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IN CONFIDENCE TO THE CLIENT

REPORT NO: MT-13/727

BI – DIRECTIONAL LOAD TESTING OF AN EGT46 DROP DOWN TOILET RAIL

CLIENT: **AXESS TRADING PTY LTD**
UNIT 25, 69 ACACIA ROAD
FERNTREE GULLY VIC 3156

DATE OF TESTING: OCTOBER 31ST 2013

DATE OF REPORT: NOVEMBER 6TH 2013

TEST SYNOPSIS:

An EGT46 dropdown, grab-rail assembly was delivered to the MTS laboratory for load testing (see Fig.1). At the request of the client, the grab rail was to be load tested in accordance with AS1428.1-2009 DESIGN FOR ACCESS AND MOBILITY. PART 1: GENERAL REQUIREMENTS FOR ACCESS - NEW BUILDING WORK.

Construction details for the grab rail were as follows:

- *Tube Diameter OD:* *38.2mm*
- *Tube Material:* *Stainless Steel*
- *Flange connection to plates:* *TIG welded*

FIG.1
EGT46 DROPDOWN TOILET RAIL

The aim of the test was to verify the grab-rails performance in terms of its inherent strength characteristics when tested in both the lateral (see Fig.1) and vertical positions. The scope of the work did not extend to performance attributes of grab-rails installed onto walls of new or existing buildings.

TEST PROCEDURE:

The grab-rail was fixed to a mounting frame using four (4) M12 bolts. The mounting frame was in turn secured to the base plate of a calibrated universal testing machine (see Fig.2). Test load was applied in the lateral direction both upward and downward at multiple points on the grab-rail including 450mm and 650mm from the attachment mounting frame. Further tests were conducted on the same points in the vertical position (see Fig.4). A final destructive test was conducted by applying the load at the 650mm load point in the lateral direction.

PROOF LOAD TEST METHOD:

In accordance with AS 1428.1-Clause 17(c), a load was applied at a constant rate until a force of **1100 Newtons ≈112kg** or permanent deformation of any part of the grab-rail occurred. The application of load was then held constant for 10 seconds before terminating the test.

PROOF LOAD TEST OBSERVATIONS:

Inspection of the EGT46 toilet grab-rail, both during and at completion of loading 450mm and 650mm out from the mounting frame when tested in the lateral position, did not reveal any visible evidence of permanent deformation to the tubular framework, attachments or wall bracket components. When tested at the same points in the vertical direction, the **1100N** force was also achieved without failure.

DESTRUCTIVE LOAD TEST:

At the request of the client, a final destructive test was conducted by applying a lateral load to the rail, 650mm from the mounting plate. In this case, the grab-rail achieved a peak load of **1930N**. The test was terminated due to gross deformation. Post-test observations of the grab-rail did not reveal any evidence of cracking or structural failure.

PROOF LOAD TEST COMMENTS:

In accordance with AS 1428.1 Clause 17(c), the EGT46 dropdown toilet grab-rail, as reported herein, has passed the specified proof load of 1100 Newtons when tested 450mm and 650mm out from the mounting frame.

FIG.2
LATERAL DOWNWARD LOADING

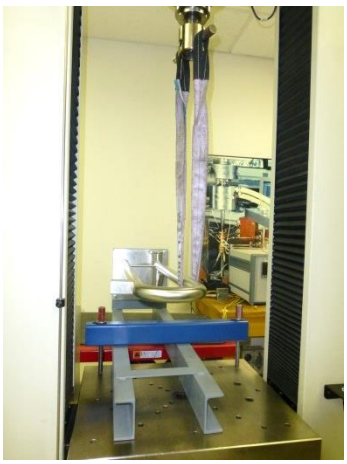

FIG.3
LATERAL UPWARD LOADING

FIG.4
VERTICAL DOWNWARD LOADING

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 grab-rail in its state at the time of testing. It should not be taken as a statement that all similar grab-rails or components of grab-rails 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 grab-rail assembly.
5) This report does not cover the actual fixing of the grab-rails to walls of buildings and other structures.
6) MTS shall take no responsibility for the procurement and authenticity of the grab-rail as described herein.
7) MTS shall take no responsibility for the installation procedures used for the grab-rail as described.

MARK WILKIE
MTS Test Officer