

工程指示 / 要求簡箋(E.I.)

工程指示編號：EI / 1130 / 19

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 修補方案用拉爆(M24)

收件人：林哥

發件人：Eric Liu

日期：15/10/2019

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：

請按 BM 訂購 M24 拉爆送地盤用

已入則，T2L.T5N 有位置計數上需要 M24 拉爆 (T2: 做 2 個位、T5: 做 3 個位)

附上位置，現場請打拉爆及驗拉力 (全部要驗) (位置按此則圖)

鐵件已在 EI0582 出單

謝謝。

請在 2019/ 10 / 28 前完成上列要求。

附：1 頁 BM, 1 頁 Hilti catalogue, 1 頁批則圖, 3 頁拉爆方案

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 小羅  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：

發件人簽署：

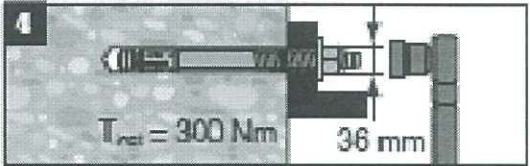
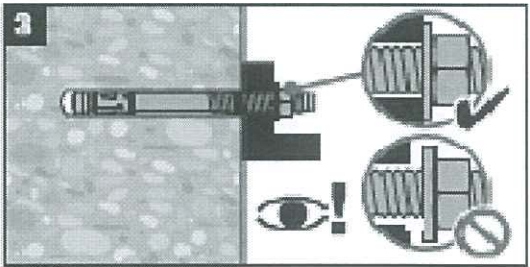
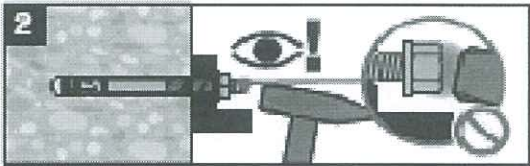
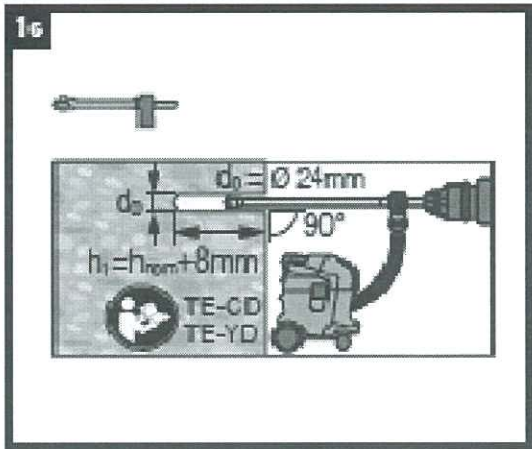
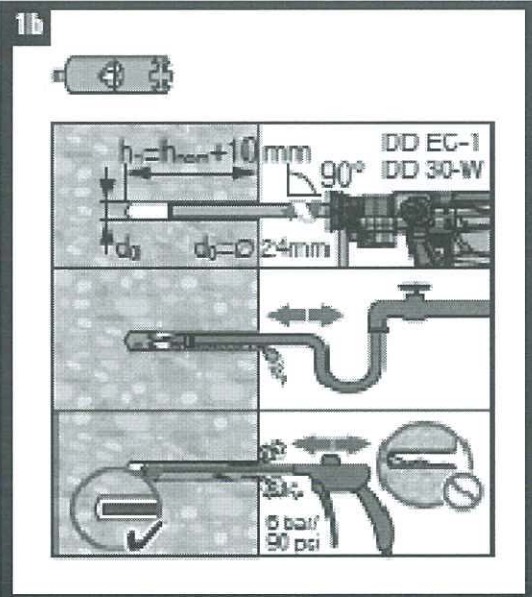
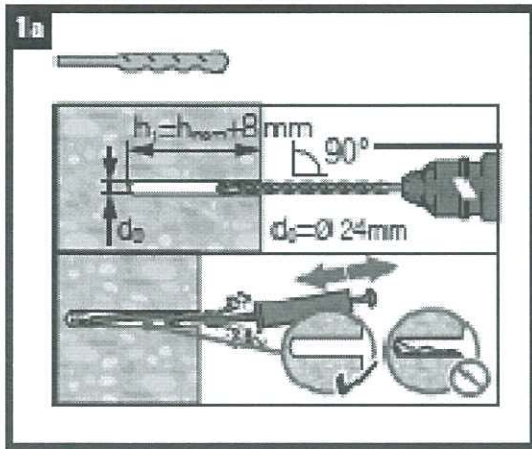
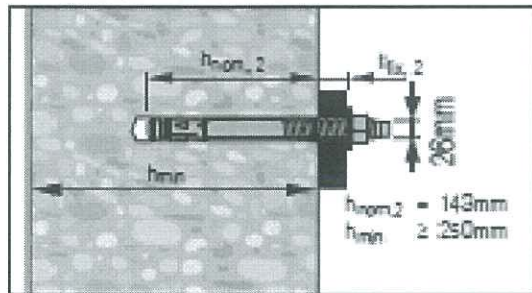
項目經理簽署：

 美特鋁質有限公司		工程號: J-837	計算:		日期:		送呈:			
MIDI Aluminium Fabricator Ltd.		地盤名稱: 觀塘裕民坊	核對:		日期:		副本:			
地盤用配件B.M.表		項目類別: 修補方案	批准:		日期:					
BM編號:837-CW-M01-S-HP03B		A/C Code								
序號	修改標示	配件圖號	物料編號	配件名稱	顏色	實用	後備	總數	單位	備注
1			HILTI HST3-R	M24x200mm拉爆	Hilt	20	2	22	粒	幕牆修補方案用

# Setting instruction for M24



	HST3	HST3-R	$h_{rem,1}$	$h_{rem,2}$
M24x200-130	✓	✓	-	30
M24x230-160	✓	✓	-	60



For detailed informations on installation see instruction for use given with the package of the product.

2 HOUR FIRE RATING THERMAL INSULATION

b) THERMAL INSULATION

"CSR" 110Kg/mm ROCKWOOL FIBERTEX-820 SHALL BE 50mm THK.

c) SMOKE SEAL SHALL BE COMPLY WITH CLAUSE C10.2 OF CODE OF PRACTICE FOR SAFETY IN BUILDING 2011.

12. OPENABLE WINDOWS

a) ALL OPENABLE WINDOW SHALL BE CLOSED UNDER STRONG WIND CONDITION.

b) ALL OPENABLE WINDOW SHALL BE APPROVAL UNDER LOCKED CONDITION.

13. ISOLATION FOR METALS

ALUMINIUM / STEEL CONTACTED SURFACE SHALL BE ISOLATED WITH PVC SHEET & STEEL / CONCRETE INTERFACE SHALL BE APPLIED A LAYER OF BITUMINOUS PAINT FOR PROTECTION AGAINST B-METALLIC CORROSION.

14. CONCRETE GRADE (FOR INFORMATION)

CONCRETE STRUCTURE SHOWN IN THE SUBMISSION SHALL BE OF GRADE 35D MINIMUM.

15. ANCHOR BOLT FOR ALUM. CLADDING

ANCHOR BOLT TO BE "HILTI" TYPE, DESIGN AND INSTALLATION TO BE IN ACCORDANCE (FOR CRACKED CONCRETE)

ALLOWABLE FORCE = 1.2kN

TYPICAL CONFIGURATION (FO)

FEED

Anchor Type	BD REF. NO	Min. embedment depth (mm) into sound concrete	Minimum edge distance in concrete	Minimum spacing in concrete	Recommended Load		Test load (1.5 x recommended tensile load) (kN)
					Tensile (kN)	Shear (kN)	
M8x75 HST3-R	BD-AF151	47	40	35	2.5	5.2	=1.5x1.18x2.5=4.425
M10x90 HST3-R	BD-AF149	60	45	45	4.0	8.4	=1.5x1.18x4.0=7.080
M16x140 HST3-R	BD-AF148	85	65	65	9.4	14.1	=1.5x1.18x9.4=18.638
M24x200 HST3-R	BD-AF153	125	125	125	13.3	38.3	=1.5x1.18x13.3=23.541

CONSIDER CONCRETE GRADE FACTOR  $\sqrt{\frac{35}{25}} = 1.18$

CURTAIN WALL REMEDIAL QUANTITY : 110 NOS. OF LOCATION (ABOUT 0.5%, 110 NOS. OUT OF 21691)

FOR CURTAIN WALL REMEDIAL WORKS

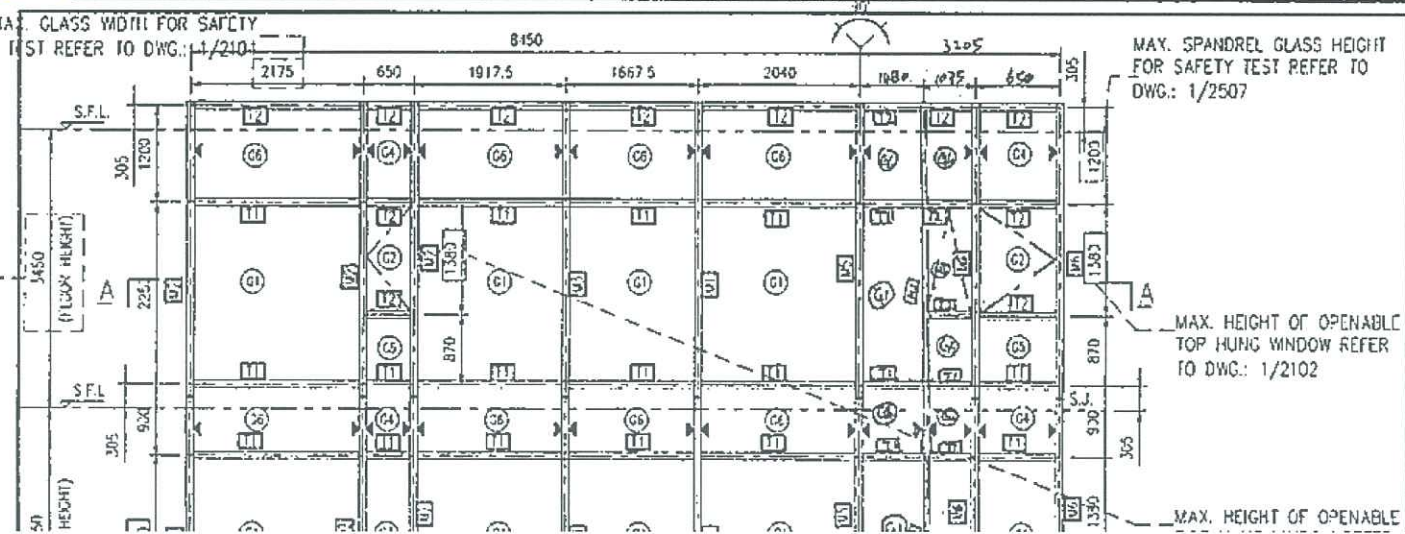
NOTE ACTION)

755-2, 2008  
LOY 6061-T6  
240 MPa  
260 MPa  
70000 MPa.

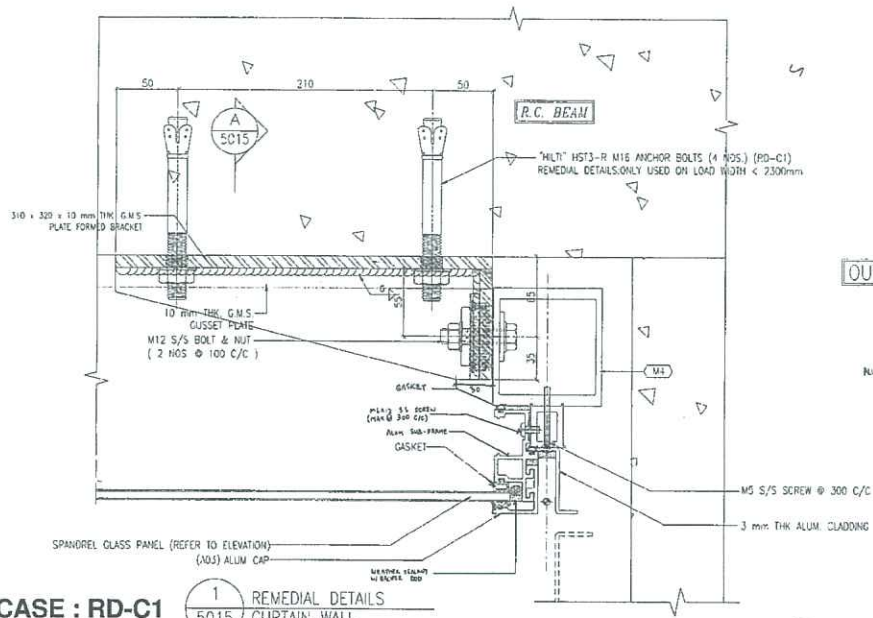
FOR SAFETY : 1/2507

SS 1 TO C.O.P.

GRADE S275)

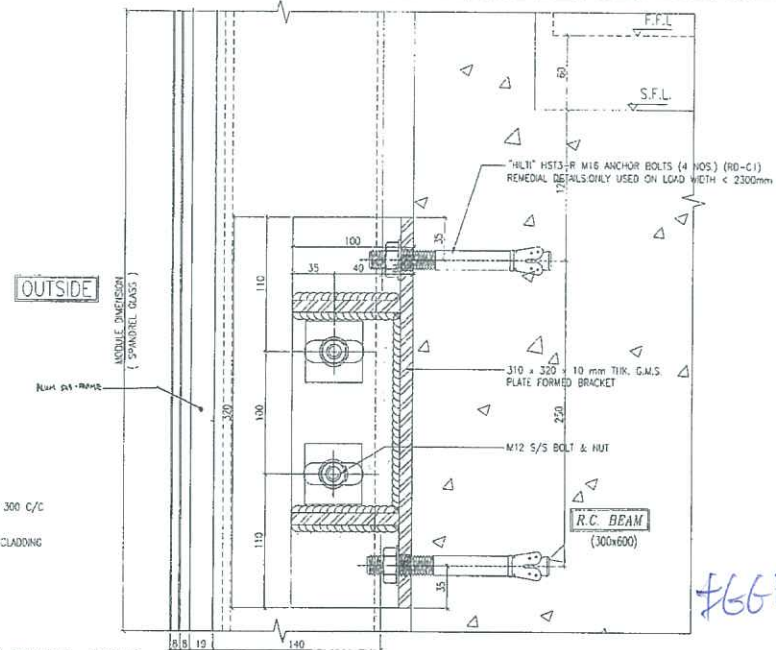


WAH STREET

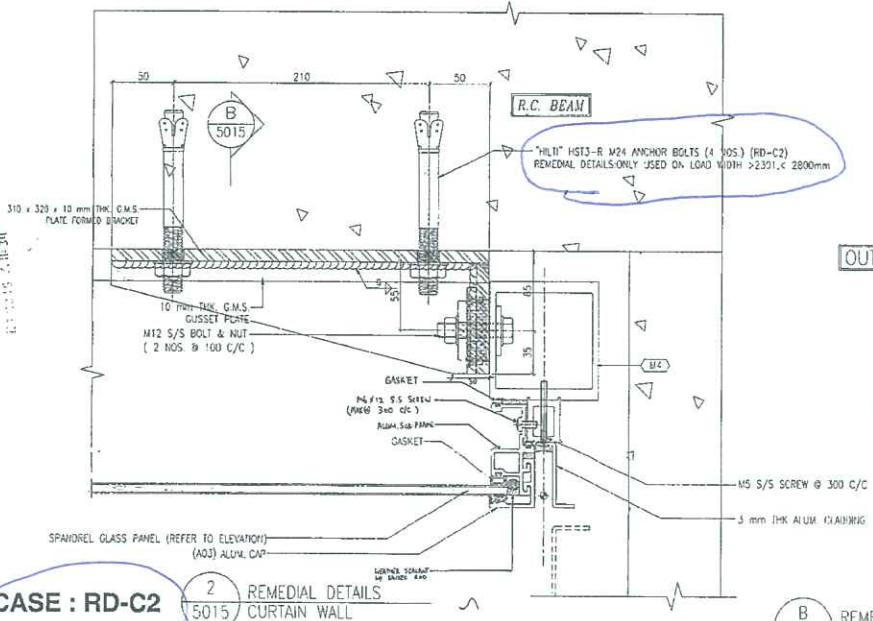


CASE : RD-C1

1 REMEDIAL DETAILS  
5015 CURTAIN WALL

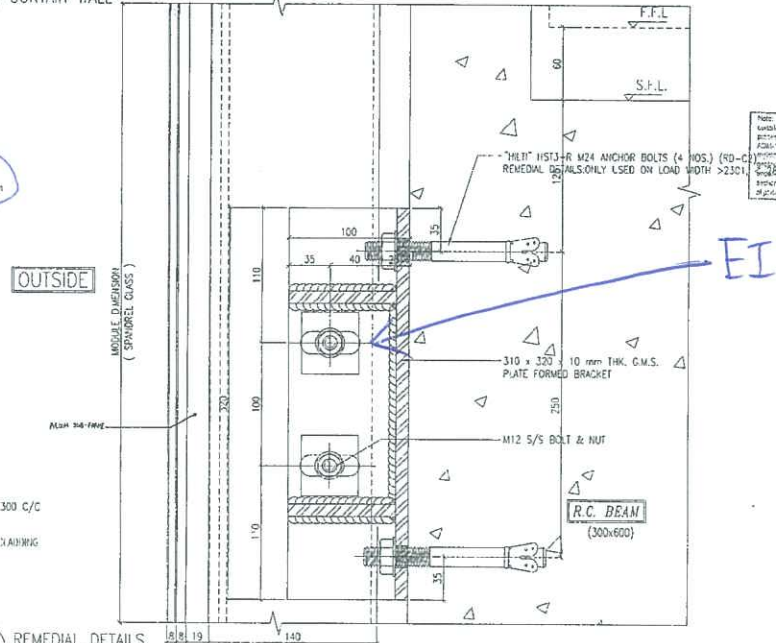


A REMEDIAL DETAILS  
5015 CURTAIN WALL



CASE : RD-C2

2 REMEDIAL DETAILS  
5015 CURTAIN WALL



B REMEDIAL DETAILS  
5015 CURTAIN WALL

B.D. REF:

STATEMENT II - THE WORKS SHOWN ON THESE PLANS ARE TYPE II WORKS IN RESPECT OF WHICH THE BUILDING AUTHORITY'S CONSENT IS APPLIED FOR

**NEW DRAWING**

CLIENT :  
信和置業有限公司  
Sino Land Company Limited

ARCHITECT :  
WONG TUNG & PARTNERS LIMITED  
ARCHITECTS & PLANNERS

MAIN CONTRACTOR :  
CR Construction Company Limited

STRUCTURAL ENGINEER :  
AECOM

FACADE CONSULTANT :  
AECOM

NOTE:  
1. ALL DIMENSIONS ARE IN mm.  
2. ALL ELEVATIONS ARE VIEWED FROM OUTSIDE.  
3. ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE FABRICATION.

LEGEND:  
① - DETAIL MARK NO.  
② - REFER SHEET NO.  
1. F.F.L. -- FINISHED FLOOR LEVEL  
2. S.F.L. -- STRUCTURAL FLOOR LEVEL  
3. --- REVERSED DETAIL

Plan Approval:  
CHK'd/Reviewed  
Senior Structural Engineer  
for BUILDINGS AUTHORITY  
18 NOV 2018

AECOM Asia Company Limited

Working for  
Happened Good. Greater RISE FOR ALL

NO.	DATE	REVISION	BY
JOB NO. : J-B37			
PROJECT : LURA KWUN TONG TOWN CENTRE REDEVELOPMENT (AREA 2 & 3) AT NKIL 6514, KWUN TONG, KWLOON			
TITLE : REMEDIAL DETAILS FOR CURTAIN WALL			
DATE : 28-JAN-19		SCALE : 1:2 (A1)	
DRAWN BY : ASING		CHECKED BY : -	
 MIDI ALUMINIUM FABRICATOR LTD. Units 6-8, Sunny Industrial Centre, 1/F 610 Che Kwo Ling Road, Kwai Tsan Tel: 23498211-4 Fax: (252)2727666			
DWG NO. JB17-BDCW-5015		REV. : -	

+(66引)

EI 0582







拉力方案 (M24)

**METHOD STATEMENT**

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

Client : Midi Aluminium Fabricator Ltd.  
Project : J/O Hip Wo Street, Mat Wah 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 Other compliance criteria such as relative movement and recovery of deformation shall also be checked as specified (Recovery should be at least 80%).
- 2.3 The specimen shall be randomly selected at least 5% 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 M24		
Recommended Load : 13.3 kN	Test Load (Recommended Load x 1.5 x 1.18) : 23.541 kN	Maintain period : 60 minutes

**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
  - f. Dial gauge for measuring relative movement





# 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 1 hour, 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. The reaction of the loading frame shall be applied to the base material.

b. The dial gauge shall be supported on one or more reference points, independent of the loading frame.

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 1 hour.

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

6.9 When the relative movement / deformation recovery is required, the record at the beginning, during and at the end of the loading period shall be recorded.

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

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

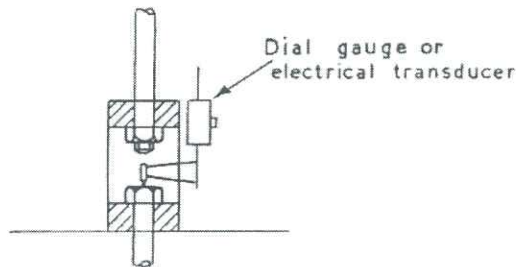
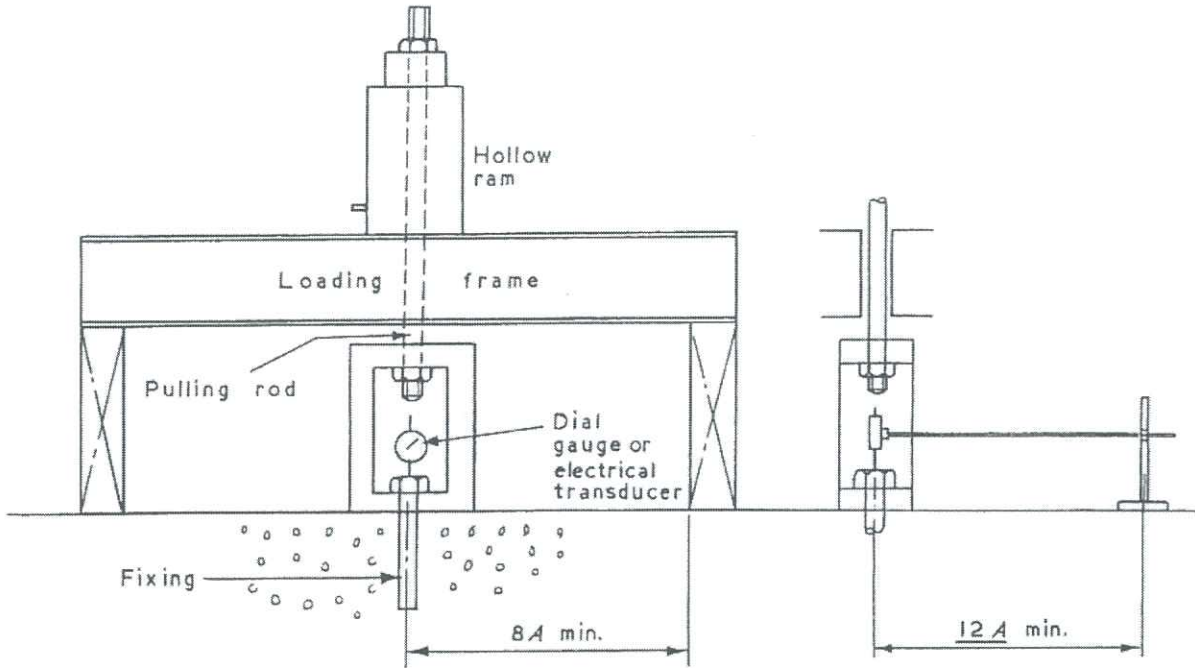
## 7. Record

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





Loading Apparatus



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

