



工程指示 / 要求簡箋(E.I.)

工程指示編號：EI / 0859 / 19

修改版次：A

工程編號：J - 837

工程名稱：觀塘裕民坊

工程項目：Glass Cladding 玻璃收貨色差問題

收件人：生統 / 王良

發件人：Eric Liu

日期：07/08/2019

要求提供 /  確認 事項：

- |                                    |                                     |                               |
|------------------------------------|-------------------------------------|-------------------------------|
| <input type="checkbox"/> 初步鋁料 B.M. | <input type="checkbox"/> 加工拆圖，然後生產  | <input type="checkbox"/> 尺寸表  |
| <input type="checkbox"/> 正式鋁料 B.M. | <input type="checkbox"/> 技術上資料 / 指示 | <input type="checkbox"/> 報價   |
| <input type="checkbox"/> 配件 B.M.   | <input type="checkbox"/> 樣辦或貨品說明書   | <input type="checkbox"/> 分判合約 |
| <input type="checkbox"/> 其他：_____  |                                     |                               |

內容：

回覆質量檢驗報告: QIR-837-19-069，

按合約內容及玻璃標準(ASTM-C1376)， Glass Cladding 玻璃在檢驗後，色差在標準範圍內請安排收貨。

謝謝！

請在 2019 / 08 / 09 完成上列要求。

附：2 頁報告，1 頁 ASTM C1736，1 頁合約

以上項目為：

- 原合約工程包                       原合約工程加 / 減賬                       新工程報價

原因：-\_\_\_\_\_

分發東莞各部門：

- ( ) 生產技術總監  連附件    ( / ) 技術部  連附件    ( 永林 )    ( ) 生產部  連附件    ( ) 機械設計部  連附件  
 ( ) 採購部  連附件    ( / ) 生產統籌部  連附件    ( 梅 )  
 ( / ) 質檢部  連附件    ( ) 會計部  連附件    ( ) 報關組  連附件    ( ) 其他 楊榮輝  連附件

分發香港各部門：

- ( ) 行政部  連附件    ( ) 會計部  連附件    ( ) 統籌部  連附件    ( ) 工程部地盤科文  連附件    炳哥 / 民 / 豪  
 ( ) 採購部  連附件    ( ) QS 部  連附件    ( ) 維修部  連附件    ( ) 其他 \_\_\_\_\_  連附件

傳遞編號：

HK 1776 / 19

發件人簽署：

項目經理簽署：

### 质量检验报告

### Quality Inspection Report

版次: 0 表格 MD-08

REPORT NO. 质量检验报告编号: QIR-837-19-069

PROJECT NO. 工程编号: J-837 PROJECT NAME 工程名称: 观塘裕民坊

DRAWING NO. 物料编号/图号: \_\_\_\_\_ INSPECTED BY 质检员: 李良平

N.C.REP.NO. 不合格项目报告编号: \_\_\_\_\_ REPORT DATE 报告日期: 2019.8.6

LOT QTY. 总数量: 821 件 APPROVAL BY 核准人: 王良

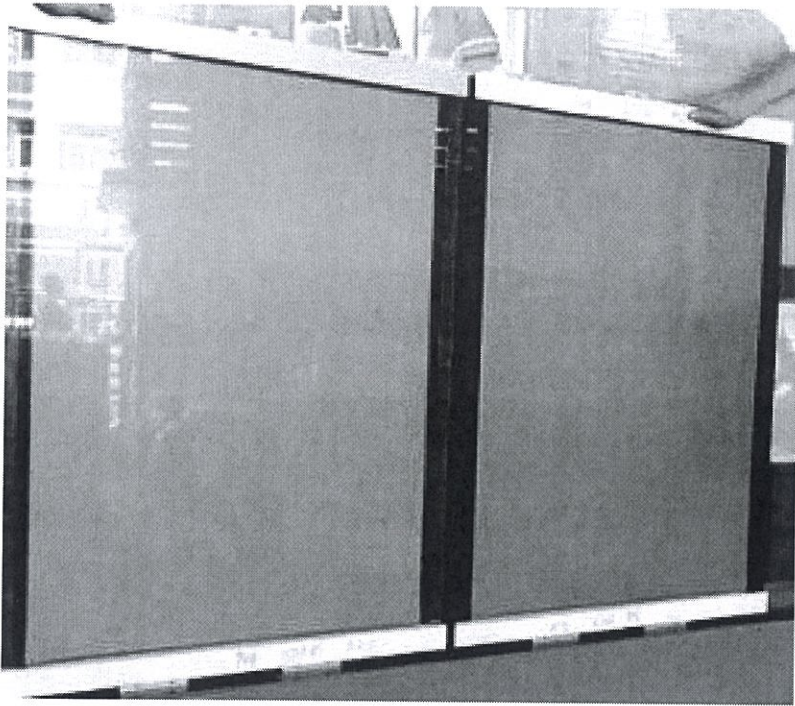
SAMPLING 抽样标准: 全检 APPROVAL DATE 核准日期: 2019.8.6

CONCLUSION 结果:  UNACCEPTABLE 不接受  ACCEPTED ON DEVIATION 降级收货

处理要求: 请胡哥、Jason 决策该如何处理。

检验工序编号: QRA-837-19-220 QRA-837-19-232 QRA-837-19-238	抽查		次品		次品比率
E I 编号: EI/0462/19 EI/0463/19 EI/0464/19 EI/0465/19	序号	数量	严重	轻微	
项目名称: Glass Cladding		500	500		100%
次品详细描述及图示: EI/0462/19 來貨 229 件      EI/0463/19 來貨 242 件 EI/0464/19 來貨 133 件      EI/0465/19 來貨 217 件					
1、以上玻璃, 與 EI/10051/19 樣板層及玻璃樣辦相對比, 目測均存在明顯色差。					
2、2019.07.30 所提供于廠 '簽名樣辦' 與大貨對比:  目測有明显色差;  但用色差仪检测, 色差值實測为 $\Delta E: 1.0 \sim 2.0$ 之間。 $< 4.5$					
3、依据指示 EI/0866/19, 依照 ASTM C-1376 标准, 色差允许接受值 $\Delta E^*_{ab}$ of 4.5, 则所有玻璃均可收货采用。但目测观察, 色差状态则为不可接受。					
导致质量事件原因 (由发生质量事件原因部门填写)					
跟进结果:					
<input type="checkbox"/> 另有附页说明 <input type="checkbox"/> 图纸 <input type="checkbox"/> 相片					

分发:  叶先生     统筹部     采购部 (罗小姐)     技术部 (    )  
 质量指导     生产部     项目经理 (胡哥、Jason)     其它 (    )  
 供应商-公司名称:



**TABLE 3 Quality Specifications for Cut Size Coated Spandrel Glass (Kind CS)<sup>A</sup>**

Blemish <sup>B,C</sup>	Range Number 1, in. (mm) <sup>D</sup>	Range Number 2, in. (mm) <sup>D</sup>
Pinhole	1/8(3.2) max	1/2(4.0) max
Spot	1/8(3.2) max	1/2(4.0) max
Coating scratch	3 (75) max length	6 (150) max length
Mark/contaminant	3 (75) max length	6 (150) max length
Coating rub	none allowed	length plus width not to exceed 3/4(19)
Crazing	none allowed	none allowed
Corrosion	none allowed	none allowed

<sup>A</sup>These specifications apply to cut size glass only. For specifications of stock size glass contact the manufacturer.

<sup>B</sup>The glass shall be inspected, in reflection, at a distance equal to or greater than 15 ft (4.6 m) at a viewing angle of 90° to the specimen under uniform lighting conditions. If a blemish is readily apparent under these viewing conditions, the above criteria applies.

<sup>C</sup>No more than two readily apparent blemishes are allowed in a 3 in. (75-mm) diameter circle and no more than five readily apparent blemishes are allowed in a 12 in. (300-mm) diameter circle.

<sup>D</sup>The specifications separates glass by the distance that it will be viewed when installed. Range No. 1 is for all glass within a viewing distance of 15 ft (4.6 m) or less, and Range No. 2 is all glass viewed from a distance greater than 15 ft (4.6 m).

size mock-ups under typical site conditions and surrounding landscape is highly recommended before construction.

6.4.1 The scientific nature of controlling gas flow, electrical charges, and coating layer densities require production tolerances for light transmittance, reflectance, and color of coated glass products. Glass within allowable production tolerances may yield differences in reflected color or intensity of light

transmittance or reflectance or both. Perceivable differences are not immediate cause for rejection.

6.4.2 Glass should be viewed as installed and from the exterior of the building for uniformity comparison. Coating nonuniformity may occur from lite to lite in a building. It may also occur within a lite in the form of edge-to-edge gradation, banding, mottling, or picture framing.

6.4.3 Nonuniformity is defined using a  $\Delta E^*ab$  as defined in Test Method D 2244 for CIE 1976 L\*A\*B\*, Illuminant D65, and 10° Observer. **Using a reference target established by the manufacturer, or the average color readings as defined below, no color readings should exceed a  $\Delta E^*ab$  of 4.5.** To calculate  $\Delta E^*ab$ , the following procedure should be used: Using a mobile/handheld spectrophotometer, color readings will be taken and documented from a predetermined number of units that have been installed on a building. A minimum of ten readings should be taken and should include any glass that is in question. The readings taken should then be averaged and that average will be used as a target for calculating the  $\Delta E^*ab$ . Using the average color reading as a target, no color readings should exceed a  $\Delta E^*ab$  of 4.5.

NOTE 4—Design professionals and building owners should be aware that certain coated glass products will yield color differences when used in adjacent vision and spandrel area conditions and when used in laminated glass constructions or on different glass thickness.

NOTE 5—Refer to manufacturer for blemishes not listed in this specification.

## 7. Keywords

7.1 coated glass; flat glass; glazing; nonuniformity; overhead glass; pyrolytic coating; spandrel glass; sputtered coatings; vacuum deposition coating; vision glass

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N.K.I.L. 6514 Kwun Tong Town Centre (Development Areas 2 & 3)  
 Specification for the Tower Curtain Wall, Alum. Window, Alum. Cladding and  
 Balustrade Nominated Sub-Contract

合約

	Cycle)
- ASTM C743	Standard Test Method for Continuity of Porcelain Enamel
- ASTM C774	Standard Test Method for Yield Strength of Enameling Steels After Straining and Firing
- ASTM C792	Effects of Heat Aging on Weight Loss, Cracking, and Chalking of Elastomeric Sealant
- ASTM C794	Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants
- ASTM C864	Specifications for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers
- ASTM C920	Standard Specification for Elastomeric Joint Sealants
- ASTM C1036	Standard Specification for Heat-Treated Flat Glass – Kind HS, Kind FT Coated and Uncoated Glass
- ASTM C1087	Test Method for Determining Compatibility of Liquid-Applied Sealants with Accessories Used in Structural Glazing Systems
- ASTM C1172	Standard Specification for Laminated Architectural Glass
- ASTM C1184	Standard Specification for Structural Silicone Sealants
- ASTM C1199	Standard Test Method for Measuring the Steady-State Thermal Transmittance of Fenestration Systems Using Hot Box Methods
- ASTM C1253	Standard Test Method for Determining the Outgassing Potential of Sealant Backing
- ASTM C1363	Standard Test Method for Thermal Performance of Building Materials and Envelope Assemblies by means of a Hot Box Apparatus
↳ - ASTM C1376	Standard Specification for Pyrolytic and Vacuum Deposition Coatings on Flat Glass
- ASTM C1401	Standard Guide for Structural Sealant Glazing
- ASTM D412	Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension
- ASTM D790	Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
- ASTM D2200	Pictorial Surface Preparation Standard for Painting Steel Surface.
- ASTM D2244	Standard Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates
- ASTM D2247	Standard Practice for Testing Water Resistance Coating in 100% Relative Humidity
- ASTM D2583	Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impresser
- ASTM D2584	Test Method for Ignition Loss of Cured Reinforced Resins
- ASTM D2563	Classifying Visual Defects in Glass Reinforced Plastic Laminate Parts
- ASTM D2794	Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact)
- ASTM D3039/3039M	Standard Test Method for Tensile Properties of Polymer Matrix Composite Materials
- ASTM D3363	Standard Test Method for Film Hardness by Pencil Test
- ASTM D3359	Standard Test Methods for Measuring Adhesion by Tape Test
- ASTM D3330/D3330M	Standard Test Method for Peel Adhesion of Pressure-Sensitive Tape
- ASTM D3363	Standard Test Method for Film Hardness by Pencil Test
- ASTM E84	Standard Test Method for Surface Burning Characteristics of Building Materials
- ASTM E119	Standard test Methods for Fire Tests of Building Construction and Materials
- ASTM E136	Standard Test Method for Behaviour of Materials in a Vertical Tube Furnace at 750° C
- ASTM E283	Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen
- ASTM E330 E330M	Structural Performances of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference
- ASTM E331	Standard Test Method for Water Penetration of Exterior