber, density of timber, gauge of steel, thickness of leaf, inclusion of intumescent seals, will affect the fire resistance of an assembly local to the item of building hardware.

直接應用範圍涉及了相關結構的組成。各種因素例如已知的木質炭化率、木質密度、鋼製規格、門扇厚度、包含膨脹密封件等，都將影響建築五金品項局部組件的防火性能。

These factors will have limits placed upon them in the field of direct application. Therefore, if it is proposed to use an item of building hardware in a given door or window assembly, the composition of the construction local to the item of building hardware shall be expected to provide at least as great a contribution to the fire resistance as the associated construction which was tested.

這些因素將會對它們在直接應用範圍方面造成限制。因此如果提議在既定門或窗

組件上使用建築五金品項，建築五金品項的施工組成應能提供至少相當於被測試的相關結構所能提供的防火性能。

The method for determining the field of direct application for each of the building hardware types covered by this European Standard is given in Clauses 14.2 to 14.5.

此歐洲標準中的第 14.2 節至第 14.5 節包含了針對每一種建築五金種類來判斷直接應用範圍的方法。

14.2 Single action hinges

14.2 單向開啟鉸鏈

14.2.1 General

14.2.1 一般

The factors which will influence the fire resistance of a moving element and which are related to the performance of hinges are given in Clauses 14.2.2 to 14.2.9.

與鉸鏈性能有關且會影響移動元件的防火性能的因素載列在第 14.2.2 節至第 14.2.9 節中。

The tested hinge is suitable for use in conjunction with doorsets or openable windows requiring a fire resistance with respect to EN 1634-1 of no more than x min (where x is the time between commencement of the test and failure under either the integrity, insulation or resistance to loading criteria) when the:

經測試的鉸鏈適用於依據 EN 1634-1 具備不超過 x 分鐘防火時效的門組或可開式窗戶 (其中 x 是依據負載標準的完整性、絕緣性或抗阻性，自測試開始至失敗之間的時間)，此時：

- assembly has been tested to EN 1634-1 with hinges of the same material;
- dimensions of the hinge shall not be changed other than the height dimension of the hinge which may be increased by a maximum of 25 %;
- mode of operation remains the same; and
- method of fixing remains the same;
- 組件已通過 EN 1634-1 測試且具備相同材料的鉸鏈；
- 鉸鏈除了高度尺寸以外 (最多可增加 25%)，其它尺寸不能更改；
- 操作模式保持不變；以及
- 固定方式保持不變；

provided that the specification of the proposed assembly is within all of the limits given in 14.2.2 to 14.2.9.

但是提議的組件的規格則須在第 14.2.2 節至第 14.2.9 節所有限制範圍內。

14.2.2 Frame

14.2.2 門樘

a) For timber/cellulosic frames

a)針對木質/纖維板門樘

The density and dimensions of the frame including the rebate depth shall be equal to or greater than those which were tested. A test on a timber frame is applicable to the use of a frame made from timber with a slower charring rate, but is not applicable to the use of a frame constructed from a timber with a faster charring rate, even if it has an equal or higher density.

門樘的密度和尺寸，包含槽口深度，應等於或大於測試門樘的密度、尺寸和深度。木質門樘的測試適用於炭化率較低的木製門樘，但不適用於炭化率較快的木製門樘，即使它的密度相同或更高。

NOTE It is generally assumed that a higher density timber chars more slowly than a lower density species but there are exceptions to this rule.

註：一般假設是較高密度木質的炭化速度比較低密度的木質慢，但這個規則仍有例外。

b) For metal frames

b)針對金屬門樘

The frame shall be of the same metal and specification, and all cross-sectional dimensions, including the rebate depth, may be varied by $\pm 25\%$ except that a test on a mild steel frame is applicable to the use of a hinge in a stainless steel frame, but not vice versa.

門樘應採用相同金屬和規格，且所有橫截面尺寸，包括槽口深度都可在 $\pm 25\%$ 之間變化，除非低碳鋼門樘的測試適用於該鉸鏈搭配不鏽鋼門樘，但非反之亦然。

Any change in thickness, except normal manufacturing tolerances, when forming part of an unfilled frame, shall be the subject of a field of extended application. A

test on an unfilled frame is applicable to the use of the hinge on a back-filled frame.

除了正常製造公差以外，當形成未填充門樑的一部分時，任何厚度的變化都應是擴大應用範圍的主題。未填充門樑的測試適用於在回填門樑上使用鉸鏈的情況。

14.2.3 Door leaf

14.2.3 門扇

14.2.3.1 Timber/cellulosic constructions

14.2.3.1 木質/纖維板結構

a) Leaf Height: If the pressure in the furnace was not greater than 12 Pa the hinge may only be used on leaves of height up to 2,1 m (hinge height 'a' of 2 m). If the pressure was 18 Pa there is no restriction on leaf height.

a)門扇高度：若爐內的壓力不大於 12 Pa，鉸鏈就只能用在高度最高 2.1 公尺的門扇上（2 公尺的鉸鏈高度 a）。若壓力是 18 Pa，就無門扇高度限制。

b) Leaf Thickness: A test with an associated construction with a thickness of 't' mm is suitable for use on leaves of similar construction with a thickness not less than 't' mm.

b)門扇厚度：厚度 t 公釐的相關結構進行的測試，適用於類似結構厚度不小於 t 公釐的門扇。

c) Mass: A test on a hinge with a simulated leaf or window of mass 'y' may only be used on opening elements with that mass or less.

c)質量：對質量為 y 的模擬門扇或窗戶上鉸鏈進行測試，只限用於其質量相等或更小的開放元件。

d) Construction:

d)結構：

1) All-cellulosic construction: A test on a hinge where the fixings penetrate an all-cellulosic associated construction is applicable to the use of the hinge in conjunction with leaves or frames with a slower charring rate but not with a faster charring rate, or with protected sub-facings, or mineral core.

1)全纖維板結構：對固定件穿透全纖維板結構的鉸鏈進行測試，適用於和門扇或門樑合併使用鉸鏈的情況，其中炭化率較慢而不會更快，或是有搭配保護

用的底面或是礦物核心。

2) Cellulosic door leaves with protective sub-facings⁵⁾: A test on a hinge where the fixings penetrate an associated construction with a protected core is applicable to the use of the hinge on leaves with more protection, i.e. thicker boards, or mineral board constructed leaves, but not on all-cellulosic leaves.

2)含有保護性底面的纖維板門扇⁵⁾：對固定件穿透具有保護核心相關結構的鉸鏈進行測試，適用於該鉸鏈裝在更具保護性的門扇上，亦即更厚的板子或是礦物板結構的門扇，但不是全纖維板門扇。

3) All mineral construction: A test on a hinge where the fixings penetrate into an all mineral board associated construction is applicable to the use of the hinge on constructions with at least equal physical properties, but is not for assemblies consisting of all-cellulosic or protected cellulosic construction.

3)全礦物結構：對固定件穿進一個全礦物板結構上的鉸鏈進行測試，適用於該鉸鏈裝在具有至少等於物理屬性的結構上，但不適用於包含全纖維板或有保護纖維板結構的組件。

14.2.3.2 Metal constructions

14.2.3.2 金屬結構

a) Leaf Height: If the pressure in the furnace was not greater than 12 Pa the hinge may only be used on leaves of height up to 2,1 m (hinge height 'a' of 2 m). If the pressure was 18 Pa then there is no restriction on leaf height.

a)門扇高度：若爐內的壓力不超過 12 Pa，鉸鏈就只能用在高度最高 2.1 公尺的門扇上（2 公尺的鉸鏈高度 a）。若壓力是 18 Pa，就無門扇高度限制。

b) Leaf Thickness: A test with an associated leaf construction with a thickness of 't' mm is suitable for use on leaves of approximately the same construction with a thickness not less than 't' mm.

b)門扇厚度：厚度 t 公釐的相關門扇結構進行的測試，適用於大約相同結構且厚度不低於 t 公釐的門扇。

5) This only applies to doors as no openable windows are constructed in this way.

5)這點只適用於例如無可開式窗戶並未以此方式作結構的門。

- c) Mass: A test on a hinge with a simulated leaf mass of 'y' may only be used on leaves with a mass equal to or less than 'y'.
- c)質量：對其模擬門扇質量為 y 的鉸鏈進行測試，只適用於其質量等於或小於 y 的門扇。
- d) Construction: A test on a hinge directly attached to the leaf edge by welds, screws, etc., will apply to hinges attached to leaves made from metal of equal or greater thickness and formed in an identical manner but not on a leaf constructed from thinner metal unless the fixing is into material other than the metal.
- d)結構：對直接以焊接、螺絲等方式連接到門扇邊緣的鉸鏈進行測試，將適用於該鉸鏈裝在以金屬製成或厚度相等或更大且以相同方式構成的門扇上，但不適用於採用較薄金屬結構的門扇，除非固定件是固定到非金屬的材料中。

14.2.4 Configuration of the assembly

14.2.4 組件的配置

A test is applicable to the use of hinges in both single leaf and double leaf configurations.

測試可適用於鉸鏈搭配同時具有單雙門扇的配置。

14.2.5 Door lipping/leaf edge construction

14.2.5 封邊/門扇邊緣結構

14.2.5.1 Timber door lippings

14.2.5.1 木質門封邊

Any edge lipping or part of the timber leaf edge with which the hinge is in contact or which it penetrates shall have a charring rate equal to or slower than that of the associated construction used in the test.

任何門的封邊或是木質門邊緣的部分，與鉸鏈接觸或是其穿透時炭化率須等於測試使用的相關結構或更慢。

14.2.5.2 Metal door leaves

14.2.5.2 金屬門扇

The method of constructing the leaf edge shall not differ from that used in the tested associated leaf construction.

門扇邊緣的結構施作方法不能和測試的相關結構不同。

14.2.6 Intumescent protection

14.2.6 膨脹保護

If the hinge was tested with an intumescent material running continuously past the edge of the hinge blade, then the assembly to which it is to be fixed shall contain a minimum of the same volume of an intumescent material with identical or better critical properties, located no further from the edge of the hinge blade than that which was tested.

若鉸鏈測試時其具有連續沿著鉸鏈葉片邊緣的膨脹材料，則它將被固定上的組件應包含最低等量的膨脹材料，且具備相同或更佳的關鍵性能，另離鉸鏈葉片邊緣的距離不能比被測試的品項遠。

In the case of identical or better critical properties with locally applied additional protection (see Figure 8) a test with a mono-ammonium phosphate type, low pressure seal is applicable to the use of a pressure forming seal (e.g. sodium silicate or graphite) but not vice versa.

在關鍵性能相同或更佳且搭配局部適用的額外保護 (參見圖 8) 的情況下，磷酸二氫銨型的低壓密封件進行的測試，適用於使用以壓力成型的密封件 (例如矽酸鈉或石墨)，但非反之亦然。

14.2.7 Hinge blade clearance

14.2.7 鉸鏈葉片空隙

In the case of timber/cellulosic doors, the edge of the hinge blade shall be no closer to the door stop face of the leaf in the assembly in which it is to be used, than that tested.

若是木質/纖維板的門，鉸鏈葉片邊緣不能比測試的品項更靠近所使用組件中門扇的門擋面。

14.2.8 Fixings

14.2.8 固定件

Any screw fixings through the hinge blades into the door edge and frame shall be of the same metal, length (if penetrating solid material for their full length) and have at least the same pull-out resistance as those tested. Any alternative method of fixing

shall have the same strength at high temperature as that tested.

固定穿過鉸鏈葉片進入門邊和門樁的螺絲，都必須使用相同金屬、長度 (若需要其全部長度穿過固體材料) 且具有至少和經測試的品項相同的拉出阻力。任何固定件的替代方法都應具備和測試的一樣在高溫時的相同強度。

NOTE Pull-out and strength resistance may be determined by fixing manufacturer's specification.

註：拉出和強度阻力可依據固定件製造商的規格加以判斷。

14.2.9 Gaps

14.2.9 間隙

The gaps for single swing door assemblies shall be between the following dimensions for the different door types:

單擺門組件的間隙，必須介於以下針對不同門種類的尺寸之間。

The leaf to frame gap:

門扇至門樁的間隙：

- 1) Timber/cellulosic 0,5 to 4 mm;
 - 2) Metal - 0,5 to 5 mm;
- and the stop to leaf gap:
- 3) Timber/cellulosic - 0 to 4 mm;
 - 4) Metal - 0 to 4,5 mm.

1)木質/纖維板 0.5 至 4 公釐；

2)金屬 - 0.5 至 5 公釐；

及門擋至門扇間隙：

3)木質/纖維板 - 0 至 4 公釐；

4)金屬 - 0 至 4.5 公釐。

14.3 Securing devices

14.3 安全裝置

14.3.1 General

14.3.1 一般

Several factors have been identified which influence the contribution to the fire performance of a single leaf door or window assembly as a result of fitting a securing device and which will affect the ability of the device to maintain closure of the element.

因裝上安全裝置而影響單門扇或窗戶組件的防火性能的若干因素已確認，且這些因素會影響裝置維持元件閉合的能力。

The tested securing device is suitable for use in single leaf doorsets or openable windows requiring a fire resistance with respect to EN 1634-1 of not more than x minutes (where x is the time between the commencement of the test and failure under either integrity, insulation or the resistance to loading criteria) when the assembly has been tested with securing devices of a similar type and design in an identical mode and operation provided that the specification of the proposed doorset is within all of the limits given below.

經測試的安全裝置適用於依據 EN 1634-1 具備不超過 x 分鐘防火時效的單門扇組或可開式窗戶上 (其中 x 是根據負載標準的完整性、絕緣性或抗阻性，自開始測試至失敗之間的時間)，此時組件已搭配類似種類和相同模式設計和操作方式的安全裝置經過測試，但是提議的門組規格則介於下文所有限制的範圍內。

14.3.2 Frames

14.3.2 門樘

a) For timber/cellulosic frames:

a) 針對木質/纖維板門樘：

The density and dimensions of the frame including the rebate depth shall be equal to or greater than those tested. A test on a timber/cellulosic frame is applicable to the use of a frame constructed from a timber with an equal or slower charring rate, but is not applicable to the use of a frame constructed from a timber with a faster charring rate, even if it has an equal or higher density.

門樘的密度和尺寸，包含槽口深度，都必須等於或大於測試門樘的密度、尺寸和深度。木質/纖維板門樘的測試適用於炭化率相等或較慢的木質結構門樘，但是不適用於炭化率較快的木製門樘，即使其密度相等或更高。

Evaluation of a securing device in a double leaf application is applicable to the use of the securing device in solid timber frames of an equal or higher density of equal or slower charring rate to the leaf framing. If other leaf constructions are used a

field of extended application will be required.

安全裝置應用在雙門扇的評估，適用於該安全裝置搭配密度和門扇框相等或更高、炭化率相等或較慢的固體木質門樘。若使用其它門扇結構，將需要擴大應用範圍。

NOTE It is generally assumed that a higher density timber chars more slowly than a low density species but there are exceptions to this rule.

註：一般假設是較高密度木質的炭化速度比低密度的木質慢，但這個規則仍有例外。

b) For metal frames:

b)針對金屬門樘：

The frame shall be of the same metal specification and all cross-sectional dimensions, including the rebate depth, may be varied by $\pm 25\%$.

門樘必須是相同金屬規格，且所有橫截面尺寸，包括槽口深度都可在 $\pm 25\%$ 之間變化。

A test on a mild steel frame is applicable to the use of a securing device on a stainless steel frame, but not vice versa. The result of the test will apply equally to back-filled or unfilled frames.

低碳鋼門樘的測試適用於該安全裝置裝在不鏽鋼門樘上，但非反之亦然。測試結果將同樣適用於回填或未填充的門樘。

14.3.3 Door leaves and openable windows

14.3.3 門扇及可開式窗戶

14.3.3.1 Timber/cellulosic door leaf or openable window

14.3.3.1 木質/纖維板門扇或可開式窗戶

a) Leaf Height: The rules will vary for the components as given below:

a)門扇高度：規則將視以下提供的組件而有所不同：

1) Latchbolt/deadbolt: As the height of the latchbolt/deadbolt will not vary on a tall or short door leaf there is no restriction on the height of the leaf to be used with these items, provided it is not to be fitted more than 1,5 m above floor level.

- 1) 鎖舌/門栓：由於高或矮的門扇上的鎖舌/門栓高度不會不同，因此搭配這些品項使用的門扇不限制高度，但是它不能設在地板上超過 1.5 公尺的位置。
- 2) Door edge bolt: If the pressure in the furnace was not greater than 12 Pa the bolt may only be used on opening elements of height up to 2,1 m. If the pressure was 18 Pa then there is no restriction on leaf height.
- 2) 門的邊緣螺栓：若爐內的壓力不大於 12 Pa，則螺栓只限用於高度最高 2.1 公尺的開放元件。若壓力是 18 Pa，就無門扇高度限制。
- b) Leaf Thickness: A test on a latchbolt/deadbolt or edge bolt in conjunction with an associated leaf construction thickness of 't' mm is suitable for use on leaves of approximately the same construction as long as the thickness is not less than 't' mm.
- b) 門扇厚度：鎖舌/門栓或邊緣螺栓搭配門扇結構厚度 t 公釐的測試，適用於大約相同結構的門扇，只要其厚度不小於 t 公釐。
- c) Construction: For mortice-in deadlocks, latches and edge bolts the field of direct application is as given in the clauses 1) to 3) below. For face fixed items the exact nature of the construction is not important except for the ability of the construction to retain fixings which shall be the subject of a field of extended application.
- c) 結構：針對榫接門栓、鎖舌和邊緣螺栓，直接應用範圍見於下文第 1) 至 3) 條件中。針對表面固定的品項，其結構的實際性質並不重要，除非是有關保持固定件結構的能力，這點應作為擴大應用範圍的主題。
- 1) All-cellulosic door leaf or window: A test on a securing device where the item is housed in an all-cellulosic associated construction is applicable to the use of the device in conjunction with a construction with a slower charring rate, but not with a faster charring rate, or for use in leaves or openable windows where the device is housed in constructions with either protective sub-facings or mineral boards.
- 1) 全纖維板門扇或窗戶：裝設於全纖維板相關結構中的安全裝置測試，適用於該裝置搭配炭化率較慢的結構上，但不能搭配炭化率較快的，或是用於該裝置裝設於有保護性底面或礦物板的結構中的門扇或可開式窗戶。
- 2) Cellulosic constructions with protective sub-facings: A test on a securing device where the item is housed in a protected core associated construction is

applicable to the use of the device on elements with more protection, i.e. thicker boards, or mineral board construction, but not on leaves of all-cellulosic construction.

2) 具備保護性底面的纖維板結構：裝設於保護核心相關結構中的安全裝置的測試，適用於該裝置裝在有更強保護的成分上，亦即更厚的板子或是礦物板結構，但不適用該裝置設在全纖維板結構的門扇上。

3) All mineral construction: A test on a securing device housed in an all mineral board associated construction is applicable to the use of the device on constructions with equal or higher density and strength properties and equal or better thermal properties, but not for use on leaves of all-cellulosic or protected cellulosic construction.

3) 全礦物結構：裝設在全礦物板相關結構內的安全裝置進行的測試，適用於該裝置裝在具備相同或更高密度及強度屬性的結構上，且其熱屬性也相等或更高，但不適用在全纖維板或保護性纖維板結構的門扇上。

14.3.3.2 Metal doors and openable windows

14.3.3.2 金屬門及可開式窗戶

a) Leaf Height: If the pressure in the furnace was not greater than 12 Pa the securing device may only be used on leaves of height up to 2,1 m (securing device height 'a' of 2 m). If the pressure was 18 Pa, then there is no restriction on height.

a) 門扇高度：若爐內壓力不超過 12 Pa，安全裝置只能用在最高高度 2.1 公尺的門扇上（2 公尺的安全裝置高度 a）。若壓力是 18 Pa，則無高度限制。

b) Leaf Thickness: A test with an associated leaf construction with a thickness of 't' mm is suitable for use on leaves of approximately the same construction as long as the thickness is not less than 't' mm.

b) 門扇厚度：厚度 t 公釐的相關門扇結構進行的測試，適用於大約相同結構的門扇，只要厚度不低於 t 公釐。

c) Construction: A test on a securing device housed in an uninsulated metal associated construction is applicable to the use of the device in an uninsulated construction that is thicker, or in an insulating construction. A test in an insulated metal associated construction is applicable only to insulated constructions with similar or better thermal properties.

c)結構：裝設在非絕緣金屬相關結構中的安全裝置進行的測試，適用於該裝置裝在厚度較厚的非絕緣結構中，或是裝在絕緣結構中。絕緣金屬相關結構的測試，只適用於具備類似或更佳熱屬性的絕緣結構。

14.3.4 Configuration of the assembly

14.3.4 組件的配置

A test on a securing device securing a section of associated door leaf or window to another leaf or window assembly is applicable to the use of securing devices in single leaf doors or openable windows for securing the leaf to the frame. A test on a device securing a leaf or window to a frame is not applicable for securing the leaf to another leaf or window.

對於將一部分相關門扇或窗戶固定到另一門扇或窗戶組件的安全裝置的測試，適用於該裝置裝在單門扇或可開式窗戶以便將門扇固定到門樑。對於將門扇或窗戶固定到門樑的裝置的測試，不適用於將門扇固定到另一門扇或窗戶的裝置。

14.3.5 Door lipping/leaf or window edge construction

14.3.5 封邊/門扇或窗戶邊緣結構

14.3.5.1 Timber lippings

14.3.5.1 木質封邊

Any edge lipping or part of the timber door or window edge with which the securing device or its forend plate is in contact or which it penetrates, shall have a charring rate equal to or slower than that of the associated construction used in the test.

任何封邊或木質門或窗戶邊緣的某部分（安全裝置或其前板透過它接觸或穿透）都應具備與測試所使用的相關結構相等或更慢的炭化率。

14.3.5.2 Metal door leaves or openable windows

14.3.5.2 金屬門扇或可開式窗戶

The method of constructing the edge shall not be different from that used in the associated construction.

建構邊緣的方法不能和相關結構所使用的不同。

14.3.6 Intumescent protection

14.3.6 膨脹保護

14.3.6.1 Additional intumescent protection to door or window to frame gap

14.3.6.1 對門或窗戶到門樑間隙的額外膨脹保護

If the securing device was tested with an intumescent material running continuously past the item, then the assembly to which it is to be fixed shall contain a minimum of the same cross sectional area of an intumescent material with identical critical properties, located no further from the edge of the device than that which was tested.

若安全裝置測試時具有以連續沿著該品項的膨脹材料，則它將被固定上的組件應包含最小的膨脹材料的相同橫截面積，且具備相同關鍵性能，另離裝置邊緣的距離不能比被測試的品項遠。

In the case of locally applied additional protection, a test with a mono-ammonium phosphate type, low pressure seal is applicable to the use of a pressure forming seal, but not vice versa.

若局部適用的額外保護情況下，磷酸二氫銨型及低壓密封件進行的測試，適用於使用以壓力成型的密封件，但非反之亦然。

14.3.6.2 Direct protection to the device

14.3.6.2 直接保護裝置

Any additional intumescent material such as pastes, plugs or coatings, etc., incorporated in the tested securing device in timber/cellulosic assemblies shall also be incorporated in the assembly to be used.

任何併入測試裝在木質/纖維板組件內的安全裝置的額外的膨脹材料，例如漿糊、塞子或塗層等等，也都應併入欲使用的組件中。

14.3.7 Fixings

14.3.7 固定件

Any screws fixing the device to the door or window edge and/or frame shall be of the same metal, length (if penetrating solid material for their full length) and have at least the same pull-out resistance as those tested. Any alternative method of fixing shall have the same strength at high temperature as that tested.

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將裝置固定到門或窗戶邊緣及/或門樑的螺絲，都必須使用相同金屬、長度（若需要其全部長度穿過固體材料）且具有至少和經測試的品項相同的拉出阻力。任何固定件的替代方法都應具備和測試的一樣在高溫時的相同強度。

NOTE Pull-out and strength resistance may be determined by fixing manufacturer's specification.

註：拉出和強度阻力可依據固定件製造商的規格加以判斷。

14.3.8 Position of locking plate and forend

14.3.8 鎖固板和前板的位置

The edge of the locking plate or the forend shall not be closer to the face of the leaf than that which was tested.

鎖固板或前板的邊緣不能比測試的更靠近門扇面。

14.3.9 Gap

14.3.9 間隙

The gaps between any leaf or window edge, forend plate and the adjacent frame/locking plate shall not exceed 4 mm or the gap that existed between them in this test, whichever is the greater, in the case of timber/cellulosic or insulated metal door leaves, or more than 5,5 mm in the case of uninsulated metal door leaves and/or frames.

任何門扇或窗戶、前板和相鄰門樑/鎖固板邊緣之間間隙，都不得超過 4 公釐，或若是木質/纖維板或絕緣金屬門扇，則不得超過此測試中這些位置之間間隙（取數據較大者），或若是非絕緣金屬門扇及/或門樑，則不得超過 5.5 公釐。

14.4 Surface mounted overhead controlled door closing devices

14.4 表面安裝置頂控制的門關閉裝置

14.4.1 Maintenance of closing force for unlatched door assemblies

14.4.1 針對無門門組件關閉力道的維持

14.4.1.1 Closing devices without brackets and slide arms

14.4.1.1 不具備托架及滑臂的關閉裝置

Provided that the device has satisfied the maintenance of closing force criterion (see 11.3) for the required period given below, then the closing device is applicable for use on any doorset without limitation on the duration of the fire resistance period (14.4.1.1.a and 14.4.1.1.b).

前提是在該裝置已符合下文所規定的期間內的關閉力道維持標準 (參見 11.3)，則此關閉裝置即適用於任何門組且不限制防火時效的持續時間 (14.4.1.1.a 和 14.4.1.1.b)

a) Timber/cellulosic door assemblies:

a)木質/纖維板門組件：

A closing device shall have an unrestricted field of direct application in respect of the various forms of construction, if it maintained the closing force for 12 min when used in a timber/cellulosic door assembly, with exposed intumescent edge seals or 25 min when fitted with concealed intumescent edge seals (see C.3).

在各種形式的結構方面，如果關閉裝置用於木質/纖維板組件且配有暴露的膨脹式邊緣密封件時，維持了關閉力道 12 分鐘，或是當配有隱藏式膨脹式邊緣密封件時，維持關閉力道達 25 分鐘 (參見 C.3)，該關閉裝置就應有一個未限制的直接應用範圍。

b) Metal door assemblies:

b)金屬門組件：

1) Steel door assemblies:

1)鋼製門組件：

A closing device shall have an unrestricted field of direct application with respect to various forms of construction if it maintained the closing force for 15 minutes (see C.3).

在各種型式的結構方面，若關閉裝置維持了關閉力道達 15 分鐘，就應有一個未受限的直接應用範圍 (參見 C.3)。

2) Aluminium door assemblies:

2)鋁製門組件：

The closing device shall have a field of application limited to the period of the maintenance of the closing force.

關閉裝置應有一個應用範圍，其限制於關閉力道的維持期間。

c) Timber/cellulosic leaf/metal framed assemblies:

c)木質/纖維板門扇/金屬框組件：

The suitability of the closing device for such applications shall be the subject of a field of extended application.

此類應用的關閉裝置的合適性應作為擴大應用範圍的主題。

14.4.1.2 Closing devices with slide arms and brackets

14.4.1.2 具備滑臂及托架的關閉裝置

The closing device shall be required to maintain the closing force for at least the times given in 14.4.1.1a) and 14.4.1.1b) above, and maintain integrity for the test duration. Where the bracket or slide arm has been evaluated in a timber/cellulosic frame the closing device is applicable for use in frames where the charring rate is slower than that of the timber used in the associated frame section, but not vice versa, as well as in metal frames.

關閉裝置應該要能維持關閉力道達到上文 14.4.1.1a)和 14.4.1.1b)規定的時間，且在測試持續時間內均維持其完整性。在托架或滑臂已在木質/纖維板門槿中接受評估的情況下，該關閉裝置即適用於炭化率比用於相關門槿部分的木質更慢的門槿中（但非反之亦然），以及用在金屬門槿中。

Any intumescent seal used either integrally or additionally to protect the bracket or slide mechanism shall be retained.

任何不論是整體或額外用來保護托架或滑臂機構的膨脹式密封件都應保留。

The evidence is only applicable for the fixings used in the test and any proposed changes shall be the subject of a field of extended application.

此證據僅適用於測試所用的固定件，且任何提議的更改都應作為擴大應用範圍的主題。

14.4.2 Power size

14.4.2 功率大小

A test on any device at a particular power size is applicable for use of the device at the power rating tested or above, minimum power size 3 as defined in Table 2 of EN 1154:1996.

以特定功率大小對任何裝置進行的測試，適用於以額定功率或更高功率測試的裝置，最低功率大小為 3，如同 EN 1154:1996 表 2 所定義。

14.4.3 Closer cover

14.4.3 關門器蓋子

If an optional closer cover is fitted to the tested closing device the result is not applicable for a closer without a cover unless the cover has a melting point of less than 400 °C.

如果測試的關閉裝置上安裝了可選用的關門器蓋子，則其結果不適用於沒有蓋子的關門器，除非蓋子的熔點低於 400°C。

14.5 Non edge-mounted items of building hardware

14.5 非邊緣安裝的建築五金

14.5.1 Duration of performance

14.5.1 性能持續

The tested item is applicable for use in doorsets requiring a fire resistance with respect to EN 1634-1 of no more than x min (where x is the time between the commencement of the test and the earlier of either integrity or, where required, insulation failure times), provided that the specification of the assembly to which it is to be attached is within the limits given below.

經測試的品項適用於依據 EN 1634-1 具備不超過 x 分鐘防火時效的門組 (x 是自測試開始至提早使其完整性或必要的絕緣失敗時的時間)，前提是它將被裝上的組件規格是介於下文所規定的範圍內。

14.5.2 Door leaf or window construction

14.5.2 門扇或窗戶結構

14.5.2.1 Timber/cellulosic elements door assemblies

14.5.2.1 木質/纖維板成分的門組件

Tests on items fitted onto or into an all-cellulosic associated construction are

applicable for use on elements incorporating non-combustible sub-facings and mineral board cores. A test in conjunction with a protected cellulosic associated construction is applicable for use of the item on mineral cored door assemblies or openable windows but not leaves of all-cellulosic constructions.

對安裝在全纖維板相關結構上或裡面的品項進行的測試，適用於結合不可燃底面和礦物板核心的元件。結合受保護的纖維板相關結構的測試，適用於該品項裝在礦物核心門組件或可開式窗戶上，但不包括全纖維板結構的門扇。

A test on a softwood associated construction is applicable for use on associated constructions of slower charring rate timbers but a test using a hardwood associated construction is not applicable for use with a softwood associated construction.

軟木相關結構的測試，適用於炭化率較慢的相關結構上，但使用硬木相關結構的測試，則不適用於軟木相關結構上。

14.5.2.2 Metal door assemblies

14.5.2.2 金屬門組件

A test on a non-edge mounted item in an insulated metal associated construction is not applicable for use in a non-insulated door or window but a test on a non-insulated associated construction is applicable for use in insulating metal door assemblies.

非邊緣安裝的品項在絕緣金屬相關結構內的測試，不適用於非絕緣門或窗戶上，但非絕緣相關結構的測試，則適用於絕緣金屬門組件上。

14.5.3 Leaf thickness

14.5.3 門扇厚度

Results apply to any construction of equal or greater thickness than that tested.

結果適用於等於或大於測試厚度的任何結構。

14.5.4 Fixings

14.5.4 固定件

Any screw fixings into the door or window shall be of the same metal, length (if penetrating solid material for their full length) and, if strength is important, have at least the same pull-out resistance as those tested. Any alternative method of fixing shall have the same strength at high temperature as that tested.

固定門或窗戶的螺絲，都必須使用相同金屬、長度（若需要其全部長度穿過固體材料），且如果強度很重要，則須具備至少和經測試的品項相同的拉出阻力。任何固定件的替代方法都應具備和測試的一樣在高溫時的相同強度。

NOTE Pull-out and strength resistance may be determined by fixing manufacturer's specification.

註：拉出和強度阻力可依據固定件製造商的規格加以判斷。

14.5.5 Intumescent protection

14.5.5 膨脹保護

If the tested specimen contained any intumescent protection between the specimen and the associated construction, then the door or window assemblies to which the item is to be attached shall contain similar intumescent materials in the same location to provide at least the level of thermal protection which existed in the tested specimen.

若測試樣品在樣品和相關結構之間具備任何膨脹保護，則該項目將被安裝上的門或窗組件就須在相同位置包含類似的膨脹材料，以提供至少和測試樣品相同的熱保護等級。

14.5.6 Removal of constructional material

14.5.6 結構性材料的移除

In the case of timber/cellulosic assemblies the total volume of material removed to create a mortise for an item of building hardware shall not exceed that which was removed in this test. If more material has been removed the evidence may still be applicable if additional protection is applied, but this shall be the subject of an extended field of application.

就木質/纖維板組件方面，被移除以建立某建築五金榫眼的總材料量，不得超過測試中所移除的量。若移除了更多材料，只要有提供額外的保護，則該證據仍可適用，但這點應作為擴大應用範圍的主題。

14.5.7 Size of air transfer grilles

14.5.7 通風格柵尺寸

The size of an air transfer grille may be increased beyond that tested in this European

Standard but shall not exceed the size for which a glazed opening in the door construction is approved, nor be fitted closer than 125 mm to any edge of the leaf or glazed opening.

通風格柵的尺寸可增加超過經此歐洲標準測試的大小，但不能超過已允許門內結構裝有玻璃開口的尺寸，也不能安裝得太近而離門扇或玻璃開口任何邊緣 125 公釐以內。

14.5.8 Ignition of closer damping fluid

14.5.8 關門器阻尼機油的引燃

The tested device may be used when attached to the unexposed face of any non-insulated metal door assembly, but if the device is to be fitted on a door which incorporates significant areas of noninsulating glass immediately below the closing device the evidence shall be the subject of an extended application analysis.

經測試的裝置可於安裝到任何非絕緣金屬門組件的未暴露面時使用，但若該裝置將被安裝在結合了非絕緣玻璃並在關閉裝置正下方重要區域的門上，則該證據應作為擴大應用分析的主題。

The mass of the closing device may be increased beyond that tested, assuming all other aspects of the closing device remain the same. The door construction may be of a type that provides reduced unexposed face surface temperatures. If the surface temperature of a door remains below that which caused ignition, even after a longer duration, then the closer device may be fixed to this leaf.

關閉裝置的質量可增加超過經測試的質量，只要關閉裝置的所有其它方面都維持相同。門的結構可採用能降低未暴露表面溫度的種類。若即使經過長時間後，門的表面溫度維持低於引燃的溫度，則關閉裝置就可被固定到此門扇上。