



工程指示 / 要求簡箋(E.I.)

工程指示編號：EI / 10042 / 18 修改版次：-
 工程編號 : J - 837 工程名稱 : 觀塘裕民坊
 工程項目 : 幕牆 Pull out Test 測試 (Curtain Wall) (HAC-70,50)(M8)
 收件人 : Maggie 發件人 : Ant Yeung 日期 : 14/12/2018

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 :

請安排公証行到地盆做 Pull out test (Curtain Wall) (M8) (2min)

HAC-70 :

各座每 4 層 1 個 Visit，(以 1 個 Visit 能夠測試 15 套計)

HAC-50 :

1 個 Visit 用於 27/F (以 1 個 Visit 能夠測試 15 套計)

附拉力測試方案

請在 2018 / 12 / 27 前完成上列要求。

附 :

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 () 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
 () 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 () 工程地盤科 連附件 炳哥 / 有哥
 () 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 :

發件人簽署 :

HK / 18

項目經理簽署 :

美特鋁質有限公司
MIDI ALUMINIUM FABRICATOR LTD.

Our ref. MC/38691/837

10th December 2018

CR Construction Company Limited
Unit No. 1-16, Level 32,
Standard Chartered Tower of Millennium City 1,
No. 388 Kwun Tong Road,
Kwun Tong, Kowloon, Hong Kong

By Email & Hand

Attn.: Mr. Frankie S. W. Cheung

Dear Sir,

**Re: Design, Supply and Installation of Curtain Wall, Aluminium Window & Door to
Tower for N.K.I.L. 6514, Kwun Tong Town Centre (Development Areas 2 & 3),
Kwun Tong, Kowloon.**

Submission of Method Statement for Pull Out Test (2mins) for Curtain Wall

Regarding the captioned project, we would like to submit the Method Statement for Pull Out Test (2mins) for Curtain Wall for your review and comment.

- 1) Method Statement for Pull Out Test (2mins) (HAC-50, HAC-70) (Channel)(3 pages)
- 2) Method Statement for Pull Out Test (2mins) (HST3-R M8) (Anchor Bolt) (3 pages)

Thank you for your kind attention.

Yours faithfully,
MIDI ALUMINIUM FABRICATOR LTD.


Marco Tam
Director

Encl - 6 page(s)

FM/MT/JL/JC/AY/EL/BL/yl



Qualitech Testing & Consultancy Limited

匯駿檢測及顧問有限公司

Flat E & F, 9/F, Block B, Universal Industrial Centre, 19-25 Shan Mei Street, Sha Tin, Hong Kong.

新界火炭山尾街19-25號宇宙工業中心B座9樓E&F室

Tel : (852) 2185-0900 Fax : (852) 2687-6752 Website : www.qtc-hk.com E-mail : qtc@qtc-hk.com

METHOD STATEMENT

Tensile Proof Load Test on Structural Fixings in Concrete and Masonry (BS 5080 : Part 1 : 1993)

Client : Midi Alumimium Fabricator Ltd.

Project : J/o Hip Wo Street & Hong Ning Road, Kwun Tong Town Centre Redevelopment (Area 2 & 3) -
N.K.I.L.6514

1. Introduction

- 1.1 This method statement described the procedure for conducting test under axial tensile force on structural fixings installed in concrete or masonry used in building and civil engineering.
- 1.2 The method statement in accordance with BS 5080 : Part 1 : 1993.

2. Acceptance criteria & Sampling

- 2.1 The specimen shall be accepted if the test load can be maintained for the specified time without show any signs of separation, plastic deformation or deleterious effect.
- 2.2 The specimen shall be randomly selected at least 1% or 5 nos., whichever is more, for each type and size by the client.

3. Specimen information

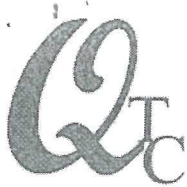
(Refer to manufacturer's specification)

1) Type of Specimen : Hilti HAC-50 with 2nos HBC-C M16		
Recommended Load : 19.4 kN	Test Load (Recommended Load x 1.5) : 29.1 kN	Maintain period : 2minutes
2) Type of Specimen : Hilti HAC-70 with 2nos HBC-C M16		
Recommended Load : 42.95 kN	Test Load (Recommended Load x 1.5) : 64.4 kN	Maintain period : 2minutes

4. Equipment

- 4.1 For measuring the tensile loading of structural fixings, the following equipment shall be used:
 - a. Hydraulic hand pump with loading device
 - b. Hydraulic cylinder
 - c. Load cell
 - d. Loading frame
 - e. Loading accessories, e.g. steel plate, bolts & nuts, brackets, etc





Qualitech Testing & Consultancy Limited

匯駿檢測及顧問有限公司

Flat E & F, 9/F, Block B, Universal Industrial Centre, 19-25 Shan Mei Street, Sha Tin, Hong Kong.

新界火炭山尾街19-25號宇宙工業中心B座9樓E&F室

Tel : (852) 2185-0900 Fax : (852) 2687-6752 Website : www.qtc-hk.com E-mail : qtc@qtc-hk.com

5. Test Requirement

5.1 Test load

The test load shall be minimum equal to 1.5 times of the recommended tensile load as specified by the manufacturer or specified by the client.

5.2 Maintain period

Normally, the maximum test load will be maintained constant for at least 2 minutes, or to whatever time period as specified by client.

6. Procedure

6.1 Check & record the type / diameter of specimen, location, test load, maintain period, number of test etc.

6.2 Visual check the specimen and the base material to ensure no damages were found.

6.3 Select equipment

Select suitable loading device according to the test load provided by clients, the type / diameter of the specimen and the environmental condition.

6.4 Set up the apparatus according to the diagram.

a. T-bolts with nuts for each test specimen shall be provided by client.

b. The reaction of the loading frame shall be applied to the base material.

6.5 Ensure that the alignment of the whole test set up is such that the tensile force is applied along the axis of the test specimen.

6.6 Initially a force sufficient to take up any slack in the apparatus and the attachments shall be applied.

6.7 The specimen will be loaded to test load provided by clients in one increment at a constant rate or at other intervals as specified by client. The maximum load will be maintained constant for 2 minutes.

6.8 The load is then gradually released until the loading device can be safely removed from the test specimen.

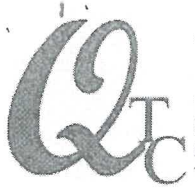
6.9 Check and record any damages, signs of separation to the test specimen.

6.10 Use the standard worksheet to record down all information and result for the test.

7. Record

7.1 The test results shall be recorded in a standard form for the record of the client.





Qualitech Testing & Consultancy Limited

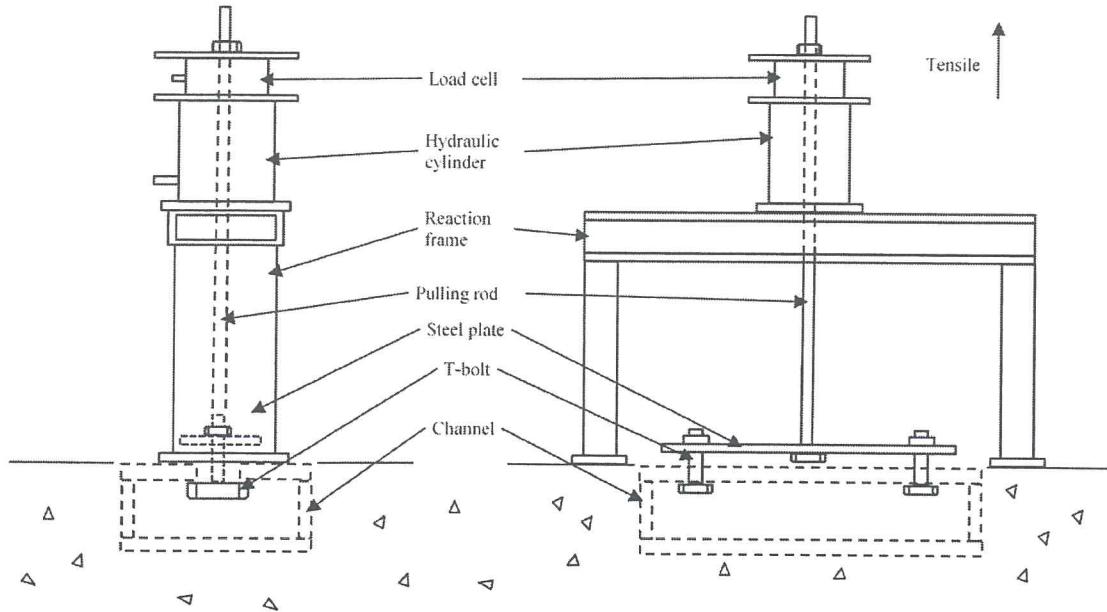
匯駿檢測及顧問有限公司

Flat E & F, 9/F, Block B, Universal Industrial Centre, 19-25 Shan Mei Street, Sha Tin, Hong Kong.

新界火炭山尾街19-25號宇宙工業中心B座9樓E&F室

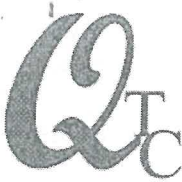
Tel : (852) 2185-0900 Fax : (852) 2687-6752 Website : www.qtc-hk.com E-mail : qtc@qtc-hk.com

Loading Apparatus



Typical set-up of the tensile proof load test on structural fixing (Channel)





Qualitech Testing & Consultancy Limited

匯駿檢測及顧問有限公司

Flat E & F, 9/F, Block B, Universal Industrial Centre, 19-25 Shan Mei Street, Sha Tin, Hong Kong.

新界火炭山尾街19-25號字宙工業中心B座9樓E&F室

Tel : (852) 2185-0900 Fax : (852) 2687-6752 Website : www.qtc-hk.com E-mail : qtc@qtc-hk.com

METHOD STATEMENT

Tensile Proof Load Test on Structural Fixings in Concrete and Masonry (BS 5080 : Part 1 : 1993)

Client : Midi Alumimium Fabricator Ltd.

Project : J/o Hip Wo Street & Hong Ning Road, Kwun Tong Town Centre Redevelopment (Area 2 & 3) -
N.K.I.L.6514

1. Introduction

- 1.1 This method statement described the procedure for conducting test under axial tensile force on structural fixings installed in concrete or masonry used in building and civil engineering.
- 1.2 The method statement in accordance with BS 5080 : Part 1 : 1993.

2. Acceptance criteria & Sampling

- 2.1 The specimen shall be accepted if the test load can be maintained for the specified time without show any signs of separation, plastic deformation or deleterious effect.
- 2.2 The specimen shall be randomly selected at least 1% or 5 nos., whichever is more, for each type and size by the client.

3. Specimen information

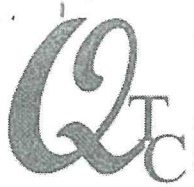
(Refer to manufacturer's specification)

1) Type of Specimen : Hilti HST3-R M8		
Recommended Load : 2.957 kN	Test Load (Recommended Load x 1.5) : 4.436 kN	Maintain period : 2minutes

4. Equipment

- 4.1 For measuring the tensile loading of structural fixings, the following equipment shall be used:
 - a. Hydraulic hand pump with loading device
 - b. Hydraulic cylinder
 - c. Load cell
 - d. Loading frame
 - e. Wedges grip for fixing the specimen to the loading device





Qualitech Testing & Consultancy Limited

匯駿檢測及顧問有限公司

Flat E & F, 9/F, Block B, Universal Industrial Centre, 19-25 Shan Mei Street, Sha Tin, Hong Kong.

新界火炭山尾街19-25號宇街工業中心B座9樓E&F室

Tel : (852) 2185-0900 Fax : (852) 2687-6752 Website : www.qtc-hk.com E-mail : qtc@qtc-hk.com

5. Test Requirement

5.1 Test load

The test load shall be minimum equal to 1.5 times of the recommended tensile load as specified by the manufacturer or specified by the client.

5.2 Maintain period

Normally, the maximum test load will be maintained constant for at least 2 minutes, or to whatever time period as specified by client.

6. Procedure

6.1 Check & record the type / diameter of specimen, location, test load, maintain period, number of test etc.

6.2 Visual check the specimen and the base material to ensure no damages were found.

6.3 Select equipment

Select suitable loading device according to the test load provided by clients, the type / diameter of the specimen and the environmental condition.

6.4 Set up the apparatus according to the diagram.

The reaction of the loading frame shall be applied to the base material.

6.5 Ensure that the alignment of the whole test set up is such that the tensile force is applied along the axis of the test specimen.

6.6 Initially a force sufficient to take up any slack in the apparatus and the attachments shall be applied.

6.7 The specimen will be loaded to test load provided by clients in one increment at a constant rate or at other intervals as specified by client. The maximum load will be maintained constant for 2 minutes.

6.8 The load is then gradually released until the loading device can be safely removed from the test specimen.

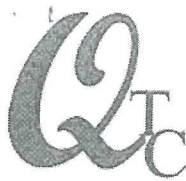
6.9 Check and record any damages, signs of separation to the test specimen.

6.10 Use the standard worksheet to record down all information and result for the test.

7. Record

7.1 The test results shall be recorded in a standard form for the record of the client.





Qualitech Testing & Consultancy Limited

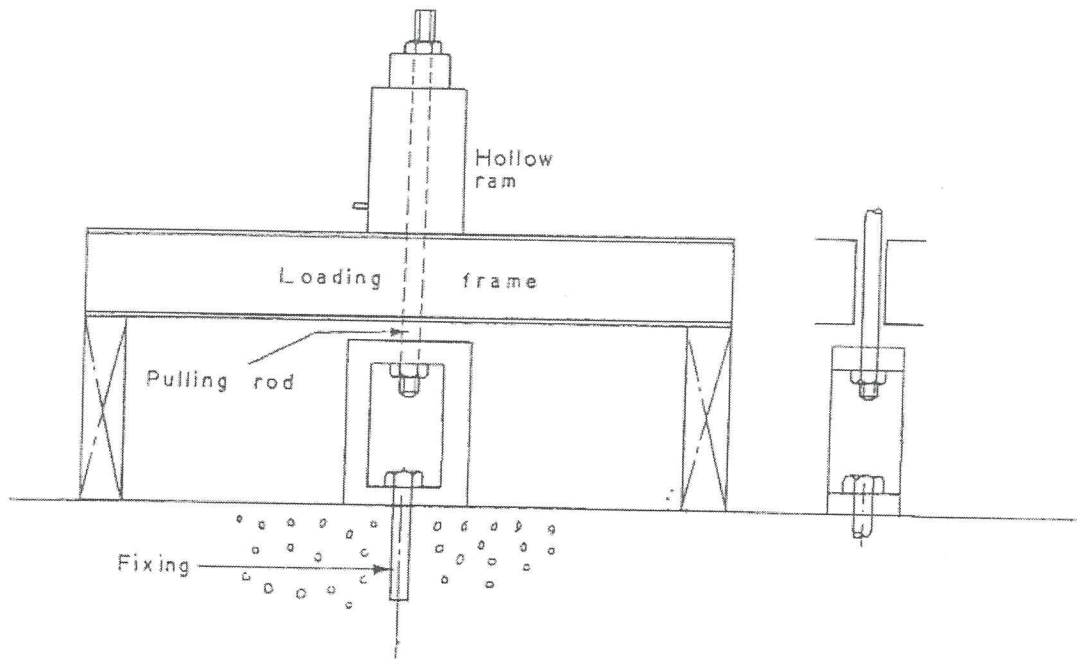
匯駿檢測及顧問有限公司

Flat E & F, 9/F, Block B, Universal Industrial Centre, 19-25 Shan Mei Street, Sha Tin, Hong Kong.

新界火炭山尾街19-25號宇宙工業中心B座9樓E&F室

Tel : (852) 2185-0900 Fax : (852) 2687-6752 Website : www.qtc-hk.com E-mail : qtc@qtc-hk.com

Loading Apparatus



Typical set-up of the tensile proof load test on structural fixing (anchor bolt)

