

Test report

1. Document Control

| | | | |
|--------------|--------------------|----------------|-----------------------|
| Company Name | Multec | Address | 34 Chickasaw Crescent |
| Client Name | Alex Ziarkowski | Suburb | Greenfield Park |
| E-mail | alex@multec.com.au | State/Province | NSW |
| Phone | alex@multec.com.au | Postal Code | 2176 |
| ABN | - | Country/Region | Australia |

Report Number: MUL-13-1-REP-PT-1



Document prepared by: Frank Iapozzuto BEng (Mech)
Laboratory Manager

Date: 21/02/2013



Document reviewed by: Terry Nguyen BEng (Mech)
Senior Test Engineer

Date: 21/02/2013

| Issue Date | Release Number | Description |
|------------|----------------|-------------|
| 21/02/2013 | 1 | Initial use |

2. General

| | |
|-------------------------|---------------------------|
| Test Item: | Pipe and fitting assembly |
| Standard tested to: | Clients own method |
| Sample(s) selected by: | Multec |
| Sample(s) delivered by: | Multec |
| Mode of delivery: | Courier |
| Date Received: | 15/02/2013 |

3. General

PROVE Standards & Engineering Pty Ltd is a NATA endorsed plumbing laboratory. Multec appointed PROVE to perform a hydrostatic pressure test on a pipe and fitting assembly. The intent of the test was to determine if the fittings would leak under a given hydrostatic pressure.

4. Referenced documents

The following documents have been referenced for testing and reporting.

| Standard | Standard Name |
|----------|---------------|
| - | - |

5. Specimens Description

| Sample Code | Sample description |
|--------------------------------|---|
| PROVE Sample ID: MULTEC1 | Name: Multec |
| | Markings on pipe: HOT/COLD MOP 1MPa at 95°C/2MPa at 20°C MULTEC 002m |
| | Markings on fittings: W (Watermark symbol) AS 4176 DR WMKA22140 NF 16 2 CL1 14Bar |
| | Size: DN16 |



Figure 5.1 Test Assembly provided by Multec

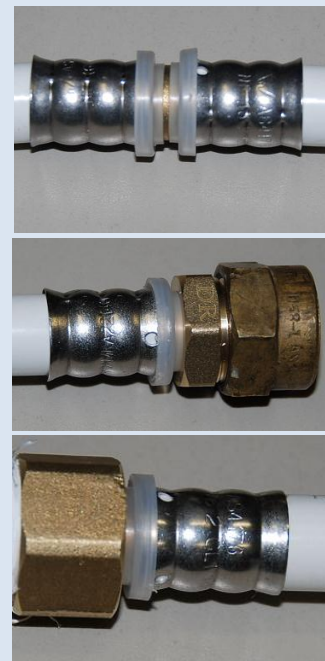


Figure 5.2 Joint assemblies

6. Performance requirements

| Test Reference Standard: | Burst pressure | | |
|--------------------------|--|---|-----------------------------------|
| Test Method Standard: | Developed by Multec | | |
| Date of Test: | 18/02/2013 | | |
| Test Officer: | Frank Iapozzuto | | |
| Sample ID | Requirement | Result | Conformity to burst pressure test |
| MULTEC1 | The test assembly is filled with water at ambient temperature and is gradually pressurized at to 6000kPa and maintained for 30min. The assembly is inspected for leakage or another failure. | <p>Test pressure applied: 6000±100kPa Test temperature: 23±3°C</p> <p>Observations: The test assembly showed no signs of leakage or any other failure</p> | Conforms |



ABN 50 005 613 641

42 TITAN DRIVE, CARRUM DOWNS, VICTORIA, 3201.
 PHONE: (03) 9776-8888 FAX: (03) 9776-8656
 FREE CALL: 1800 101 102 EMAIL: contact@ambitinst.com.au

NATA CALIBRATION REPORT ON A TEST PRESSURE GAUGE

Tested For: Prove Standards & Engineering
 13 Kinder Street, Campbellfield, Victoria, 3061.

| | | | |
|-----------------------|------------------------|-----------------------------|----------------------------|
| Date of Test: | 3rd December 2012 | Report No: | 1212950 |
| Make of Gauge: | Ambit | Test Equipment: | DWT 6116 |
| Model/Type: | 800/150mm Bottom Entry | Test Medium: | Oil |
| Serial No: | 119272 | Gauge Position: | Dial Vertical |
| Range: | 0/10,000 kPa | Temperature of Test: | 20°C ± 2°C |
| Interval: | 100 kPa | Test Specifications: | AS 1349:1986 Section 4.1.1 |
| | | Uncertainty of Test: | ± 15 kPa |

Table of Results

| TEST PRESSURE | GAUGE READING | | CORRECTION TO GAUGE READING | |
|---------------|---------------|------|-----------------------------|------|
| | kPa | | kPa | |
| kPa | UP | DOWN | UP | DOWN |
| 0 | -10 | -10 | +10 | +10 |
| 1000 | 1010 | 1010 | -10 | -10 |
| 2000 | 2010 | 2010 | -10 | -10 |
| 3000 | 3010 | 3010 | -10 | -10 |
| 4000 | 4000 | 4000 | 0 | 0 |
| 5000 | 4990 | 5000 | +10 | 0 |
| 6000 | 6010 | 6010 | -10 | -10 |
| 7000 | 7000 | 7000 | 0 | 0 |
| 8000 | 7990 | 7990 | +10 | +10 |
| 9000 | 8990 | 8990 | +10 | +10 |
| 10,000 | 10,000 | - | 0 | - |

Note: 1. This gauge was lightly tapped prior to taking a reading.
 2. The uncertainty of test represents a confidence level of 95%. (coverage factor 2)

Test Result: This test pressure gauge meets the accuracy requirements of AS 1349:1986.
 This requires that the correction be no greater than 0.25% of range (25 kPa).



Revision 3 - 18/03/2010

NATA Accredited Laboratory Number: 3103

This document is issued in accordance with NATA's accreditation requirements. Accredited for compliance with ISO/IEC 17025

Issued by:

Alan R. Ward

3rd December 2012

Page 1 of 1