MTS
ABN: 11 088 395 153

Laboratory Address:
Unit 1/15 Pickering Road
Mulgrave Vic 3170

Melbourne Testing Services Pty Ltd

Delivery Address:	**Postal Address:**
1/15 Pickering Road	PO Box 5111
Mulgrave Vic 3170	Brandon Park Vic 3150

Telephone:	61 3 9560 2759
Facsimile:	61 3 9560 2769
Email Address:	info@melbtest.com.au
Web Address:	www.melbtest.com.au

Mechanical Testing

- Tensile
- Compression
- Bend
- Shear
- Load
- Structures
- Fasteners
- Tensioning & Staying Systems
- Structural Bearings

NATA
ACCREDITED FOR
TECHNICAL
COMPETENCE

MTS
ABN: 11 088 395 153

Laboratory Address:
Unit 1/15 Pickering Road
Mulgrave Vic 3170

Melbourne Testing Services Pty Ltd
Telephone: 03 9560 2759
Facsimile: 03 9650 2769
Email: info@melbtest.com.au
Web: www.melbtest.com.au

IN CONFIDENCE TO THE CLIENT

REPORT NO: MT-12/160

LOAD TESTING OF A TOILET BACKREST EGR800 GRABRAIL

CLIENT: **AXESS TRADING PTY LTD**
ATT: RUDI
25/69 ACACIA ROAD
FERNTREE GULLY VIC3156

DATE OF TESTING: MARCH 28TH TO 29TH 2012

DATE OF REPORT: MARCH 30TH 2012

TEST SYNOPSIS:

An EGR800 toilet backrest/grabrail assembly was delivered to the MTS laboratory for load testing (see Fig.1). At the request of the client, the grabrail was to be proof load tested in accordance with AS1428.1-2009 DESIGN FOR ACCESS AND MOBILITY. PART 1: GENERAL REQUIREMENTS FOR ACCESS - NEW BUILDING WORK.

FIG.1.
EGR800 TOILET BACKREST/GRABRAIL

Construction details for the backrest/grabrail were provided by the client and are as follows:

- *Tube Diameter OD: 25.4mm*
- *Tube Wall Thickness: 1.2mm*
- *Tube Material: 304 Stainless Steel*
- *Flange connection to plates: TIG welded*

The aim of the test was to verify the backrest's performance in terms of its inherent strength characteristics. The scope of the work did not extend to performance attributes of fitted backrests or grabrails installed onto walls of new or existing buildings.

TEST PROCEDURE:

The backrest/grabrail was fixed to a mounting frame using four (4) M8 bolts. The mounting frame was in turn secured to the base plate of a calibrated universal testing machine (see Fig.2). Load testing was applied in both outward and downward directions and at multiple points on the rail including mid-span as well offset configurations. The position of the load point was selected on the basis of applying the worst case loading condition.

PROOF LOAD TEST METHOD:

In accordance with AS 1428.1-Clause 17(c), load was applied at a constant rate until a force of 1100 Newtons ≈112kg was achieved. The application of load was then held constant for 5 seconds before terminating the test.

PROOF LOAD TEST OBSERVATIONS:

Inspection of the EGR800 toilet backrest/grabrail both during and at completion of loading did not reveal any visible evidence of permanent deformation to the tubular framework, attachments or wall bracket components.

PROOF LOAD TEST COMMENTS:

In accordance with AS 1428.1 Clause 17(c), the EGR800 toilet backrest/grabrail as reported herein has passed the specified proof load of 1100 Newtons.

Proof loading test curves are provided in Figure 3.

FIG.2A
MID-SPAN DOWNWARD LOADING

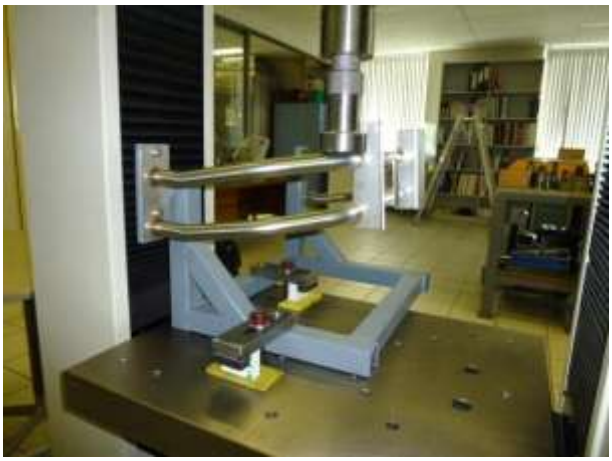

FIG.2B
OFFSET DOWNWARD LOADING

FIG.2C
MID-SPAN OUTWARD LOADING

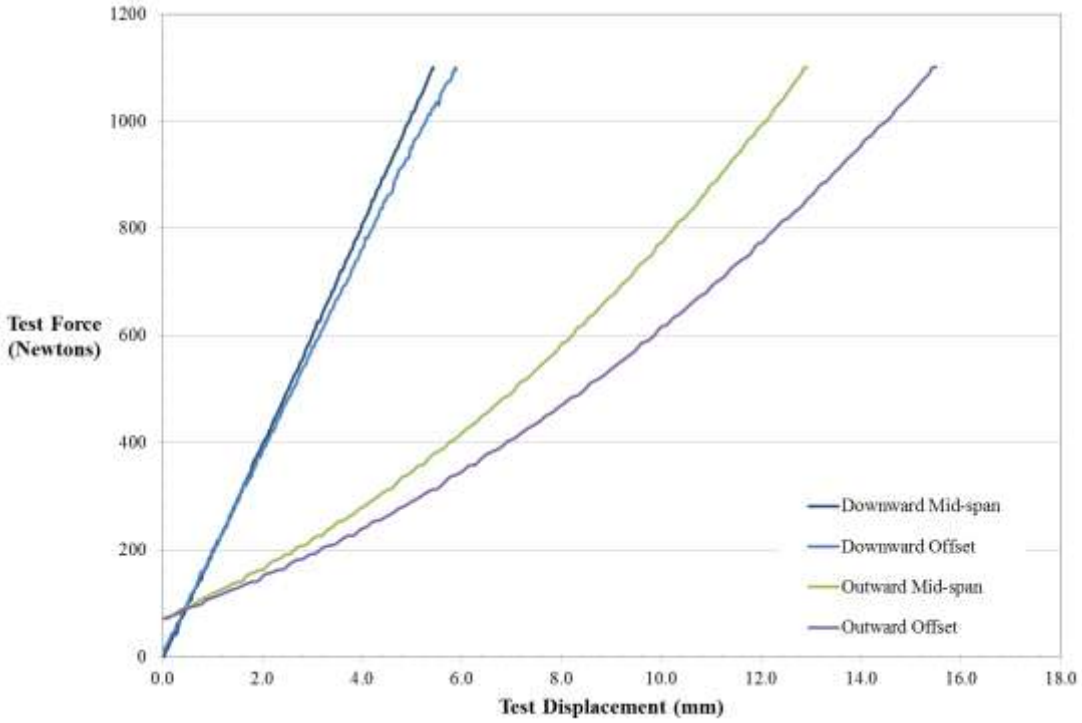

FIG.3
PROOF LOADING TEST CURVES

OVER LOAD TEST:

Upon completion of proof load testing, overload tests were conducted to verify that the backrest/grabrail could withstand a test load of 3.3kN ≈330kg. As with proof load testing, loads were applied in the downward and outward direction and maintained for 5s. In each case the EGR800 toilet backrest grabrail sustained the applied test load without failure by cracking or fracture of the tube or welded joints. However, plastic deformation (bending) of the tubular material at the welded connection was observed.

Notes:

1) Melbourne Testing Services Pty Ltd shall not be liable for loss, cost, damages or expenses incurred by the client or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Melbourne Testing Services Pty Ltd be liable for consequential damages including, but not limited to, lost profit, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested.
2) This report only indicates compliance of the grabrail in its state at the time of testing. It should not be taken as a statement that all similar grabrails or components of grabrails in all states of repair, would also be found to comply.
3) It remains the responsibility of the client to ensure that the sample tested is representative of the entire product batch.
4) This report only covers the structural integrity of the grabrail assembly.
5) This report does not cover the actual fixing of the grabrails to walls of buildings and other structures.
6) MTS shall take no responsibility for the procurement and authenticity of the grabrail as described herein.
7) MTS shall take no responsibility for the installation procedures used for the grabrail as described.

MARK WILKIE
Laboratory Test Technician