



Australian Government
**National Measurement
Institute**

Bradfield Road, West Lindfield NSW 2070

Cancellation
Certificate of Approval
No 8/79A

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

This is to certify that the approval for use for trade granted in respect of the
Westfalia Surge Model Atlas Milk Tank

submitted by Westfalia Surge Australia
 16 Trade Park Drive
 Tullamarine VIC 3043

has been cancelled in respect of new instruments as from 1 October 2011.

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

A handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke at the bottom.



Australian Government

**National Measurement
Institute**

12 Lyonpark Road, North Ryde NSW 2113

Certificate of Approval

No 8/79A

Issued by the Chief Metrologist 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
Westfalia Surge Model Atlas Milk Tank

submitted by Westfalia Surge Australia
16 Trade Park Drive
Tullamarine VIC 3043.

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.

This Certificate is issued upon completion of a review of approval No 8/79.

CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 December 2009, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked with approval number 'NMI 8/79A' and only by persons authorised by the submitter.

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 5 November 2004

- A Westfalia Surge model Atlas horizontal cylindrical refrigerated milk tank incorporating a Hugonnet Japy liquid level measuring device for the measurement of the volume.

Variant: approved 5 November 2004

1. With certain other models of liquid level measuring device.

Variant: approved 14 December 2004

2. With Westfalia Surge model Kryos tank instead of the tank of the pattern.

Technical Schedule No 8/74A describes the pattern and variants 1 & 2.

FILING ADVICE

The documentation for this approval comprises:

Certificate of Approval No 8/79A dated 15 December 2004
Technical Schedule No 8/79A dated 15 December 2004 (incl. Test Procedure)
Figures 1 to 4 dated 15 December 2004

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

A handwritten signature in black ink, appearing to be 'J. H. T.', located in the bottom right corner of the page.

TECHNICAL SCHEDULE No 8/79A

Pattern: Westfalia Surge Model Atlas Milk Tank

Submittor: Westfalia Surge Australia
16 Trade Park Drive
Tullamarine VIC 3043

1. Description of Pattern

A Westfalia Surge model Atlas horizontal cylindrical refrigerated milk tank incorporating a Hugonnet Japy model JE-MA/1800 liquid level measuring device ('electronic dipstick') for the measurement of the volume.

1.1 Milk Tank

- (i) The Westfalia Surge Atlas series milk tanks (Figure 1) are horizontal cylindrical tanks having a maximum capacity in the range 12 000 L to 30 000 L, and designed with the base of the tank sloped towards the outlet of the tank to allow the contents to completely drain.
- (ii) The tank has adjustable legs with provision for sealing the legs to the floor (Figure 2) when the tank is in its prescribed level position. The tank is deemed to be in its prescribed level position when the liquid level in the tank corresponds with the level marks permanently marked at the widest cross-section of the tank and the Japy electronic calculator/indicator displays a volume corresponding to the datum level stamped on the data plate.
- (iii) The tank incorporates a top-mounted access hole used to check that the 'electronic dipstick' has been placed in its correct position. If necessary a ladder is provided near the access hole.

1.2 Measuring Device

The Hugonnet Japy model JE-MA/1800 liquid level measuring device ('electronic dipstick') comprises a spherical stainless steel float that slides on a vertical stainless steel shaft incorporating a float sensor (Figure 1) which is interfaced to a Japy electronic calculator/indicator (Figure 3). The microprocessor in the calculator/indicator processes the signal from the sensor and displays the volume of contents or the height of the liquid level, on a five digit, eight-segment type display. The calculator/indicator is powered by mains supply (240 V AC).

The stainless steel shaft, with the stainless steel float, is mounted in a suspended position on a dedicated mounting pin located inside the tank near the access hole entrance.

Each 'electronic dipstick' is factory programmed with calibration data (height verses volume) applicable to a specific tank which is identified by a tank number marked on the data plate on the calculator/indicator for 'the electronic dipstick'.

1.3 Verification/Certification Provision

Provision is made for a verification/certification mark to be applied to both the tank and to the 'electronic dipstick'.

1.4 Sealing Provision

Provision is made for the adjustable legs to be sealed after the tank has been levelled. Provision is made for sealing the front panel of the calculator/indicator to prevent access to integrated circuits containing calibration data (Figure 3).

1.5 Markings and Notices

The following data is marked on the nameplate permanently attached to the calculator/indicator in a clearly visible location:

Manufacturer's mark, or name written in full	Westfalia Surge Australia
Model number
Serial number
Tank number
Pattern approval mark	NMI 8/79A
Maximum capacity L
Scale interval	1 L
Datum level L

In addition, the tank is marked with a tank number – this number shall correspond to that marked on the calculator/indicator nameplate.

2. Description of Variants

2.1 Variant 1

Certain other Hugonnet Japy liquid level measuring devices ('electronic dipsticks'), namely models JE-MA/1400 and JE-MA/1650, which are similar to the pattern except for the length of the stainless steel shaft.

2.2 Variant 2

With Westfalia Surge model Kryos tank instead of the tank of the pattern.

The Westfalia Surge Kryos series milk tanks (Figure 4) are horizontal cylindrical tanks similar to the Atlas tanks but have a maximum capacity in the range 2 700 L to 21 050 L and they have a different cross-sectional shape.

TEST PROCEDURE

Instruments should be tested in conjunction with any relevant tests in NSC Test Procedure No 6, *Farm Milk Tanks*.

Maximum Permissible Error at Verification/Certification

The maximum permissible errors for milk tanks incorporating a liquid level measuring device are:

$\pm 0.3\%$ of the indicated volume, for calibration adjustment of the instrument.

a volume equal to a liquid level change of ± 2 mm, for in-service inspection.

TESTS

1. Check that the tank number marked on the tank corresponds with the 'tank number' marked on the nameplate of the calculator/indicator for the 'electronic dipstick'.
2. Check that the tank is in its prescribed level position.
3. With the liquid level aligned with the level marks marked on the tank, check that the volume displayed agrees with the datum level marked on the data plate.
4. At initial verification and whenever the calibration data is changed, check the sensitivity of the 'electronic dipstick' for the intended tank. With the liquid level at the widest cross-sectional area (approximately half capacity), for a 2 mm change in liquid level, check that the instrument indicates a change in volume equal to or less than:
 - 10 L for tank capacity over 2 500 L and up to 5 000 L inclusive;
 - 20 L for tank capacity over 5 000 L and up to 10 000 L inclusive;
 - 50 L for tank capacity over 10 000 L and up to 25 000 L inclusive; or
 - 100 L for tank capacity over 25 000 L and up to 50 000 L inclusive.

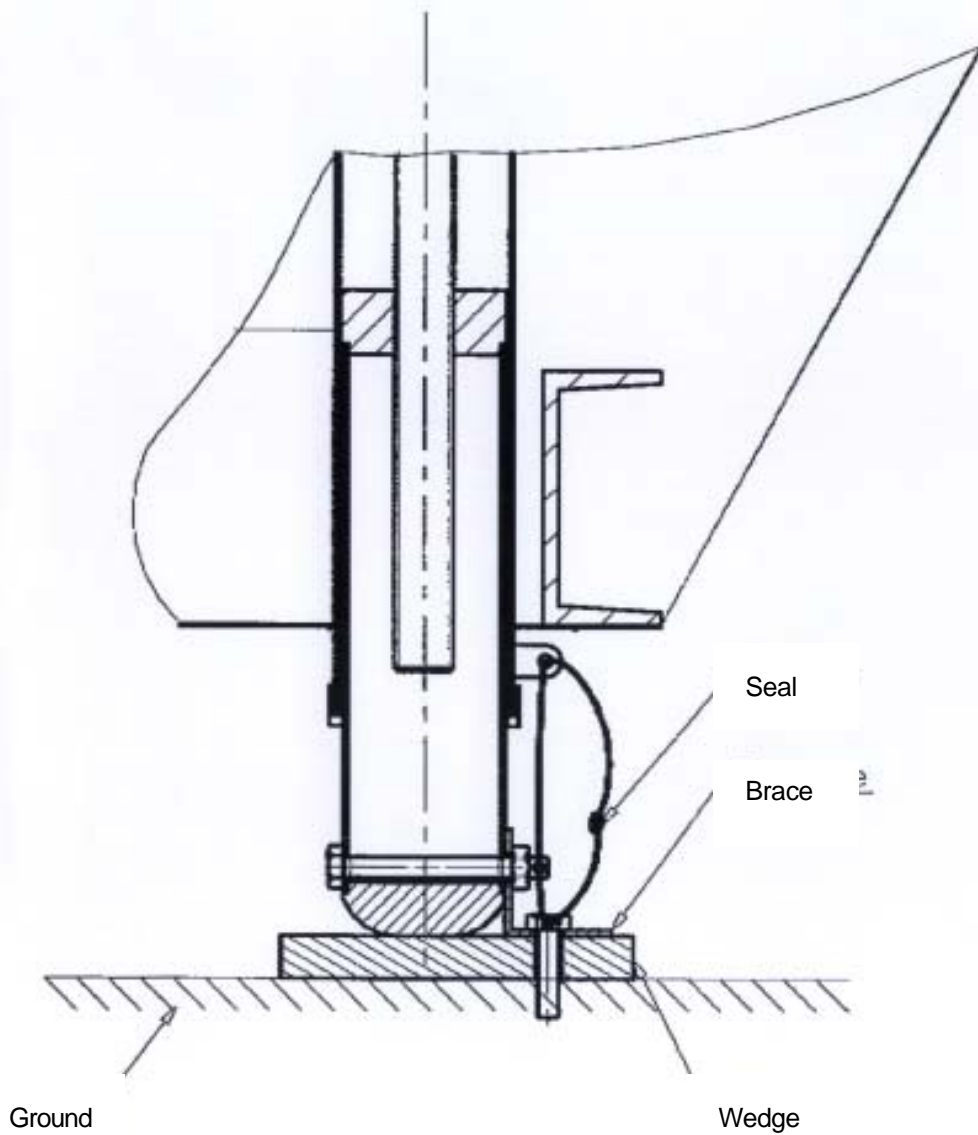
FIGURE 8/79A – 1



Westfalia Surge Model Atlas Milk Tank

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FIGURE 8/79A – 2



Sealing of Adjustable Leg

FIGURE 8/79A – 3



Japy Calculator/Indicator Including Typical Sealing

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FIGURE 8/79A – 4



Westfalia Surge Model Kryos Milk Tank