

MECHANICAL TESTING REPORT

AlfaTest Report No: 20130745M01 Date of Inspection: 20 March 2013
Location of Test: Brisbane Laboratory, Qld Client Order No: 00000164
Client Name/Address: Cliff Scaffoldings (P) Limited
Plot No. 129 A, NSEZ, Noida 201305 (UP)
Client Job No: Not specified
Project Details: Tensile Testing and Chemical Analysis of supplied sample.
Item Details: Qty 1, Scaffold Tube Section as supplied.
Sample Details: Refer results

TEST RESULTS

Test	Comments	Result
Tensile Testing	Results on page 3	Complies
Chemical Analysis	Results on page 4	Refer test results

Compliance The results of the testing undertaken on the supplied component comply to the requirements of AS/NZS 1163

Technician/s: Fabian Lyons
George YunHui Jiang
David Carter

Approved by: Fabian Lyons

Signature:



Issue Date: 21 March 2013

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TECHNICAL DETAILS

TENSILE TEST

Test Procedure:	TP 114	Test Spec:	AS 1391
Client Requirements:	Inspect and Report Test Results	Acceptance Spec:	AS/NZS 1163
Specimen ID:	M01		
Material Spec:	C250		

Test Equipment

Equipment:	Avery 50T Universal Test Machine	Equipment No:	422
Equipment:	Strain Rate Control Unit	Equipment No:	1357
Equipment:	Extensometer	Equipment No:	424
Extensometer (mm):	50		
Target Strain ($s^{-1} 10^{-6}$):	250 - 2500		
Actual Strain ($s^{-1} 10^{-6}$):	250 - 2500		

Sample Condition Refer Test Results

Test Restrictions/
Deviations: Nil

Compliance: The supplied sample complies with the requirements of AS/NZS 1163

TECHNICAL DETAILS

CHEMICAL ANALYSIS

Test Procedure:	TP 208	Test Spec:	TP 208
Client Requirements:	Report Test Results	Acceptance Spec:	AS/NZS 1163
Specimen ID:	M01		
Material Spec:	C250		

Test Restrictions/
Deviations: In accordance with the requirement of National Association of Testing Authorities Directive this method does not carry NATA Endorsement.

Compliance: The chemical analysis results of the supplied sample comply with the analysis range of AS/NZS 1163. With the exception of high silicon (requirement is 0.05 max).

TEST RESULTS

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TENSILE TESTING

Examination Criteria	Specimen ID	
	Unit	Test Value
		M01
Outer Diameter	mm	48
Thickness or Diameter	mm	3.87
Width	mm	12.45
Area	mm ²	48.22
Original Gauge	mm	50.00
Yield (0.2%)	kN	18.47
UTS	kN	20.74
Final Gauge	mm	61.31
Final Diameter	mm	N/A
Yield (0.2%)	MPa	383
UTS	MPa	430
Elongation	%	23
Tensile Stress/ Proof Stress	Ratio	1.12
Reduction in Area	%	N/A
Compliance		Complies

Sample Conditions	
Temperature of test	Ambient 22°C
Heat Treatment on sample:	175°C for 35min
Mechanical straightening or flattening of sample:	Refer results
Coating type on sample:	Not applicable
Area calculated on base or total thickness:	Total
Test piece direction:	Longitudinal
Type of test specimen:	Parallel Length specimen
Parallel length:	75mm
Dimensions of specimen:	Refer results
Features prior to test:	Nil
Reinforcement removed:	Not applicable
Extra weld metal added:	Not applicable
Location of fracture:	Parent
Features post test :	Nil

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FERROUS CHEMICAL ANALYSIS

Ref	Fe	C	Mn	Si	S	P	Ni	Cr
	%	%	%	%	%	%	%	%
Target								
M01	Bal	0.10	0.37	0.10	0.02	0.02	<0.01	0.01

Ref	Mo	Cu	V	Nb	Ti	Al	B	CE
	%	%	%	%	%	%	%	%
Target								
M01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.005	<0.0005	N/A