



Hong Kong Curtain Wall Testing Centre Ltd.

香港幕牆檢測中心有限公司

ADDRESS : Unit 8, 16/F, Grandtech Centre, No. 8 On Ping Street, Shatin,
地址 New Territories, Hong Kong
香港新界沙田安平街8號偉達中心16樓8室

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CLIENTELE : Public
服務對象 公眾



Scope of Accreditation
Registration No. HOKLAS 109
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ADDRESS

地址

Main Laboratory : Unit 8, 16/F, Grandtech Centre, No.8 On Ping Street, Shatin,
New Territories, Hong Kong
香港新界沙田安平街 8 號偉達中心 16 樓 8 室

**Hong Kong Branch
Laboratory (Fanling)** : DD77, Lot 328, Ping Yuen Road, Ping Che, Fanling, New Territories, Hong Kong
香港新界粉嶺坪輦坪原路 DD77, 328 地段

Shenzhen Test Location : 深圳市龍崗區寶龍街道同德社區嚇坑大地工業區 13 號晶南星廠 C 棟 101

ACCREDITED TEST : Construction Materials 建築材料

CATEGORY

認可測試類別

Hong Kong Curtain Wall Testing Centre Ltd.

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Construction Materials 建築材料		
ITEM TESTED OR MEASURED 測試或量度項目	SPECIFIC TEST OR PROPERTY MEASURED 特定測試或量度的特性	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED 規範、標準方法或應用技術
Welds (non-destructive)	Liquid penetrant test (Colour contrast method)	BS 6443: 1984 + Amd. 4844 BS EN 571-1: 1997 BS EN ISO 3452-1: 2013 in conjunction with the following specification(s): BS EN ISO 5817: 2014 Table 1 Buildings Department Code of Practice for the Structural Use of Steel (2005) Table 14.3b Buildings Department Code of Practice for the Structural Use of Steel (2011) Table 14.3b
	Magnetic particle test (magnetic flow method color contrast technique using permanent magnets and A.C. yokes)	BS 6072: 1981 (1986) BS EN 1290: 1998 BS EN ISO 9934-1: 2001 + A1: 2003 BS EN ISO 9934-1: 2016 BS EN ISO 17638: 2009 BS EN ISO 17638: 2016 ISO 9934-1: 2000 (2003) in conjunction with the following specification(s): BS EN ISO 5817: 2014 Table 1 Buildings Department Code of Practice for the Structural Use of Steel (2005) Table 14.3b Buildings Department Code of Practice for the Structural Use of Steel (2011) Table 14.3b
	Ultrasonic test (Butt welds in plates & pipes, 'T' joint welds, nozzle welds and node welds)	BS 3923: Part 1: 1986 (Examination Level, 1, 2a, 2b & 3) BS EN 1714: 1998 (Testing Level A, B & C) BS EN ISO 17640: 2010 (Testing Level A, B & C) BS EN ISO 17640: 2018 (Testing Level A, B & C) in conjunction with the following specification(s): BS EN ISO 5817: 2014 Table 1 Buildings Department Code of Practice for the Structural Use of Steel (2005) Table 14.3b Buildings Department Code of Practice for the Structural Use of Steel (2011) Table 14.3b
	Visual examination	BS 5289: 1976 BS EN 970: 1997 BS EN ISO 17637: 2011 BS EN ISO 17637: 2016 in conjunction with the following specification(s): BS EN ISO 5817: 2014 Table 1 Buildings Department Code of Practice for the Structural Use of Steel (2005) Table 14.3b Buildings Department Code of Practice for the Structural Use of Steel (2011) Table 14.3b

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Curtain walls	Air leakage rate	ASTM E283-04 (Reapproved 2012) ASTM E283/E283M-19 AS/NZS 4284: 2008 Cl. 8.4
	Cyclic safety test for curtain wall system	Buildings Department APP-37 (May 2012) App. B Buildings Department Code of Practice for Structural Use of Glass (2018) Table 8.1
	Static test to seismic and wind interstory drifts	AAMA 501.4: 2009 AAMA 501.4: 2018 AS/NZS 4284: 2008 Cl. 8.9
	Structural performance by uniform static air pressure difference	ASTM E330-02 (Reapproved 2010) ASTM E330/E330M-14 AS/NZS 4284: 2008 Cl. 8.2, 8.3 & 8.8
	Water penetration test by cyclic static air pressure difference	ASTM E547-00 (Reapproved 2016) AS/NZS 4284: 2008 Cl. 8.6
	Water penetration test by dynamic pressure	AAMA 501.1: 2005 AAMA 501.1: 2017
	Water penetration test by uniform static air pressure difference	ASTM E331-00 (Reapproved 2016) AS/NZS 4284: 2008 Cl. 8.5
	Wind resistance test	BS 5368-3: 1978, EN 77: 1977

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Dimension stones	Absorption and bulk specific gravity	ASTM C97/C97M-09
	Compressive strength	ASTM C170/C170M-09
	Flexural strength	ASTM C880/C880M-09 ASTM C880/C880M-18
	Modulus of rupture	ASTM C99/C99M-09
	Strength of individual stone anchorages	ASTM C1354/C1354M-09 excluding Cl. 9.6 ASTM C1354/C1354M-22 excluding Cl. 9.6
Glass	Bending strength of glass	BS EN 1288-3: 2000
	Bending strength of laminated glass at elevated temperature 50°C	Buildings Department Code of Practice for Structural Use of Glass (2018) + Amd. (2/2024) Annex B1
	Boil test of laminated glass	ANSI Z97.1: 2004 ANSI Z97.1: 2015 BS EN ISO 12543-4: 2011 Cl. 5 excluding 5.3.2 Buildings Department Code of Practice for Structural Use of Glass (2018) Annex B2
	High-temperature test	BS EN ISO 12543-4: 2011 Cl. 5 excluding Cl. 5.3.3
	Impact test of glass	BS 6206: 1981 + Amd. 8693 excluding Cl. 6 BS EN 12600: 2002
	Non-destructive photoelastic measurement of surface stresses in annealed, heat-strengthened and fully tempered flat glass	ASTM C1279-13 ASTM C1279-13 (Reapproved 2019)
Metallic Materials	Tensile test of metallic materials in the force range 1kN to 300kN	BS 18: 1987 BS EN 10002-1: 2001 BS EN ISO 6892-1: 2016 Method B in conjunction with the following specification(s): BS 1474: 1987 Cl. 6 BS EN 755-2: 1997 BS EN 10025-1: 2004 Cl. 10.2.1

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Structural fixings	Shear proof load test of anchors, dowel bars, channel inserts and embed plates by incremental loading in the force range 0.2 kN – 600 kN	BS 5080 Part 2: 1986 + Amd. 7602 Cl. 4, 7.1, 7.2.1 and 7.2.3 with modification
	Shear proof load test of drilled-in anchors used for cantilevered structure/hanger/curtain wall remedial works by incremental loading in the force range 2 kN – 50 kN	Buildings Department PNAP APP-169 (Oct 2023) App. A
	Shear proof load test of drilled-in anchors used for works other than cantilevered structure/hanger/curtain wall remedial works in the force range 2 kN – 50 kN	Buildings Department PNAP APP-169 (Oct 2023) App. B
	Shear proof load test for cementitious or polymer based grouted bolts or dowels reinforcing bars works or/and steel T-bolts with cast-in channels in the force range 2 kN – 50 kN	Buildings Department PNAP APP-169 (Oct 2023) App. C
	Tensile proof load test of anchors, dowel bars, channel inserts and embed plates by incremental loading in the force range 0.2 kN – 890 kN	BS 5080 Part 1: 1993 Cl. 6, 7.1.1 and 7.1.3 with modification (by incremental loading)
	Tensile proof load test of drilled-in anchors used for cantilevered structure/hanger/curtain wall remedial works by incremental loading in the force range 2 kN – 300 kN	Buildings Department PNAP APP-169 (Oct 2023) App. A
	Tensile proof load test of drilled-in anchors used for works other than cantilevered structure/hanger/curtain wall remedial works in the force range 2 kN – 300 kN	Buildings Department PNAP APP-169 (Oct 2023) App. B
	Tensile proof load test for cementitious or polymer based grouted bolts or dowels reinforcing bars works or/and steel T-bolts with cast-in channels in the force range 2 kN – 300 kN	Buildings Department PNAP APP-169 (Oct 2023) App. C
Structural fixings (spiders)	Proof load test of spiders and glass fixing structural components in the force range 0.2 kN – 80 kN	Buildings Department APP-37 (May 2012) App. C Buildings Department APP-37 (May 2020) App. B Buildings Department APP-37 (Apr 2022) App. C Buildings Department Code of Practice for the Structural Use of Steel (2011) Cl. 16.2

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Windows	Air permeability / leakage test	BS 6375: Part 1: 2009 Cl. 6 BS 6375: Part 1: 2015 + A1: 2016 Cl. 6 BS EN 1026: 2000 BS EN 1026: 2016 SS 212: 2007 Cl. 10.2.1.1, 10.2.1.4 & Annex A in conjunction with the following specification(s): BS EN 12207: 2000 BS EN 12207: 2016
	Dimension test - individual member	BS 1474: 1987 Cl. 7.4 in conjunction with the following specification(s): BS 1474: 1987 Table 6, 9, 10, 14 & 16 BS EN 12020-2: 2016 Table 1, 4, 5 8 & 9
	Dimension test - overall size	Hong Kong Housing Authority Specification Library (2018) (Batch 2) COM2.M005.A Cl. 2a(i)
	Operating forces	BS EN 12046-1: 2003 in conjunction with the following specification(s): BS 6375: Part 2: 2009 Cl. 5.1 BS EN 13115: 2001 Cl. 3.1
	Resistance to racking	BS EN 14608: 2004 in conjunction with the following specification(s): BS 6375: Part 2: 2009 Cl. 5.2.2 BS EN 13115: 2001 Cl. 3.2
	Resistance to static torsion	BS EN 14609: 2004 in conjunction with the following specification(s): BS 6375: Part 2: 2009 Cl. 5.2.1 BS EN 13115: 2001 Cl. 3.3
	Resistance to wind test	BS 6375: Part 1: 2009 Cl. 8 BS 6375: Part 1: 2015 + A1: 2016 Cl. 8 BS EN 12211: 2000 BS EN 12211: 2016 in conjunction with the following specification(s): BS EN 12210: 2000 BS EN 12210: 2016

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Windows (cont'd)	Watertightness test Thickness of coating Visual inspection on coating Structural performance test Proof load test Endurance of fastener / hardware - Operation of fastener - Movement of sash - Release of jammed sash - Release of jammed hinge - Strength of restricted opening devices, location devices and maximum opening stops - Resistance to accidental loadings - Endurance of fastener/hardware Operation tests - Ease of fastener operations - Movement of sash - Release of jammed sash - Release of jammed hinge - Strength of restricted opening devices, location devices and maximum opening stops - Resistance to accidental loading	BS 6375: Part 1: 2009 Cl. 7 BS 6375: Part 1: 2015 + A1: 2016 Cl. 7 BS EN 1027: 2000 BS EN 1027: 2016 SS 212: 2007 Cl. 10.2.1.2, 10.2.1.5 & Annex B in conjunction with the following specification(s): BS EN 12208: 2000 BS EN ISO 1463: 1995 BS EN ISO 1463: 2004 BS 3987: 1991 Cl. 3 & App. G SS 212: 2007 Cl. 10.2.1.3 & Annex C SS 212: 2007 Cl. 10.2.1.6 & Annex D SS212: 2007 Cl. 10.2.2 & Annex E Test 1 SS212: 2007 Cl. 10.2.2 & Annex E Test 2 SS212: 2007 Cl. 10.2.2 & Annex E Test 4 SS212: 2007 Cl. 10.2.2 & Annex E Test 5 SS212: 2007 Cl. 10.2.2 & Annex E Test 6 SS212: 2007 Cl. 10.2.2 & Annex E Test 7 SS212: 2007 Cl. 10.2.2 & Annex E Test 8 SS212: 2007 Cl. 10.2.2 & Annex E Test 8 with modification (test cycle exceeding 50,000 nos. and up to 100,000 nos.) BS 6375: Part 2: 1987 Cl. 6.1.1, 6.1.2 & A2 BS 6375: Part 2: 1987 Cl. 6.1.3 & A3 BS 6375: Part 2: 1987 Cl. 6.2.2, A2 & A5 BS 6375: Part 2: 1987 Cl. 6.3 & A6 BS 6375: Part 2: 1987 Cl. 6.4 & A7 BS 6375: Part 2: 1987 Cl. 6.5 and A8

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Windows (cont'd)	Durometer hardness test (Type A hardness only)	ASTM D2240-15
	Deflection test	AS 4420.2: 1996 in conjunction with the following specification(s): AS 2047: 1999 Cl. 2.3.1.3 NZS 4211: 2008 Cl. 6
	Operating force test	AS 4420.3: 1996 in conjunction with the following specification: AS 2047: 1999 Cl. 2.3.1.4 NZS 4211: 2008 Cl. 7
	Air infiltration test	AS 4420.4: 1996 in conjunction with the following specification(s): AS 2047: 1999 Cl. 2.3.1.5 NZS 4211: 2008 Cl. 8
	Water penetration test	AS 4420.5: 1996 in conjunction with the following specification(s): AS 2047: 1999 Cl. 2.3.1.6 NZS 4211: 2008 Cl. 9
	Ultimate strength test	AS 4420.6: 1996 in conjunction with the following specification(s): AS 2047: 1999 Cl. 2.3.1.7 NZS 4211: 2008 Cl. 10

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	Structural performance by uniform static air pressure difference	ASTM E330-02 (Reapproved 2010) ASTM E330/E330M-14 AS/NZS 4284: 2008 Cl. 8.2, 8.3 & 8.8
	Water penetration test by cyclic static air pressure difference	ASTM E547-00 (Reapproved 2016) AS/NZS 4284: 2008 Cl. 8.6
	Water penetration test by uniform static air pressure difference	ASTM E331-00 (Reapproved 2016) AS/NZS 4284: 2008 Cl. 8.5
Glass	Bending strength of glass	BS EN 1288-3: 2000

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Windows	Air permeability / leakage test Endurance of fastener / hardware - Operation of fastener - Movement of sash - Endurance of fastener/hardware Operating forces Resistance to racking Resistance to static torsion Resistance to wind test Watertightness test	BS 6375: Part 1: 2009 Cl. 6 BS 6375: Part 1: 2015 + A1: 2016 Cl. 6 BS EN 1026: 2000 BS EN 1026: 2016 in conjunction with the following specification(s): BS EN 12207: 2000 BS EN 12207: 2016 SS212: 2007 Cl. 10.2.2 & Annex E Test 1 SS212: 2007 Cl. 10.2.2 & Annex E Test 2 SS212: 2007 Cl. 10.2.2 & Annex E Test 8 SS212: 2007 Cl. 10.2.2 & Annex E Test 8 with modification (test cycle exceeding 50,000 nos. and up to 100,000 nos.) BS EN 12046-1: 2003 in conjunction with the following specification(s): BS 6375: Part 2: 2009 Cl. 5.1 BS EN 13115: 2001 Cl. 3.1 BS EN 14608: 2004 in conjunction with the following specification(s): BS 6375: Part 2: 2009 Cl. 5.2.2 BS EN 13115: 2001 Cl. 3.2 BS EN 14609: 2004 in conjunction with the following specification(s): BS 6375: Part 2: 2009 Cl. 5.2.1 BS EN 13115: 2001 Cl. 3.3 BS 6375: Part 1: 2009 Cl. 8 BS 6375: Part 1: 2015 + A1: 2016 Cl. 8 BS EN 12211: 2000 BS EN 12211: 2016 in conjunction with the following specification(s): BS EN 12210: 2000 BS EN 12210: 2016 BS 6375: Part 1: 2009 Cl. 7 BS 6375: Part 1: 2015 + A1: 2016 Cl. 7 BS EN 1027: 2000 BS EN 1027: 2016 in conjunction with the following specification(s): BS EN 12208: 2000

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Windows (cont'd)	Deflection test Operating force test Air infiltration test Water penetration test Ultimate strength test	AS 4420.2: 1996 in conjunction with the following specification: AS 2047: 1999 Cl. 2.3.1.3 NZS 4211: 2008 Cl. 6 AS 4420.3: 1996 in conjunction with the following specification: AS 2047: 1999 Cl. 2.3.1.4 NZS 4211: 2008 Cl. 7 AS 4420.4: 1996 in conjunction with the following specification(s): AS 2047: 1999 Cl. 2.3.1.5 NZS 4211: 2008 Cl. 8 AS 4420.5: 1996 in conjunction with the following specification: AS 2047: 1999 Cl. 2.3.1.6 NZS 4211: 2008 Cl. 9 AS 4420.6: 1996 in conjunction with the following specification: AS 2047: 1999 Cl. 2.3.1.7 NZS 4211: 2008 Cl. 10