

ERA Technology Limited
Cleeve Road Leatherhead
Surrey KT22 7SA England
Tel: +44 (0) 1372 367000
Fax: +44 (0) 1372 367099
E-mail: info@era.co.uk
Internet: http://www.era.co.uk



**EXPLOSION AND FIRE
HAZARDS GROUP**

**CONFIDENTIAL REPORT OF AN IMMERSION
TEST CARRIED OUT ON AN ENCLOSURE**

ERA Report 5046/426
Dated March 1996

Prepared by:
G D Lightfoot
Technician

Checked by:
A T Austin
**Senior Technical
Officer**

Approved by:
for G,R Oliver
Manager

**THIS DOCUMENT MAY BE REPRODUCED ONLY IN ITS ENTIRETY AND
WITHOUT CHANGE**

**Opinions and interpretations expressed in this report are outside
the scope of NAMAS Accreditation**

REP28/R2342/27/GDL/cl



Page 1 of 4

RESEARCH, DEVELOPMENT AND TESTING FOR INDUSTRY - WORLDWIDE

DIRECTORS: Admiral Sir Lindsay Bryson KCB DSc FEng FRSE HonFIEE HonFIMechE FRAeS (Chairman) M J Withers MSc FEng FIEE (Managing)
M P E Desvaux BSc PhD MInstP C P N Perks MA MBA DipM ACMA K Sedgwick FCMA FCCA JDipMA J C Smith CBE LLD FEng FRSE
M T Wright BSc PhD FEng FIEE FIMechE
Associate Directors: N A Adatia BSc PhD CEng FIEE B J Cane BMet PhD J E Fewtrell FCMA (Company Secretary) M A Hind BEng PhD FIEE
Approved to BS EN ISO 9001; 1994. Reg Nos FM1303 and FM27079. Company registered in England No 170454. Registered Office as above.

SUMMARY

A modified SSX7/200 fabricated stainless steel enclosure was tested for its ability to resist the ingress of water when continuously submerged at a depth of 6 m for 5 days. This was considered to be more severe than the test conditions specified for IPX7 in BS EN 60529 : 1992.

The sample complied with the requirements and has a Degree of Protection IPX8.

**CONFIDENTIAL REPORT OF AN IMMERSION TEST
CARRIED OUT ON AN ENCLOSURE**

1 MANUFACTURER

AB Controls & Technology Limited
Sanderson Street
Sheffield
S9 2UA

2 APPARATUS

A modified SSX7/200 fabricated stainless steel enclosure.

The enclosure consists of a rectangular base and lid. The base has been modified by the addition of box section stiffeners welded to the inside of the back wall of the enclosure. The lid is normally hinged, but on this sample the lid is loose and the number of fixings has been increased from the standard four to 24. Between each fixing a circular pillar has been welded on to limit the amount of compression that may be applied to the lid seal. The seal is compressed by an upstand on the base. The wall at each end of the base has a number of threaded entries welded to it, M25 at one end and M63 at the other. Two of the M25 entries were used during the test, the others were sealed with blanking plugs and silicone rubber sealant.

The lid has box section stiffeners welded to the inside. Around the outside of the stiffeners is a flat solid neoprene rubber seal.

3 TEST

The modified SSX7/200 enclosure was tested for its ability to resist the ingress of water when continuously immersed at an equivalent depth of 6 metres for 5 days for a Degree of Protection IPX8 as specified in BS EN 60529 : 1992 "Degrees of protection provided by enclosures (IP Code)".

The immersion depth and duration were considered to be more severe than the test conditions specified for Degree of Protection IPX7. The immersion depth was achieved by applying an under pressure to the enclosure.

The sample was received for test on 9th February 1996.

4 RESULT

Date of test 14th - 19th February 1996.

No water entered the enclosure as a result of the test.

5 CONCLUSION

The modified SSX7/200 enclosure has been tested and found to comply with the requirements for Degree of Protection IPX8 consisting of continuous immersion at a depth of 6 m for 5 days. This was considered to be more severe than the test conditions for IPX7 as specified in BS EN 60529 : 1992.

The results and conclusions apply only to the particular sample tested. The conclusions may be extended to other samples of the same type and having the same sealing arrangements on submission of the relevant drawing to ERA Technology for inspection and approval.

Any accessory to be used with the enclosure and the connections to the threaded entries must maintain the Degree of Protection.

Appendix

Fig 1 Inside of base

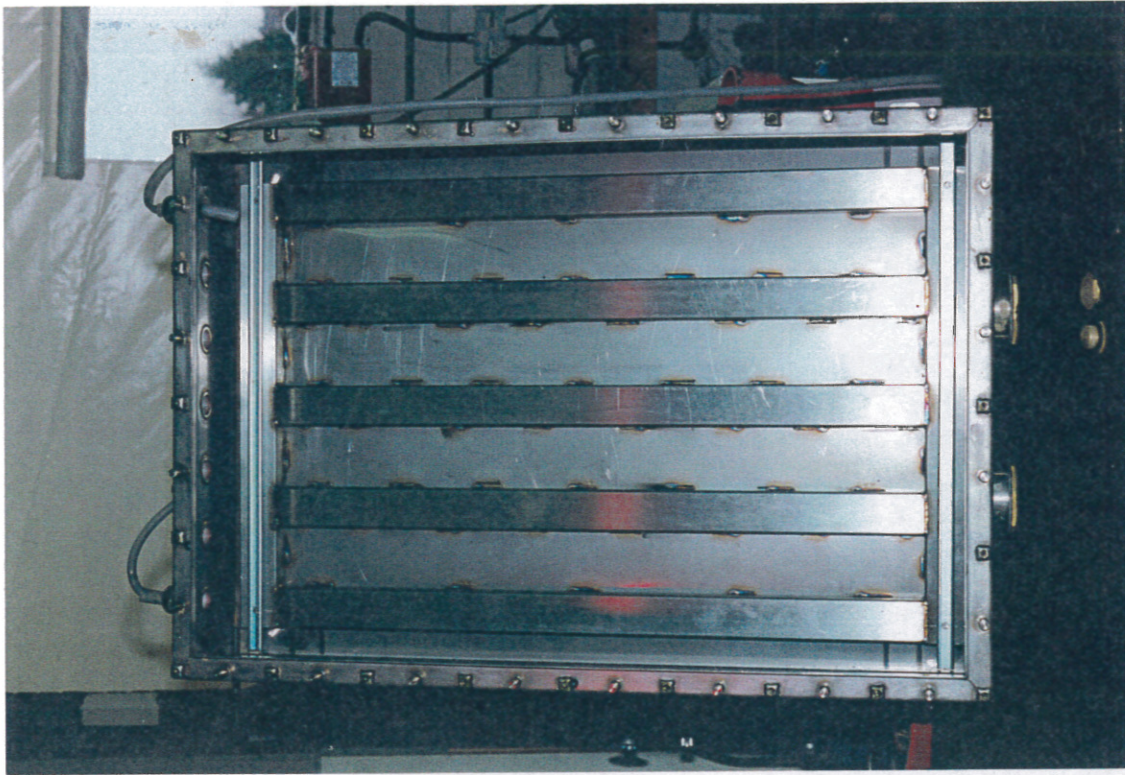
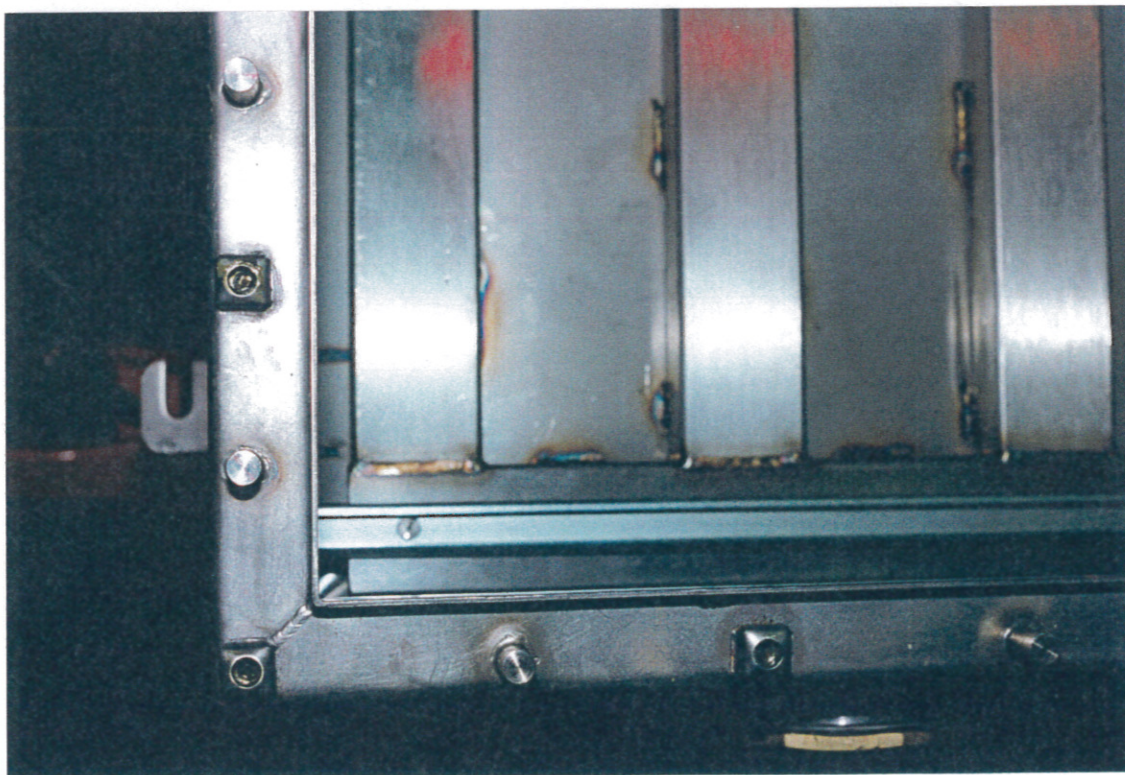


Fig 2 Fixings and pillars



Appendix

Fig 3 M25 entries

