Australian Government
National Measurement Institute
Bradfield Road, West Lindfield NSW 2070

Notification of Change
Certificate of Approval No 14/3/9
Change No 1

Issued by the Chief Metrologist under Regulation 60
of the
National Measurement Regulations 1999

The following changes are made to the approval documentation for the

Reliance Model WM201PD Water Meter

submitted by Reliance Worldwide
27-28 Chapman Place
Eagle Farm QLD 4009.

A. In Certificate of Approval No 14/3/9 dated 21 March 2006:

1. The Condition of Approval referring to the review of the approval should be amended to read:

   "This approval becomes subject to review on 1 February **2016**, and then every 5 years thereafter."

2. The FILING ADVICE should be amended by adding the following:

   "Notification of Change No 1 dated 7 July 2011"

B. In Technical Schedule No 14/3/9 dated 21 March 2006, the references to temperature and pressure limits given in clause **1.1 Field of Operation** should be amended to now read:

"• Maximum **admissible** temperature 30°C
• **Limiting condition (water** temperature) 50°C
• Maximum **admissible** pressure 1400 kPa"

Signed by a person authorised by the Chief Metrologist to exercise his powers under Regulation 60 of the *National Measurement Regulations 1999*.

14/3/9
21 March 2006

Australian Government

National Measurement Institute

12 Lyonpark Road, North Ryde NSW 2113

Certificate of Approval

No 14/3/9

Issued by the Secretary under Regulation 60
of the
National Measurement Regulations 1999

This is to certify that an approval for use for trade has been granted in respect of the

Reliance Model WM201PD Water Meter

submitted by Reliance Worldwide
27-28 Chapman Place
Eagle Farm QLD 4009.

NOTE: This Certificate relates to the suitability of the pattern of the instrument for use for trade only in respect of its metrological characteristics. This Certificate does not constitute or imply any guarantee of compliance by the manufacturer or any other person with any requirements regarding safety.

CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 February 2011, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked with approval number 'NMI 14/3/9' and only by persons authorised by the submittor.

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It is the submittor's responsibility to ensure that all instruments marked with this approval number are constructed as described in the documentation lodged with the National Measurement Institute (NMI) and with the relevant Certificate of Approval and Technical Schedule. Failure to comply with this Condition may attract penalties under Section 19B of the National Measurement Act and may result in cancellation or withdrawal of the approval, in accordance with document NMI P 106.

The National Measurement Institute reserves the right to examine any instrument or component of an instrument purporting to comply with this approval.

DESCRIPTIVE ADVICE

Pattern: approved 25 January 2006

- A Reliance model WM201PD class 2 displacement meter meter used to measure water for domestic or small commercial supply for trade.

Variant: approved 25 January 2006

1. With alternative connections.

Technical Schedule No 14/3/9 describes the pattern and variant 1.

FILING ADVICE

The documentation for this approval comprises:

Certificate of Approval No 14/3/9 dated 21 March 2006
Technical Schedule No 14/3/9 dated 21 March 2006 (incl. Test Procedure)
Figure 1 dated 21 March 2006

Signed by a person authorised by the Secretary to exercise his powers under Regulation 60 of the National Measurement Regulations 1999.

TECHNICAL SCHEDULE No 14/3/9

Pattern: Reliance Model WM201PD Water Meter

Submittor: Reliance Worldwide
27-28 Chapman Place
Eagle Farm QLD 4009

1. Description of Pattern

A Reliance model WM201PD class 2 positive displacement meter (Figure 1) used to measure water for domestic supply for trade.

1.1 Field of Operation

The following characteristics determine the field of operation of the measuring system:

- Maximum continuous flow rate, Q_3 — 4 m^3/h
- Flow rate ratio, Q_3/Q_1 — 200
- Maximum working temperature — 30°C
- Maximum admissible temperature — 50°C
- Maximum working pressure — 1400 kPa
- Accuracy class — 2

1.2 Features/Functions

A positive displacement piston-type class 2 water meter of a size which is normally connected to a 20 mm pipe and is approved for metering domestic supplies and has features/functions as listed below:

- Threaded end connections as normally used in NSW and ACT (ball seat).
- A mechanical digital indicator having a series of eight aligned digits giving a maximum display of 9999.9999 kL in 0.0002 kL increments.
- Meter length of 154 mm.
- Single or dual check valves.

1.3 Verification/Certification Provision

Provision is made for the application of a verification/certification mark.

1.4 Sealing Provision

Instruments shall include one or more devices (Figure 1) which can be sealed so as to prevent dismantling or modification of the instrument without damaging the device(s). The device(s) may incorporate the verification/certification mark.

1.5 Markings

Instruments are marked with the following data, either grouped or distributed on the casing, the indicating device dial, an identification plate or the cover if it is not detachable:

Manufacturer's name or mark	Pacific Valves International HK
Serial number	...
Pattern approval mark	14/3/9
Numerical value of maximum continuous flow rate, Q_3	...
Flow rate ratio, Q_3/Q_1	...
Unit of measurement	m^3
Direction of flow	$\rightarrow$ or similar
Accuracy class	... (#)

(#) Optional for class 2 meters.

2. Description of Variant 1

Other models with certain alternative connections, namely:

- Model WM202PD with threaded end connections as normally used in QLD, VIC, TAS, WA and NT; and
- Model WM203PD with 1 inch BSP threaded end connections.

TEST PROCEDURE

Instruments tested for initial verification shall comply with the Certificate of Approval and Technical Schedule, and the maximum permissible errors for initial and subsequent verifications/certifications at the operating conditions in effect at the time of verification.

All meters shall be tested at flow rates of:

$Q_2(-0, +0.1\ Q_2)$, $0.1\ Q_3(\pm 0.01\ Q_3)$ and $Q_4(-0.1\ Q_4, +0)$

in the country of origin in a third party accredited facility which has reference standards traceable to primary national standards of the country of origin.

Each batch of meters and the results of the tests of these meters shall be supplied to the verifying authority. The verifying authority shall draw sample meters from the batch of meters supplied. The drawing of such sample meters shall be in accordance with the relevant National Measurement Institute (NMI) document.

All sample meters drawn shall be tested at flow rates of:

$Q_2(-0, +0.1\ Q_2)$ and $0.1\ Q_3(\pm 0.01\ Q_3)$.

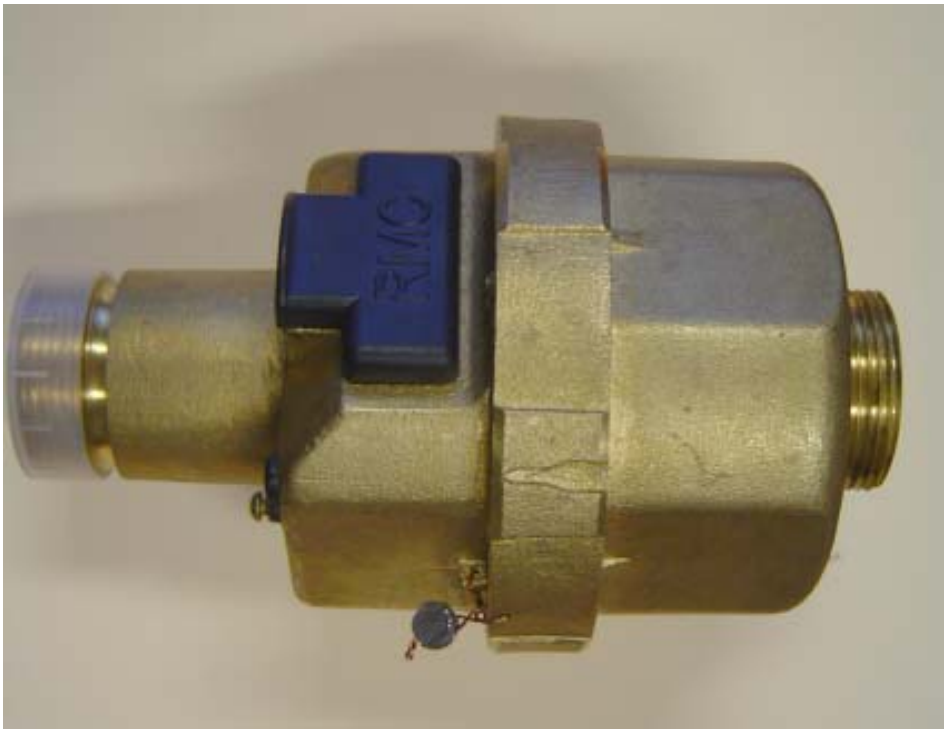
A sample of the sample meters shall be tested at flow rates of:

$Q_1(-0, +0.1\ Q_1)$ and $Q_3(\pm 0.1\ Q_3)$.

The disposition of all meters from which the sample meters were drawn shall be determined in accordance with the relevant NMI document.

NOTE: NMI reserves the right to vary this procedure. Any such variation shall be notified in writing by NMI.

FIGURE 14/3/9 – 1



Reliance Model WM201PD Water Meter