



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.



Stuart Errey
MRACI, C Chem
Manager

STRENGTH OF MASONRY CONNECTORS – galvanised (ETZ 600)

Specimen no	Peak load, kN	Displacement, mm				Preliminary stiffness, kN/mm	Serviceability stiffness, kN/mm
		$\bar{\delta}_a$	$\bar{\delta}_b$	$\bar{\delta}_c$	$\bar{\delta}_d$		
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
		$\bar{\delta}_a$	$\bar{\delta}_b$	$\bar{\delta}_c$	$\bar{\delta}_d$		
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

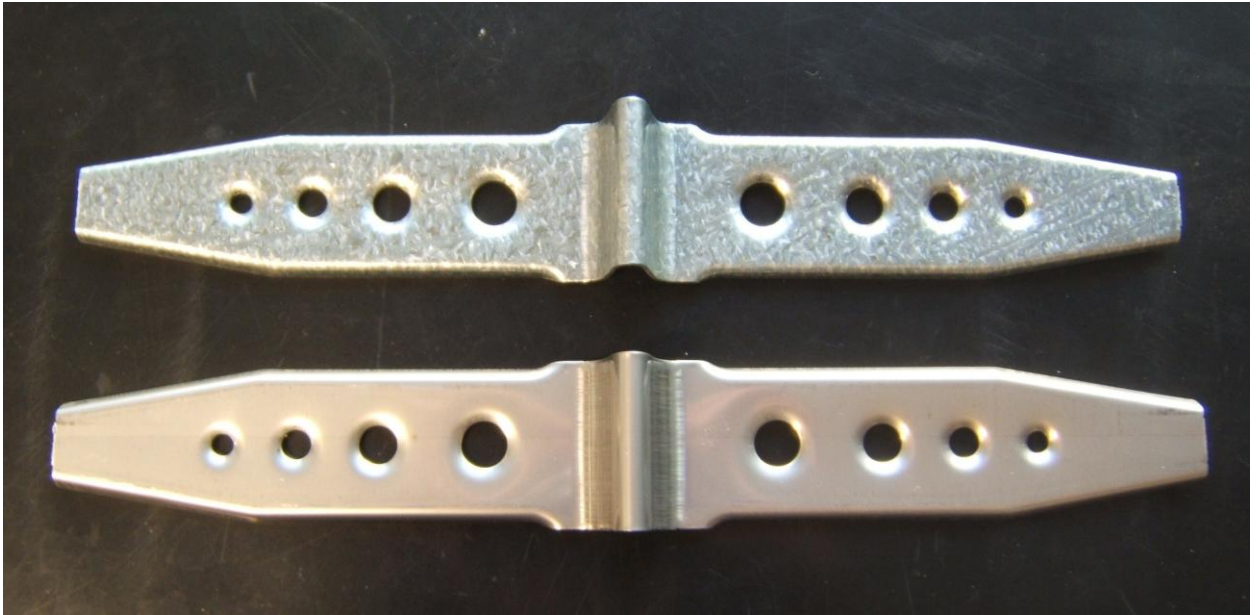


Photo 1: Galvanised and stainless steel connectors

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:

