Test Report

Testing & Certification Australia

14 Nelson Street, Chatswood, NSW 2067
P O Box 841, Artarmon, NSW, 1570 Australia
Telephone 61 (02) 9410 5111
Facsimile 61 (02) 9410 5181

Report Number 91351

Subject Amerex Fire Australia, Portable Fire Extinguishers

Client Amerex Fire Australia Pty. Ltd
PO Box 398
Salisbury Qld 4107

Attention : Mr Maurice Richards

Order Number Fax dated 29/03/00

Dates of Test 28 and 31 March 2000

Location of Test Chatswood

Test

To perform an Electrical Non-conductivity Test, in accordance with Section 7 of Australian Standard 1850:1997.

Contents of Report

Details of Equipment
Test Method
Uncertainties in Measurement
Test Results

Conclusion

The extinguishers **satisfied** the specification requirements of Section 7 of Australian Standard 1850:1997 for Electrical Non-conductivity.

For further information please contact: Paul Christianson 02 9410 5156

Paul Christianson
Authorised Signatory

2 MAY 00
Date Issued

Test Report

Report Number: 91351

Testing & Certification Australia

Details of Equipment

Two, 9.4 litre Amerex Model 272AS Extinguishers and two nozzle assemblies. The nozzle assembly consisted of a nozzle marked "S.S.OO.FULL JET 1/4" HHX-14.5", screwed into a metal tube of approximately 500 mm in length. The other end of the tube was fitted to flexible extinguisher hose of approximately 500 mm in length.

Test Method

For test series 1, the extinguishers were filled with "Halcyon deionised water" and charged with compressed air from the adjacent EnergyAustralia garage. This was done by Mr P Morris (Amerex) in the presence of Mr J Webster (QAS) and test staff.

For test series 2, the above extinguishers were refilled using "James Hunter Pty Ltd demineralised water" and charged with compressed air from the adjacent EnergyAustralia garage. This was done by Mr P Morris (Amerex) in the presence of Mr L Hillman (QAS) and test staff

The metal, extinguisher nozzle assembly was electrically bonded to the extinguisher, and connected to the high voltage supply.

The target plate was connected to earth via a milliammeter circuit and set at a distance from the extinguisher nozzle, which withstood 100 kV r.m.s.

The tests were performed in a still air enclosure, which was ventilated after each test.

A 100 kV r.m.s. 50 Hz test voltage was applied between the extinguisher and the target plate, and the resulting leakage current measured. The leakage current was re-measured during discharge of the extinguishing agent. Tests were performed with the target plate at ambient temperature and 400°C.

Uncertainties in Measurement

Applied voltage:	±3%	Target temperature at 400°C:	±20°C
Leakage current:	±3%	Target distance :	±3mm

Test Report

Report Number: 91351

Testing & Certification Australia

Test Results

Conductivities of water samples were recorded as 1.6μS/cm and 1.7μS/cm in Test Report 41612

Series 1.

Extinguisher Type	QAS Label	Target Plate Temperature (°C)	Air Gap (mm)	Leakage Current (mA)	
				Before Discharge	*During Discharge
Model 272AS	NA	24	252	0.26	Flash-over
		24	252	0.26	Flash-over

*The specification, Cl 7.2.1, does not allow any increase in electrical conductivity (leakage current).

Testing was conducted in the presence of Mr J Webster (QAS) and Mr P Morris (Amerex)
During the test, a flash-over occurred after 40 seconds of discharge. As the testing staff were uncertain as to the path of the flash-over, the test was repeated using the second extinguisher. A flash-over occurred after 17 seconds of discharge. There was no apparent increase in leakage current through the target, and signs of stress on the wet insulators supporting the extinguisher prior to the flash-over.

Results: **could not be determined**

As a result of the uncertainty, the test structure was fitted with larger outdoor insulators, wet with tap water and tested to 110 kV for 120 seconds. There was no flash-over.
Amerex arranged to supply a second container of water for retesting.

Series 2.

Extinguisher Type	QAS Label	Target Plate Temperature (°C)	Air Gap (mm)	Leakage Current (mA)	
				Before Discharge	*During Discharge
Model 272AS	NA	26	280	280	280
		400	280	280	280

*The specification, Cl 7.2.1, does not allow any increase in electrical conductivity (leakage current).

Testing was conducted in the presence of Mr L Hillman (QAS) and Mr P Morris (Amerex)

Results: **Complied**