

5th July 2016

Design Quintessence Pty Ltd
Unit 25, 7-9 Percy Street
Auburn NSW 2144

Attention: Mr Ian Wood

STRUCTURAL DESIGN CERTIFICATE

Project Description: Design Quintessence Truss Lifting Beams

We, Partridge Structural Pty Limited, being Professional Structural Engineers, within the meaning of the Building Code of Australia, hereby certify that we have carried out a design review of the proof load testing carried out on the Design Quintessence Truss Lifting Beams and confirm that the following working load limits may be assumed:

A33-A34 Truss Lifting Beam:	7.0 kN (700 kg)
F33-F34 Truss Lifting Beam:	7.0 kN (700 kg)
F43-F44 Truss Lifting Beam:	10.0 kN (1000 kg)
F54 Truss Lifting Beam:	10.0 kN (1000 kg)

Assumptions:

- The values are based on the Load Test Reports provided by Global Truss, dated 08/06/2016, 07/06/2016, 31/05/2016 and 07/06/2016 respectively, and are appended to this certificate.
- One load test was performed on each Design Quintessence Truss Lifting Beam. The capacity was derived by manipulating the results in accordance with the guidelines outlined in Section 8 of AS/NZS 1664.1-1997.
- This certification is to only be read in conjunction with all relevant technical drawings, manuals and the abovementioned Load Test Reports.

Prepared by,



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Design Engineer

Reviewed by,



Rob O'Reilly
BE (Hons) MIEAust CPEng NPER(Structural) RPEQ
Group Director

For and on behalf of:

Partridge Structural Pty Limited

APPENDIX A

LOAD TEST REPORTS

TEST REPORT FOR A33-34 Truss suspension bracket

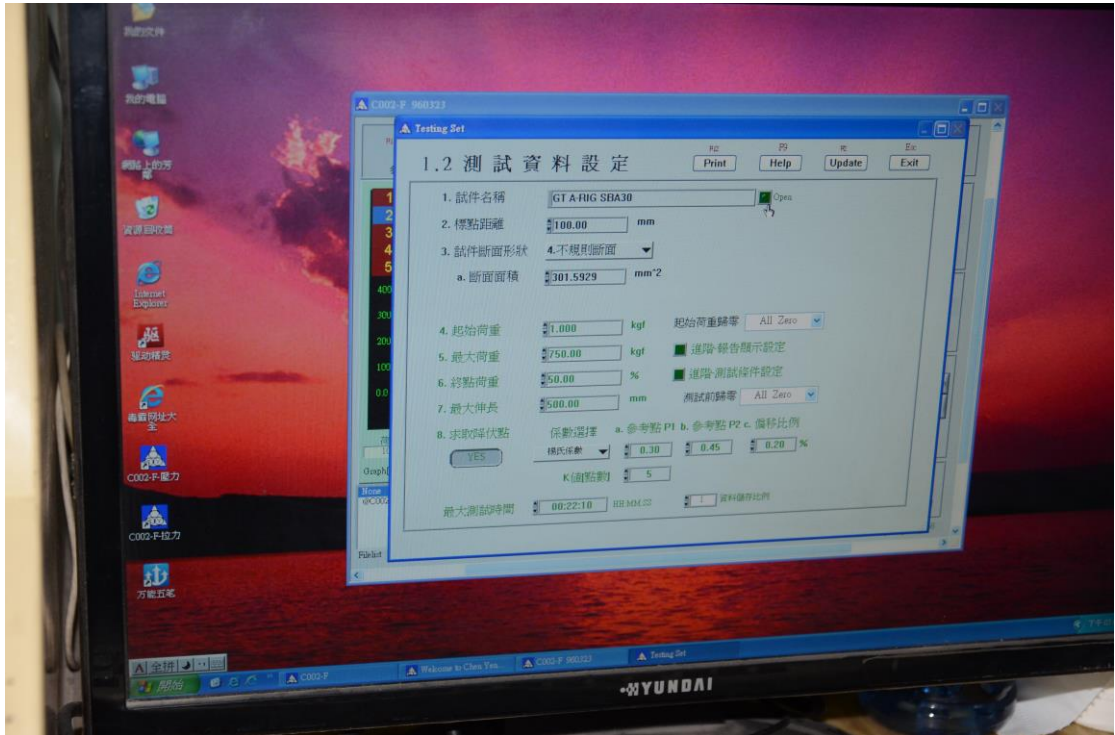
Below picture for show the statement of the conditions of testing



Before apply a test load, distance between plate and screw is 0.156m

the test results for each specimen as described above in the testing

procedure pictures



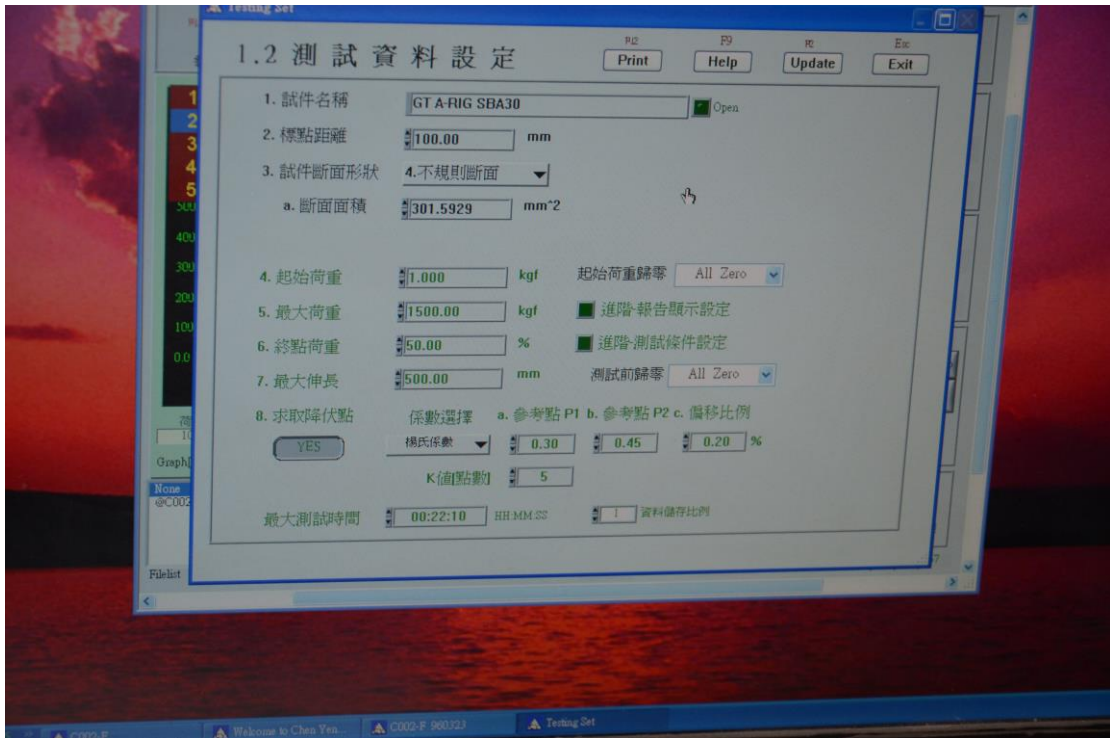
Apply a test load of 750kg



Distance is 0.157m after loaded deformation of the specimen at five minutes



Distance is 0.156m Unload the specimen



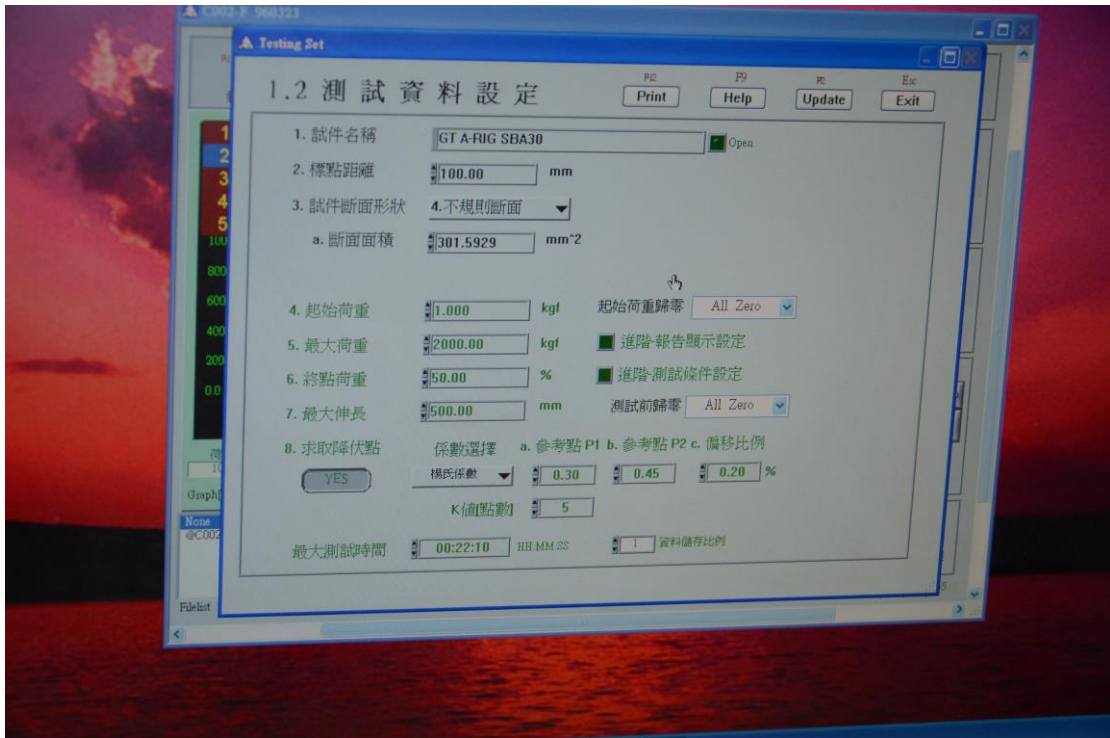
Apply a test load of 1500kg



Distance is 0.157m after loaded deformation of the specimen at five minutes



Distance is 0.156m Unload the specimen



Apply a test load of 2000kg



Distance is 0.157m after loaded deformation of the specimen at five minutes



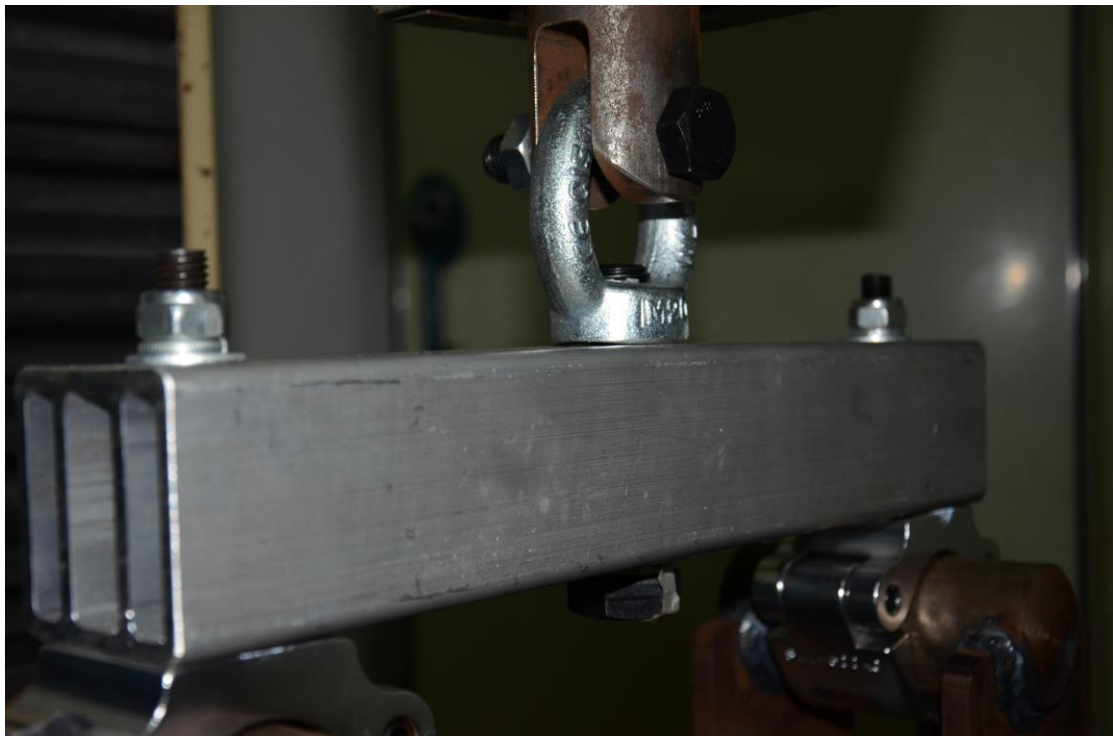
Distance is 0.156m Unload the specimen



Apply a test load of 8000kg



Distance is 0.160m





The eye bolt are obviously elongated, others No obvious deformation



Distance is 0.157m Unload the specimen

Testing Tables

Load Step	Load(N)	Loaded Deformation(mm)	Time Held(s)	Pass/Fail	Unloaded Deformation
1	7500	1	300	Pass	No obvious deformation
2	15000	1	300	Pass	No obvious deformation
3	20000	1	300	Pass	No obvious deformation
Test until failure	80000	4	300	Fail	Eye bolt deformation

2016.06.08

TEST REPORT FOR F33-34 Truss suspension bracket

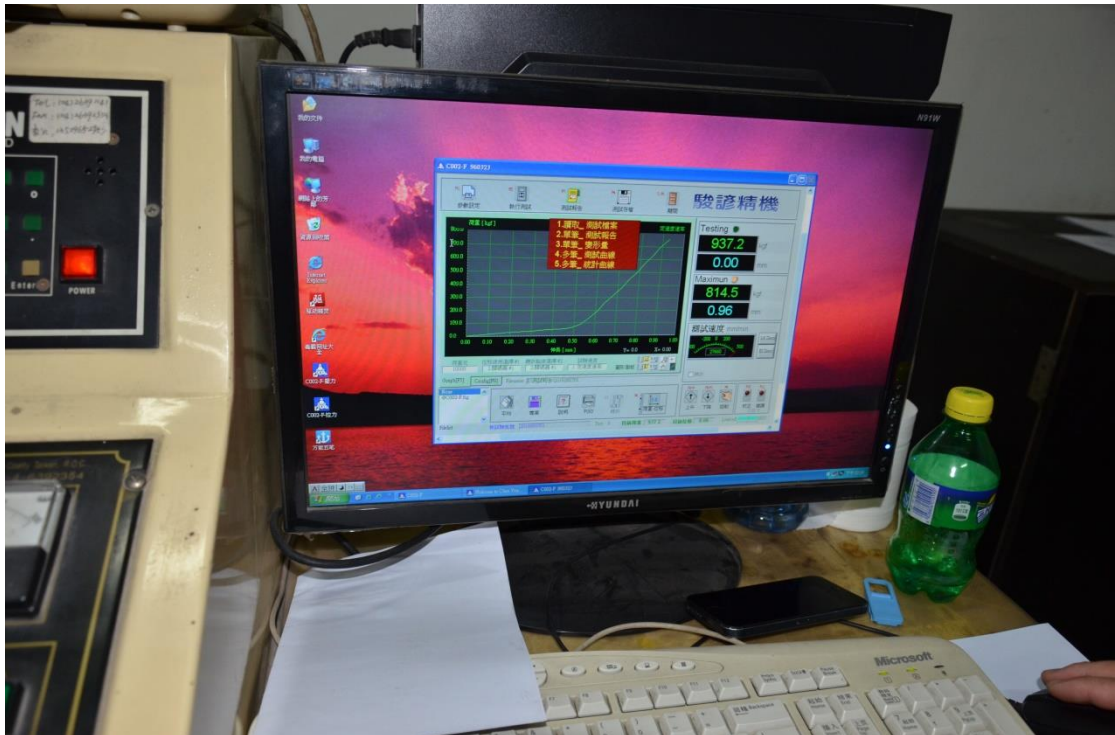
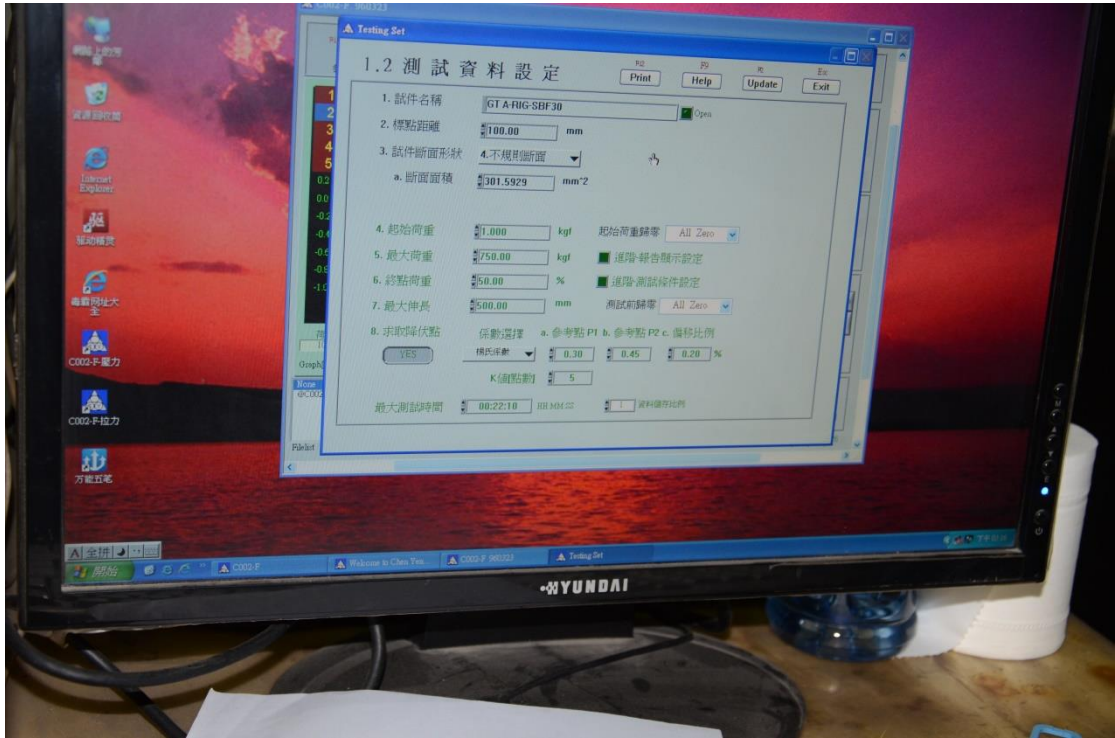
Below picture for show the statement of the conditions of testing



Before apply a test load, distance between plate and screw is 0.163m

the test results for specimen as described above in the testing

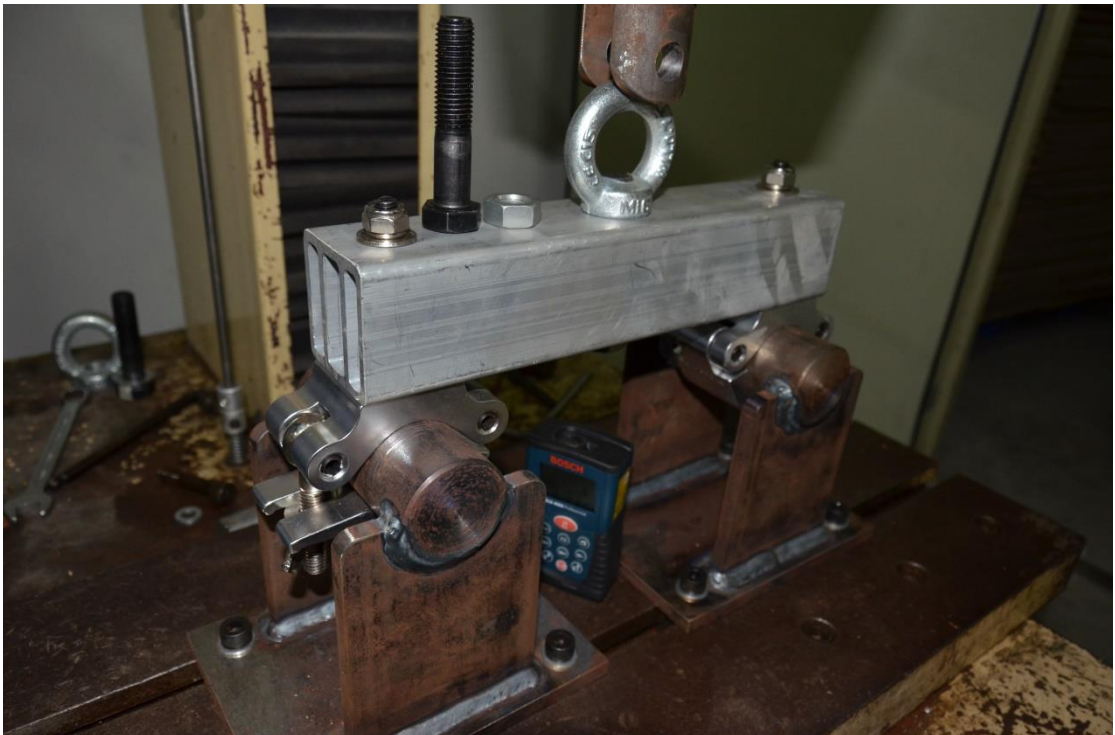
procedure pictures



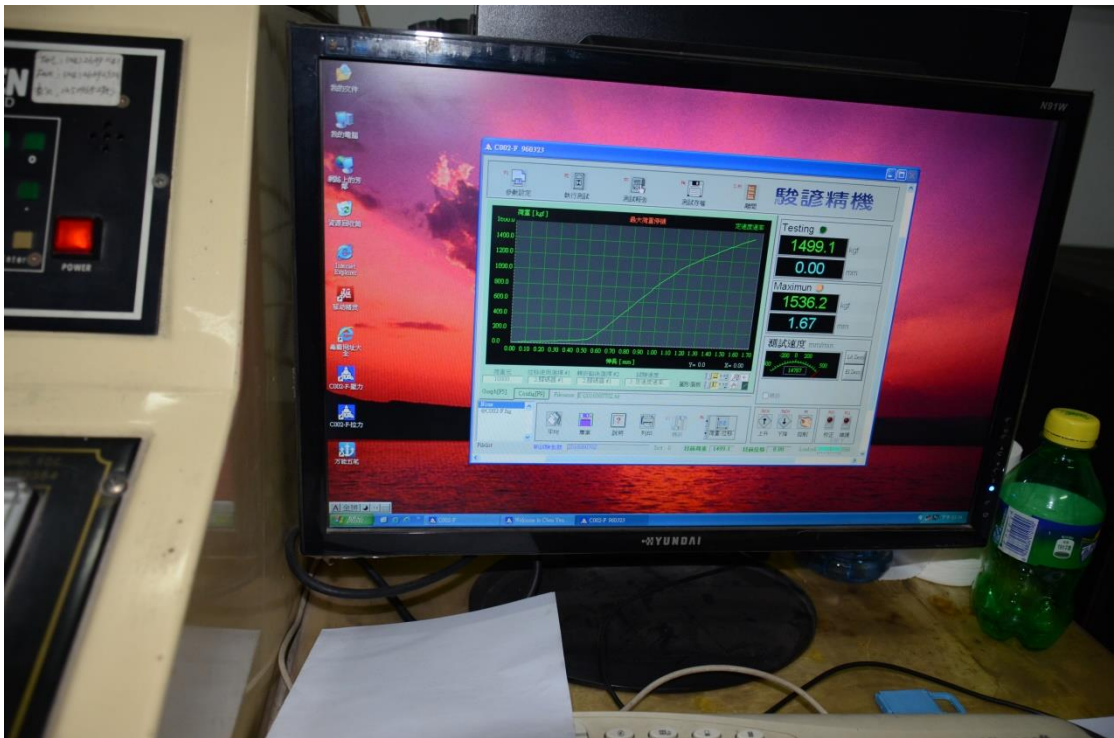
Apply a test load of 750kg



Distance is 0.163m after loaded deformation of the specimen at five minutes



Distance is 0.163m Unload the specimen



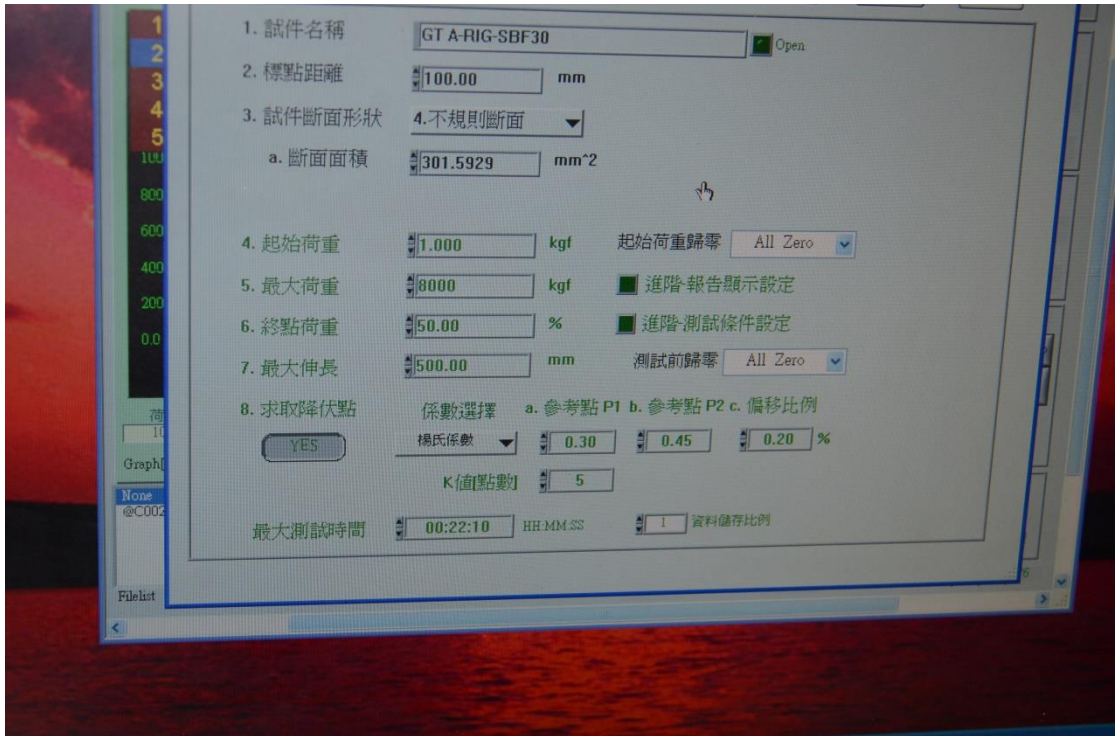
Apply a test load of 1500kg



Distance is 0.163m after loaded deformation of the specimen at five minutes



Distance is 0.163m Unload the specimen



Apply a test load of 8000kg



Distance is 0.167m



The eye bolt are obviously elongated, others No obvious deformation



Distance is 0.163m Unload the specimen

Testing Tables

Load Step	Load(N)	Loaded Deformation(mm)	Time Held(s)	Pass/Fail	Unloaded Deformation
1	7500	0	300	Pass	No obvious deformation
2	15000	0	300	Pass	No obvious deformation
Test until failure	80000	4	300	Pass	Eye bolt deformation

2016.06.07

TEST REPORT FOR F43-44 Truss suspension bracket

Below picture for show the statement of the conditions of testing





Before apply a test load, distance between plate and screw is 0.163m

the test results for each specimen as described above in the testing procedure pictures



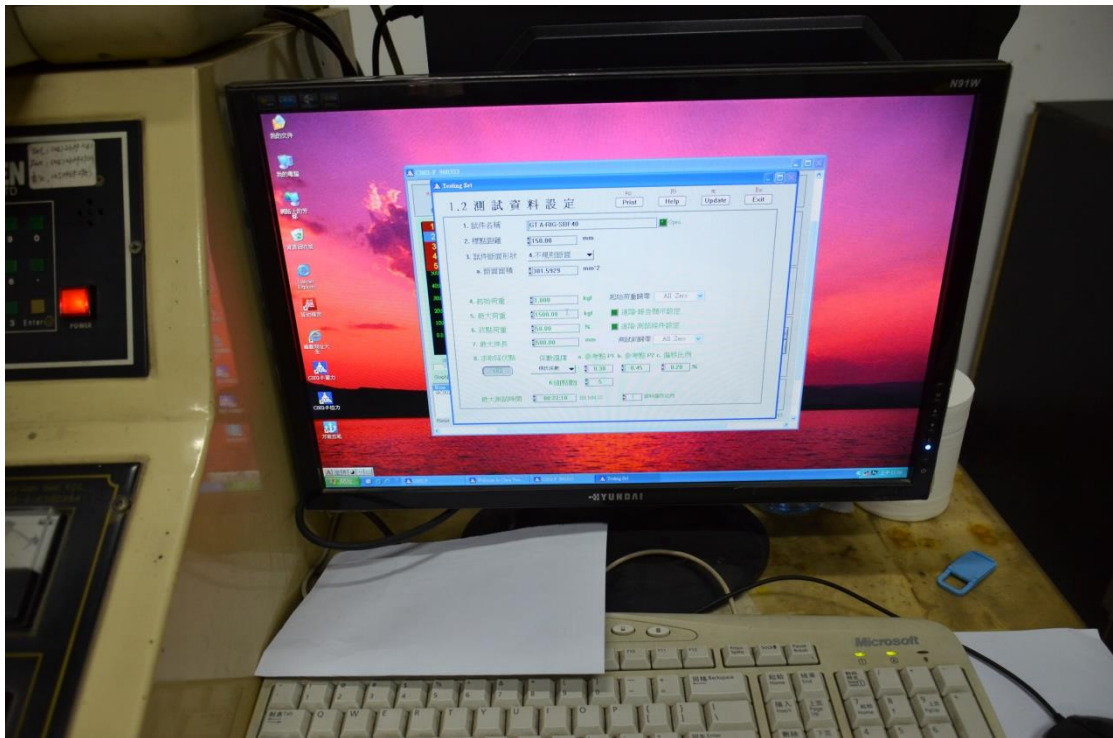
Apply a test load of 750kg



Distance is 0.164m after loaded deformation of the specimen at five minutes



Distance is 0.163m Unload the specimen

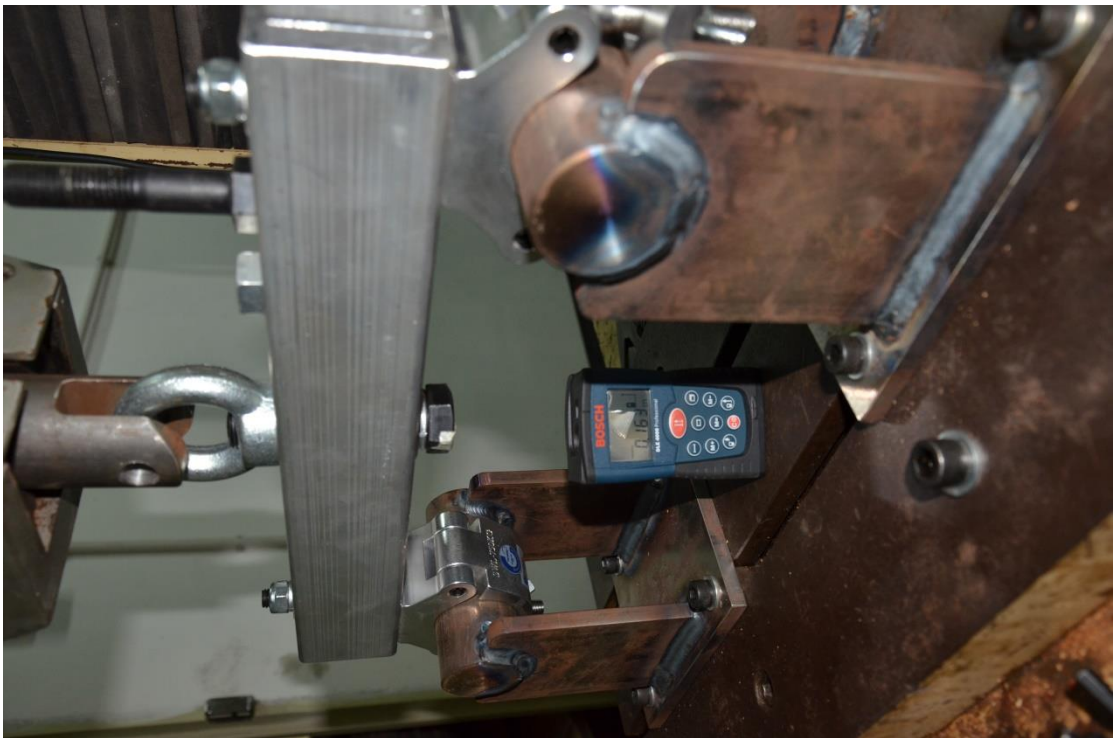


Apply a test load of 1500kg

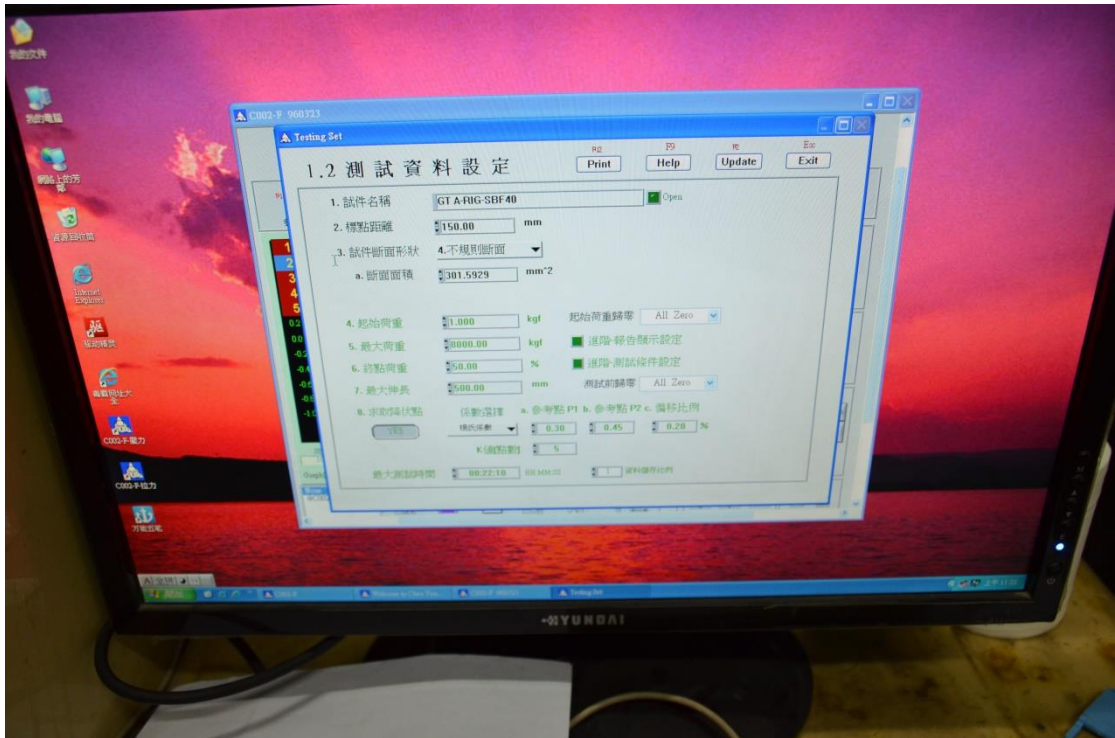


Distance is 0.164m after loaded deformation of the specimen at five minutes





Distance is 0.163m Unload the specimen



Apply a test load of 8000kg



Distance is 0.168m



The eye bolt are obviously elongated, others No obvious deformation



Distance is 0.163m Unload the specimen

Testing Tables

Load Step	Load(N)	Loaded Deformation(mm)	Time Held(s)	Pass/Fail	Unloaded Deformation
1	7500	1	300	Pass	No obvious deformation
2	15000	1	300	Pass	No obvious deformation
Test until failure	80000	5	300	Pass	Eye bolt deformation

2016.05.31

TEST REPORT FOR F54 Truss suspension bracket

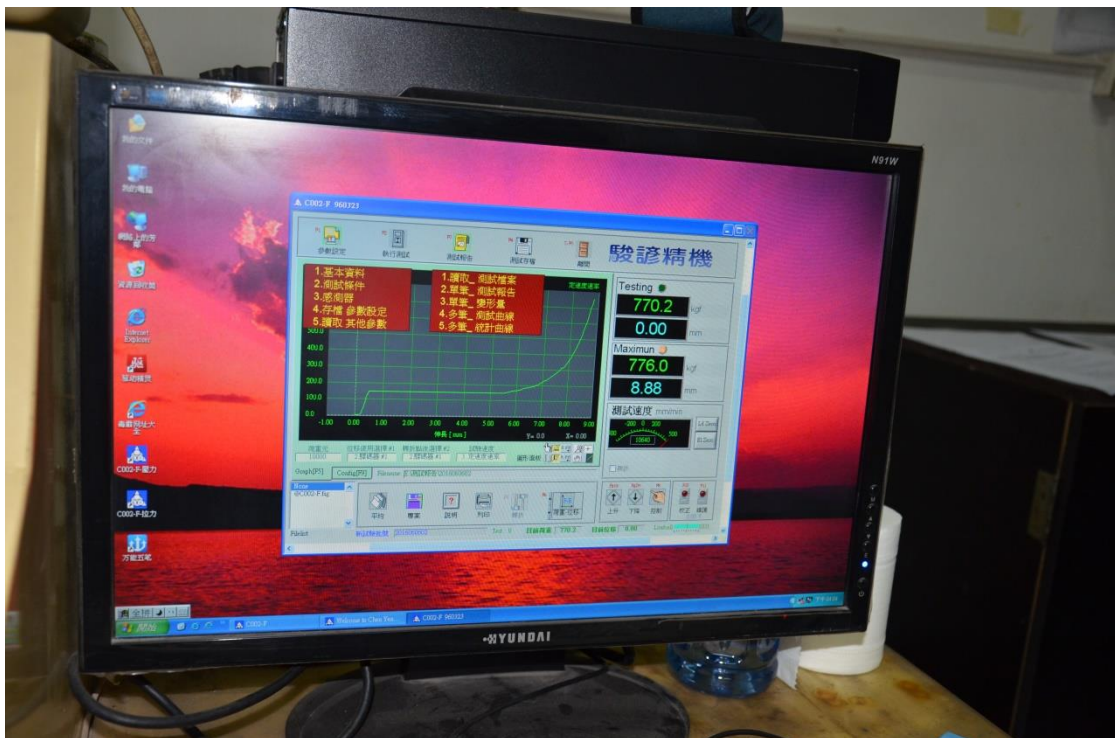
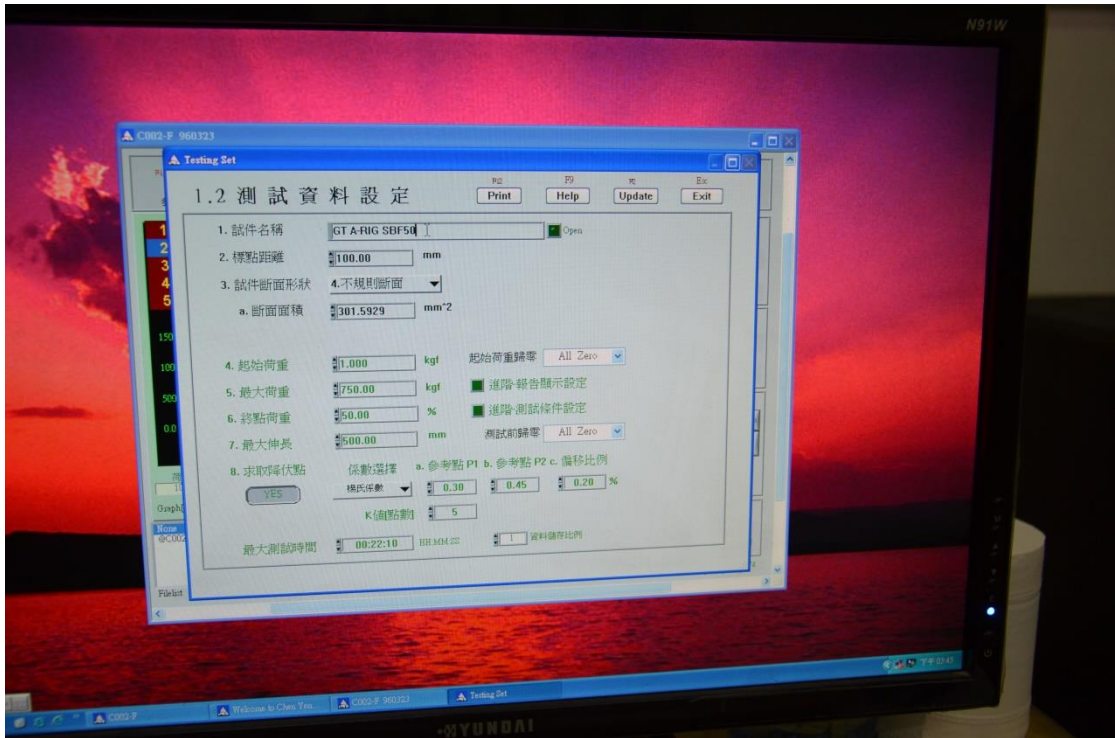
Below picture for show the statement of the conditions of testing





Before apply a test load, distance between plate and screw is 0.163m

the test results for each specimen as described above in the testing procedure pictures



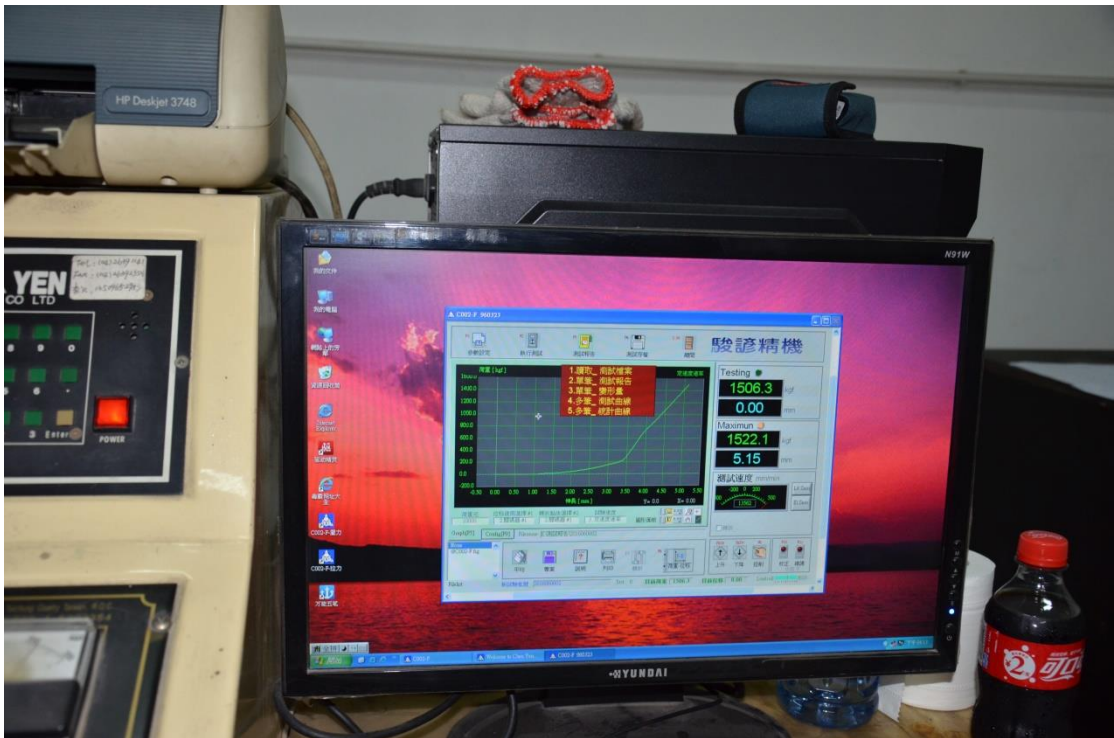
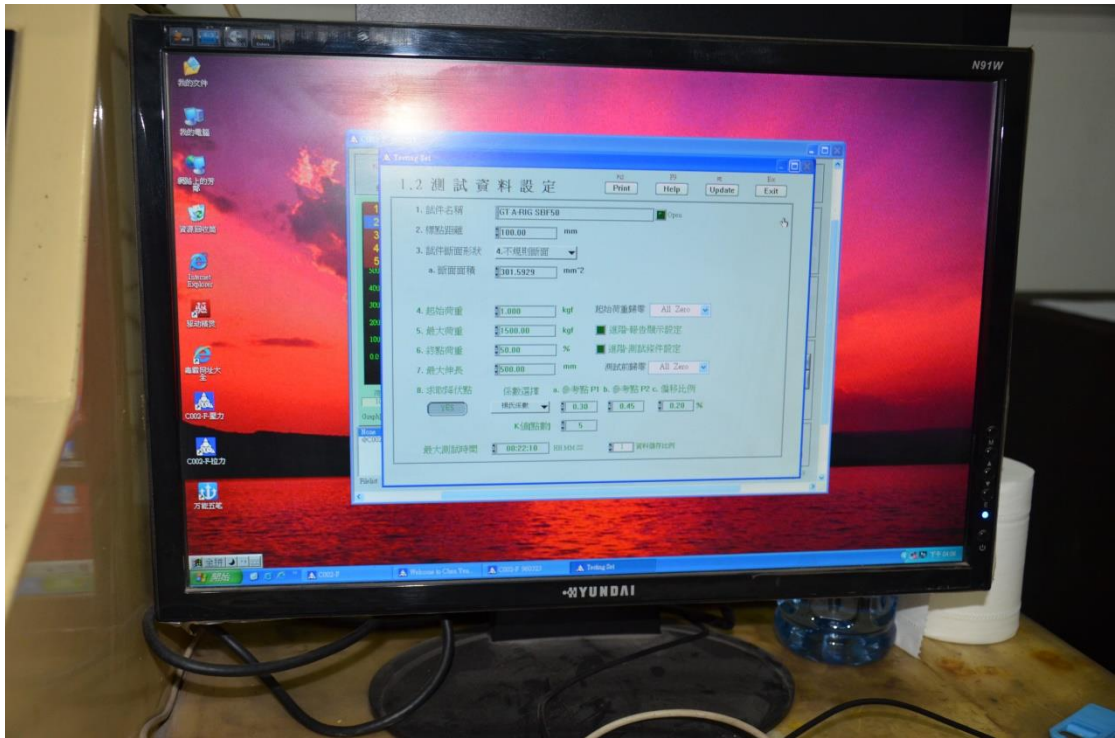
Apply a test load of 750kg



Distance is 0.163m after loaded deformation of the specimen at five minutes



Distance is 0.163m Unload the specimen



Apply a test load of 1500kg



Distance is 0.164m after loaded deformation of the specimen at five minutes



Distance is 0.163m Unload the specimen



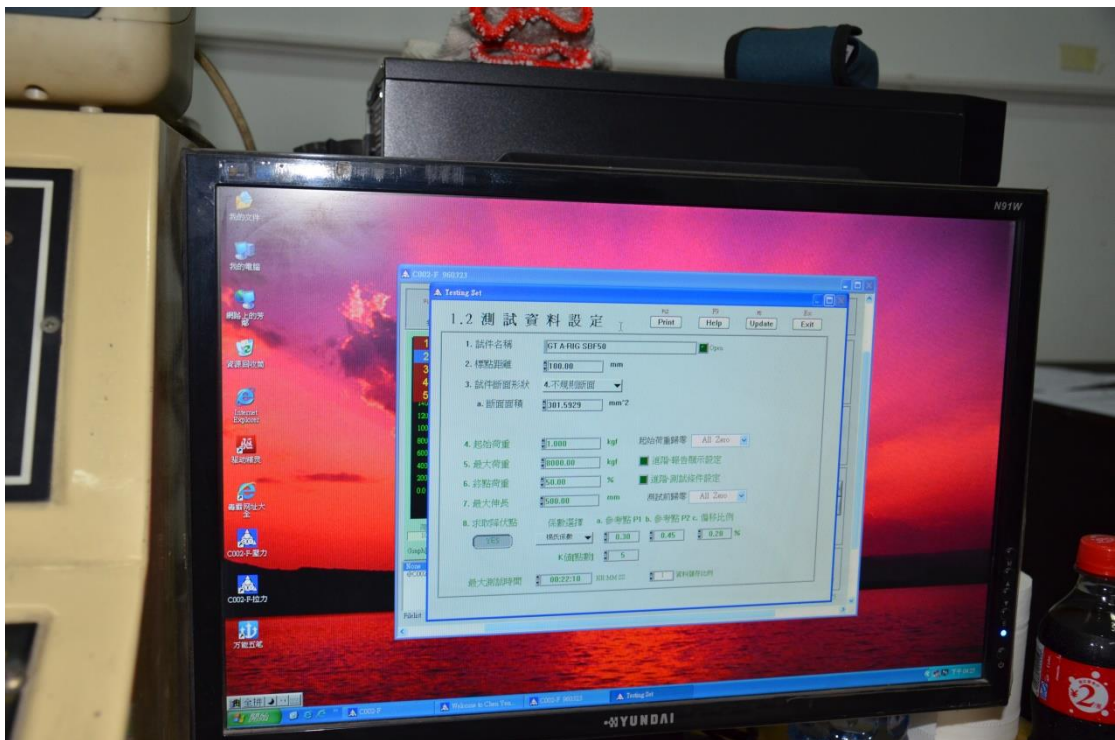
Apply a test load of 2000kg

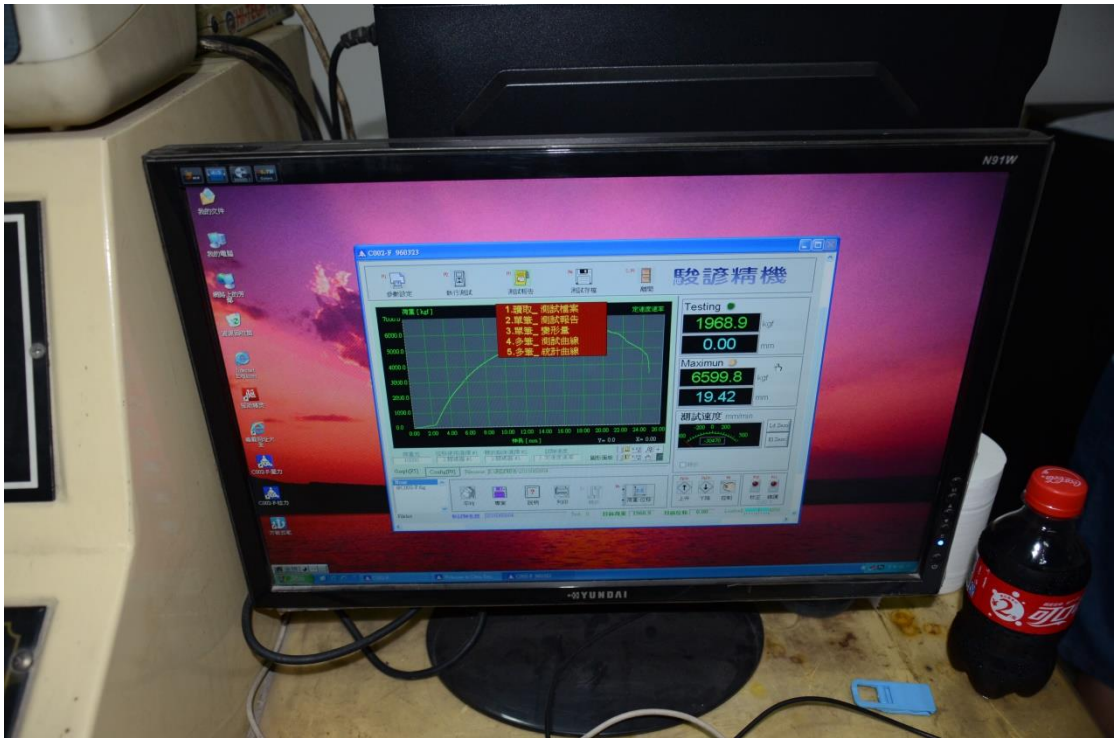


Distance is 0.165m after loaded deformation of the specimen at five minutes



Distance is 0.163m Unload the specimen





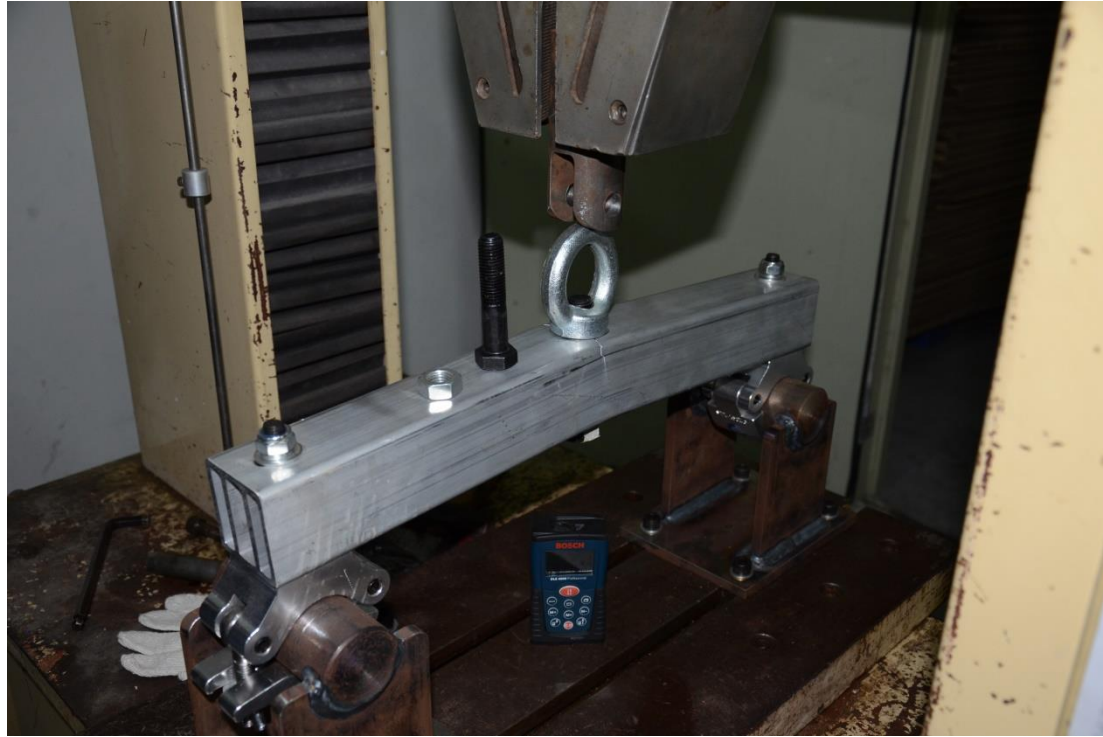
Apply a test load of 8000kg



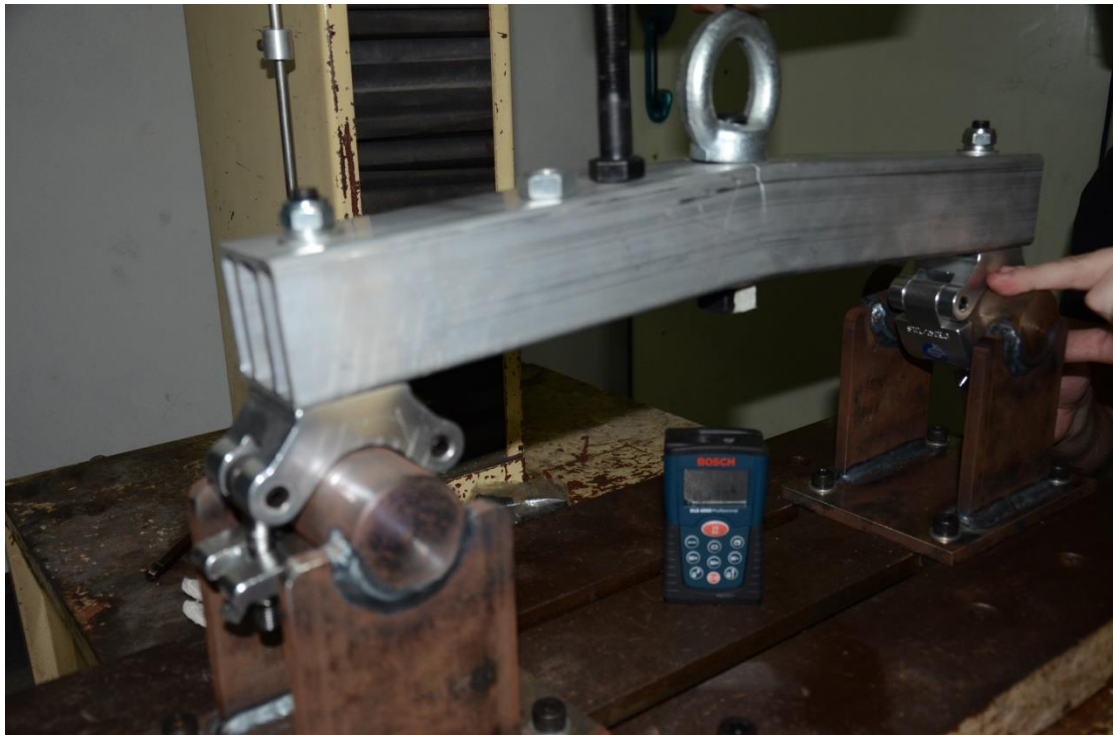
Distance is 0.179m







The eye bolt elongated, and the tube break



Distance is 0.176m Unload the specimen

Testing Tables

Load Step	Load(N)	Loaded Deformation(mm)	Time Held(s)	Pass/Fail	Unloaded Deformatio n No obvious deformatio n No obvious deformatio n No obvious deformatio n Eye bolt deformatio n and tube
1	7500	0	300	Pass	
2	15000	1	300	Pass	
3	20000	2	300	Pass	
Test until failure	80000	16	300	Fail	

2016.06.07