



BRICK & MORTAR RESEARCH LABORATORY

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NATA Accredited Laboratory No 658

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TEST CERTIFICATE NO 8213

DATE: 21/6/13

STRENGTH OF MASONRY CONNECTORS

CLIENT: Wilmaplex Pty Ltd
57 Lathams Rd
Carrum Downs Vic 3201

SAMPLE: Galvanised (ETZ 600) and stainless steel (ETSS 600) masonry connectors, 280 x 40 mm (see photo)

SAMPLER: Client

RECEIVED: 23/5/13

DATE OF TESTING: 17.to 21 June 2013

TEST

METHOD OF TEST

Determination of:

Strength of masonry connectors

AS/NZS 2699.2-2000

NATA Accredited Laboratory Number 658

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian / national standards.
Accredited for compliance with ISO/IEC 17025.



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MRACI, C Chem
Manager

Test Certificate No 8213

21/6/13

STRENGTH OF MASONRY CONNECTORS – galvanised (ETZ 600)

Specimen no	Peak load, kN	Displacement, mm				Preliminary stiffness, kN/mm	Serviceability stiffness, kN/mm
		δ_a	δ_b	δ_c	δ_d		
1	2.18	0.40	0.80	1.50	2.20	0.67	0.53
2	2.38	0.30	1.90	2.65	2.70	0.31	0.92
3	2.48	0.55	0.00	1.70	8.00	0.64	0.09
4	2.71	0.15	0.95	1.70	2.05	0.48	0.67
5	3.02	0.10	0.60	1.25	1.30	0.64	1.06
6	2.18	-0.50	-0.25	0.40	0.50	0.82	0.99
7	2.64	0.20	0.80	1.50	1.50	0.57	1.06
8	2.62	1.50	2.15	2.90	2.95	0.53	0.92
9	2.20	0.40	0.70	1.00	1.00	1.23	2.47
10	2.24	0.60	0.80	1.30	1.35	1.06	1.34
Mean	2.47	0.37	0.85	1.59	2.36	0.70	1.01
Coeff. of variation	0.11	1.36	0.87	0.46	0.90	0.39	0.61

Characteristic preliminary stiffness: 0.64 kN/mm

Characteristic serviceability stiffness: 0.87 kN/mm

Characteristic strength: 1.81 kN

STRENGTH OF MASONRY CONNECTORS – stainless steel (ETSS 600)

Specimen no	Peak load, kN	Displacement, mm				Preliminary stiffness, kN/mm	Serviceability stiffness, kN/mm
		δ_a	δ_b	δ_c	δ_d		
11	2.28	0.35	2.50	3.80	4.00	0.20	0.46
12	2.25	0.30	3.00	4.25	4.45	0.17	0.47
13	2.23	0.10	3.50	4.65	4.80	0.15	0.53
14	2.15	1.70	5.30	6.50	6.70	0.14	0.49
15	2.08	0.40	3.60	4.60	4.75	0.16	0.60
16	2.64	2.40	6.80	8.10	8.20	0.12	0.49
17	2.47	1.40	5.60	6.70	6.80	0.13	0.57
18	2.60	1.40	5.60	6.70	6.80	0.13	0.57
19	2.35	-2.00	3.80	5.05	5.30	0.10	0.46
20	1.87	-0.70	2.50	3.40	3.60	0.17	0.63
Mean	2.29	0.54	4.22	5.38	5.54	0.15	0.53
Coeff. of variation	0.10	2.38	0.35	0.28	0.27	0.20	0.12

Characteristic preliminary stiffness: 0.14 kN/mm

Characteristic serviceability stiffness: 0.51 kN/mm

Characteristic strength: 1.74 kN

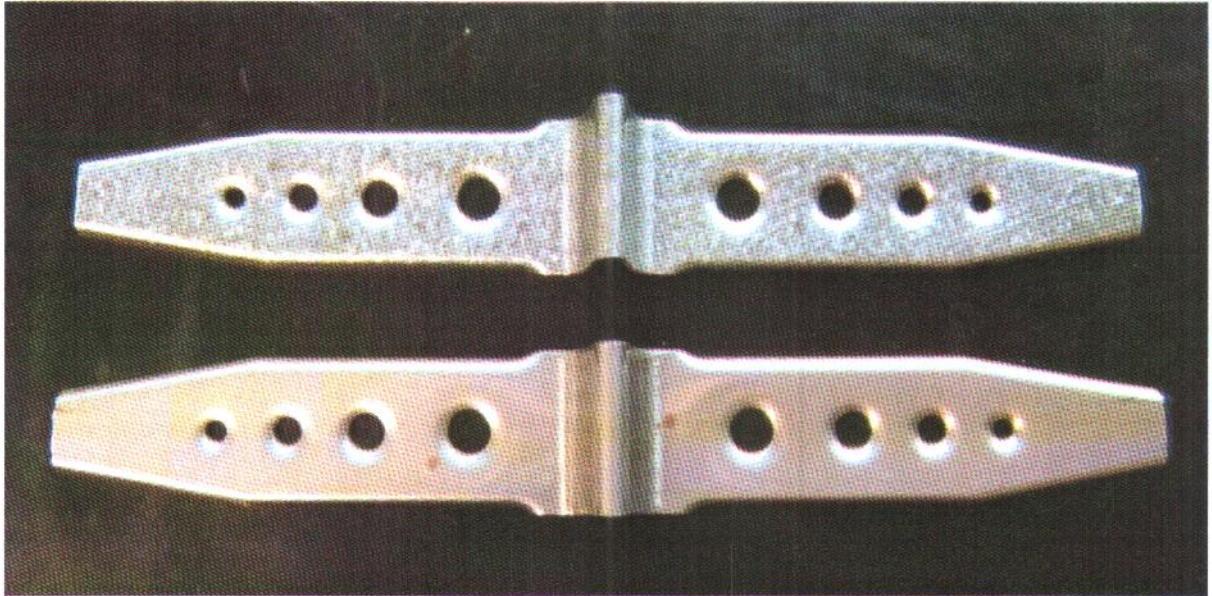


Photo 1: Galvanised and stainless steel connectors

Description of the test specimens:

Each end of the connector was embedded in mortar (1 cement : 1 lime : 6 sand) between two bricks, with a spacing of 20 mm between the couplets. Specimens were wrapped in plastic sheeting and cured for 7 days before testing.

Testing arrangement:

Couplet 1 was clamped to the testing machine. Couplet 2 was supported 25 mm in from the far end. The load was applied to couplet 2, 25 mm from the central spacing.

Mean load v deflection behaviour of the connectors:

