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Structural Design Check Certificate

Project Description : Existing Monorail in the Pump Station at
Hopkins St., Beaudesert

For : Altra9 Pty Ltd

Drawing Number : Sketch and Detail dated 24/4/2012

Our Reference : 12-008-E

Scope of Certificate:

Structural steel monorail beam

Design Criteria:

Safe Working Load 2.0 T

Applied Load – 3035 kg for a max deflection of 14.3 mm

Codes of Practice:

AS 4100 1998 Steel structures

"I hereby certify that the structure under consideration has been designed checked in accordance with the relevant Standard Codes and publications referred to herein and in accordance with the good engineering practice.


On this basis, the structure as constructed is structurally sound."

Signed:

Date: 8/5/2012

Arthur Thiris R.P.E.Q. (3325)

CERTIFICATE OF LOAD TEST AND EXAMINATION

QUANTITY	I/D NUMBERS	DESCRIPTION	LOAD APPLIED kN	WORK LOAD LIMIT
1	HOPKINS ST	<p>FIXED MONORAIL BEAM F/W 2T GIRDER TROLLEY</p> <p>E/L: 7700MM</p> <p>LOAD CELL USED: PE43</p> <p>THE ABOVE ITEMS WERE INSPECTED, BEFORE AND AFTER TEST BY A COMPETENT OFFICER AND FOUND TO BE FREE FROM PERMANENT SET, FLAW OR OTHER VISUAL DEFECT. THESE ITEMS HAVE BEEN TESTED IN ACCORDANCE WITH THE TESTING SECTION OF THE STANDARD LISTED BELOW AND HAVE PASSED.</p> <p style="text-align: right;">P1007.</p>	2210KG	2 TONNE
 <p>Accredited Laboratory Number: 13553</p> <p>This Document Shall Not be reproduced Except in full</p>		<p>CERTIFICATE NUMBER: :ALSQ15473</p> <p>TEST SPECIFICATION: :AS1418.18</p> <p>CUSTOMER REFERENCE: :P1007</p> <p>OUR REFERENCE NUMBER: :113314</p> <p>DATE OF TEST: :30.4.2012</p> <p>CUSTOMER: :RE-PUMP AUSTRALIA P/L</p> <p>AUTHORIZED SIGNATORY: :RICK BARRETT</p> <p>LOCATION: 678 Beaudesert Road, Rocklea QLD. 4106. RBA</p> <p>The tests, calibrations or measurements covered by this document have been performed in accordance with Australian standards.</p>		

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Rocklea, QLD. 4106
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24/4/12.

-
- EXISTING CONCRETE BEAM/WALL
- EXISTING MONORAIL BEAM.
- 1300
- 6200
- 3100
- 3100
- EXISTING CONCRETE COLUMN/WALL
- POINT 'A'

POINT 'B'
+ 35 kg (chain + trolley)

Diagram of a Z-section with dimensions: top flange 118mm (4.66 inches), web 7.9mm (0.31 inches), total height 254mm (10 inches). Centroidal axes X-X and Y-Y are shown.

$(29.4 \text{ kN}) \quad 3000 \text{ kg} - \quad 10.30 \text{ (mm)}$

SECTIONAL AREA (in^2) = 7.46
WEIGHT (LB/FT) = 25.4
MOMENT OF INERTIA

$$I_x (\text{in}^4) = 124 \quad I_y (\text{in}^4) = 6.79$$

SECTION MODULUS	
$w_x (in^3)$	$w_y (in^3)$
24.7	2.91