

# Test Report



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**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

Authorised Signatory

2 MAY 00

Date Issued

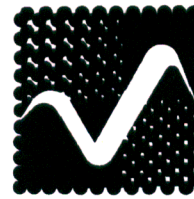
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## Details of Equipment

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

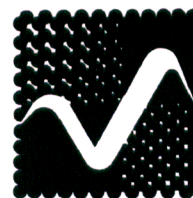
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## Test Results

Conductivities of water samples were recorded as 1.6 $\mu$ S/cm and 1.7 $\mu$ S/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, CI 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, CI 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**

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