

National Standards Commission



Certificate of Approval

No 8/37

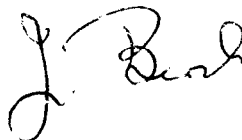
Issued under Regulation 9
of the
National Measurement (Patterns of Instruments) Regulations

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

Furphy Model FS 88/12 Farm Milk Tank

submitted by J Furphy & Sons Pty Ltd
New Dookie Road
Shepparton VIC 3630.

Signed and sealed by a person authorised under Regulation 9 of the National Measurement (Patterns of Instruments) Regulations to exercise the powers and functions of the Commission under this Regulation.



CONDITIONS OF APPROVAL

This approval is subject to review on or after 1/1/94.

This approval expires in respect of new instruments on 1/1/95.

Instruments purporting to comply with this approval shall be marked NSC No 8/37 and only by persons authorised by the submitter.

It is the submitter's responsibility to ensure that all instruments marked with this approval number are constructed as described in the drawings and specifications lodged with the Commission 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 the Commission's Document 106.

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

Special:

Instruments purporting to comply with this approval shall conform with the relevant requirements of Australian Standard AS 1187-1977 for Refrigerated Farm Milk Tank-units.

DESCRIPTIVE ADVICE

Pattern: approved 16/12/88

. A Furphy model FS 88/12 refrigerated farm milk tank of 12 000 L capacity.

Variant: approved 16/12/88

1. Of 8000 L capacity.

Technical Schedule No 8/37 describes the pattern and variant.

Variant: approved 25/6/91

2. Of 16 000 L capacity.

Technical Schedule No 8/37 Variation No 1 describes variant 2.

FILING ADVICE

Certificate of Approval No 8/37 dated 11/5/89 is superseded by this Certificate and may be destroyed. The documentation for this approval now comprises:

Certificate of Approval No 8/37 dated 5/8/91
Technical Schedule No 8/37 dated 11/5/89 (incl. Test Procedure)
Technical Schedule No 8/37 Variation No 1 dated 5/8/91
Figures 1 to 5 dated 11/5/89



NATIONAL STANDARDS COMMISSION

8/37
11/5/89

TECHNICAL SCHEDULE No 8/37

Pattern: Furphy Model FS 88/12 Farm Milk Tank.

Submittor: J Furphy & Sons Pty Ltd
New Dookie Road
Shepparton VIC 3630.

1. Description of Pattern

The pattern is a vertical cylindrical farm milk tank of 12 000 L capacity incorporating a sight-gauge for indicating the volume.

1.1 Details

(i) The bottom of the tank slopes towards the outlet valve and an interconnected sight-gauge valve (Figures 1 and 2). The latter valve allows the milk to enter the sight-gauge and be isolated from the contents of the tank. An additional valve is located at the bottom of the sight-gauge which allows the milk in the sight-gauge and the interconnection pipe between the outlet valve and the sight-gauge to be drained without draining the contents of the tank.

An optional milk-sampling valve may be fitted to the tank.

(ii) A single sight-gauge mounted in a vertical position is located in the vicinity of the outlet valve and comprises a plastic sight-tube fitted in a rigid support channel fixed to the side of the tank adjacent to a stainless steel scale (Figures 3 and 4).

The transparent sight-tube has a nominal internal diameter of 25 mm and a nominal thickness of 3 mm.

The stainless steel scale, having a width of 25 mm and thickness of 6 mm, is graduated in 20 L increments and has a scale spacing of not less than 3 mm.

(iii) Levelling is effected by means of six adjustable legs with reference to the datum level marks permanently marked on the tank. The datum level marks also represent the volume marked on the nameplate.

(iv) A Roman level device (Figure 5) is permanently fixed to the tank for indicating the reference position of the tank. The Roman level is in the form of a rigid "U" tube with each end of the tube positioned adjacent to a permanent reference mark on the tank. One end of the Roman level tube is located not greater than 50 mm from the sight-tube and the other end is located on the opposite side of the tank.

(v) A closed CIP (clean-in-place) system is incorporated for both the tank and the sight-gauge.

(vi) A side entry opening is provided for inspection.

1.2. Verification Provision

Provision is made for a verification mark to be applied.

1.3 Markings

The following is marked on a nameplate permanently attached to the instrument in a clearly visible location:

Manufacturer's name or mark	
Model number	
Serial number	
NSC approval number	NSC No 8/37
Maximum capacity L
Datum level L
Year of manufacture	

2. Description of Variant 1

Model FS 88/8 of 8000 L capacity, in which case the tank is 3225 mm high, whereas the pattern is 4425 mm high.



TEST PROCEDURE No 8/37

The following tests should be conducted in addition to any tests specified in the Inspector's Handbook.

The maximum permissible error for farm milk tanks incorporating a sight-gauge is ± 1 scale interval.

1. Level Position of The Tank

At initial verification, check that when the tank is in its level position with reference to the datum marks, the Roman level fixed to the tank also indicates that the tank is level.

Note: On re-verification it is adequate to use only the Roman level fixed to the tank, since it detects the tilt of the tank in the direction which can affect the measurement accuracy of the sight-gauge.

(Application of the Roman level is given in NSC Document 115)

2. Tank Drainage

With the tank in its level position and containing a volume of 40 L, at least 39.8 L shall run out by gravity in 1 minute.

3. Calibrated Position Of The Sight-gauge

Fill the tank to the datum level marks and check that the reading on the sight-gauge corresponds with the volume represented by the datum level marks.

4. Sight-gauge Accuracy

To determine the accuracy of the sight-gauge, deliver a measured quantity into the tank at the following volumes and compare with the sight-gauge reading:

- (i) The lowest scale mark;
- (ii) At least three, approximately-evenly spaced, intermediate scale marks;
- (iii) The highest scale mark.



National Standards Commission

TECHNICAL SCHEDULE No 8/37

VARIATION No 1

Pattern: Furphy Model FS 88/12 Farm Milk Tank.

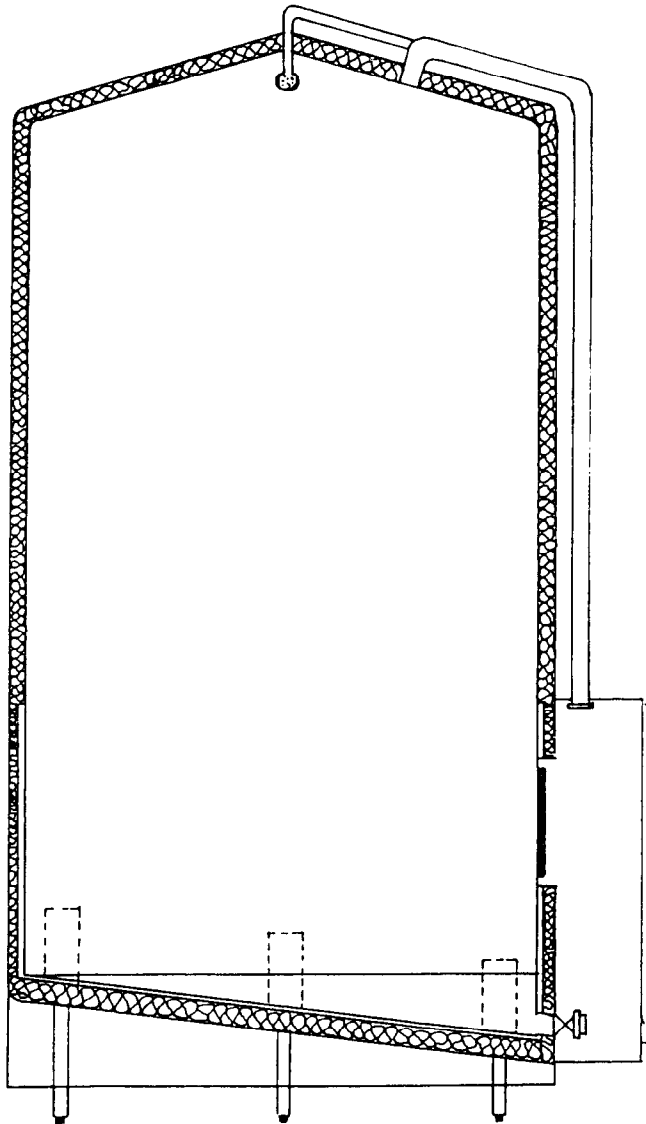
Submittor: J Furphy & Sons Pty Ltd
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1. Description of Variant 2

Model FS 88/16 of 16 000 L capacity, in which case the tank is 5 625 mm high.

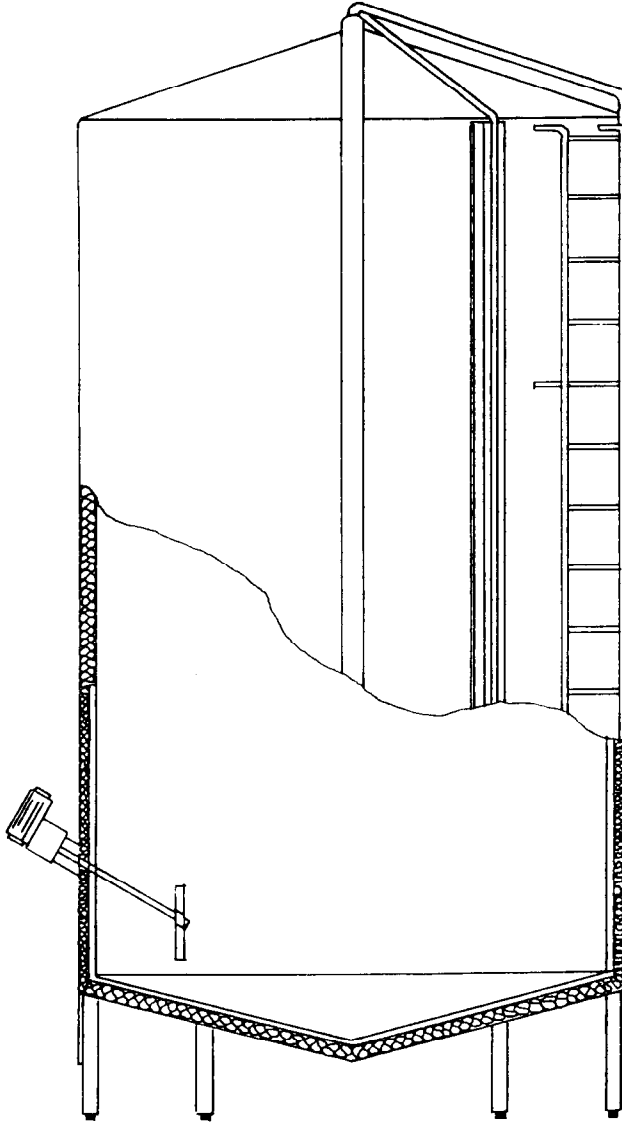
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FIGURE 8/37 - 1



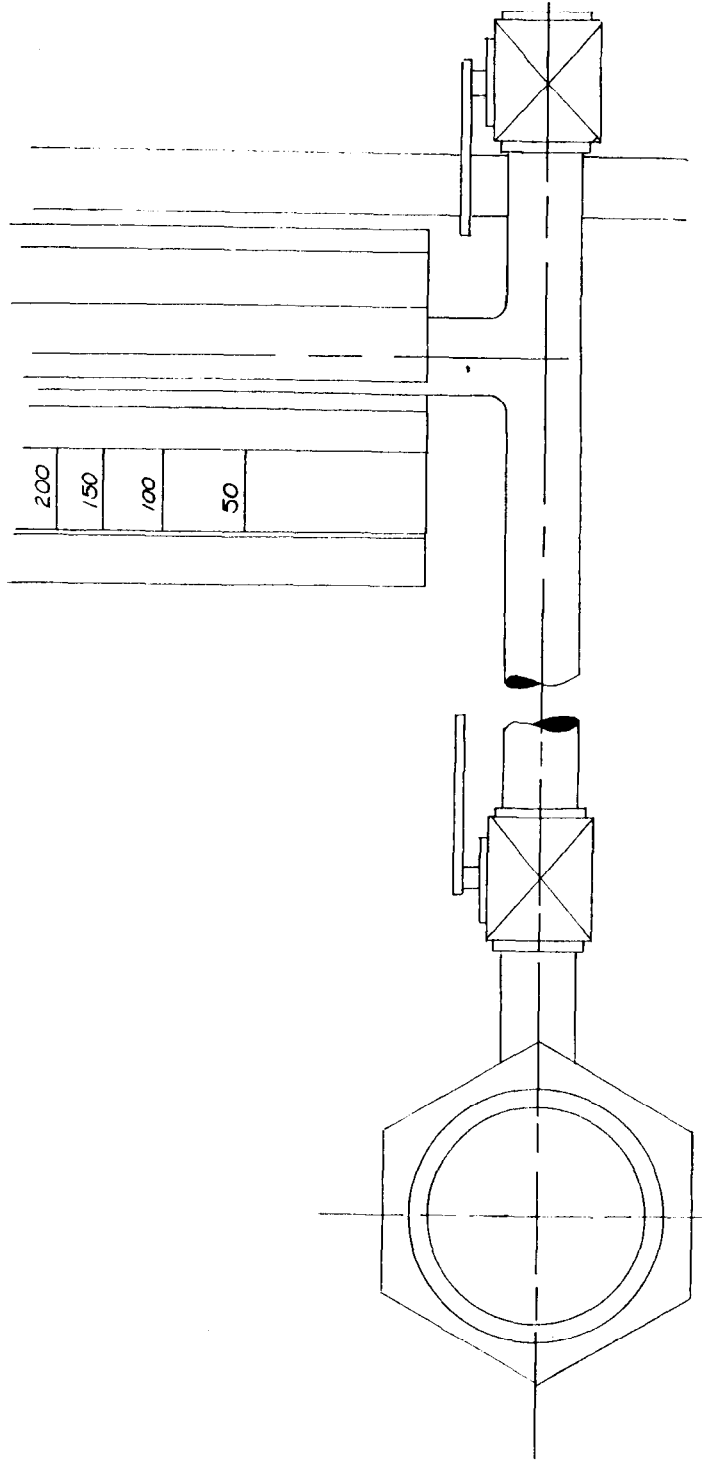
Schematic of Model FS 88/12

FIGURE 8/37 - 2



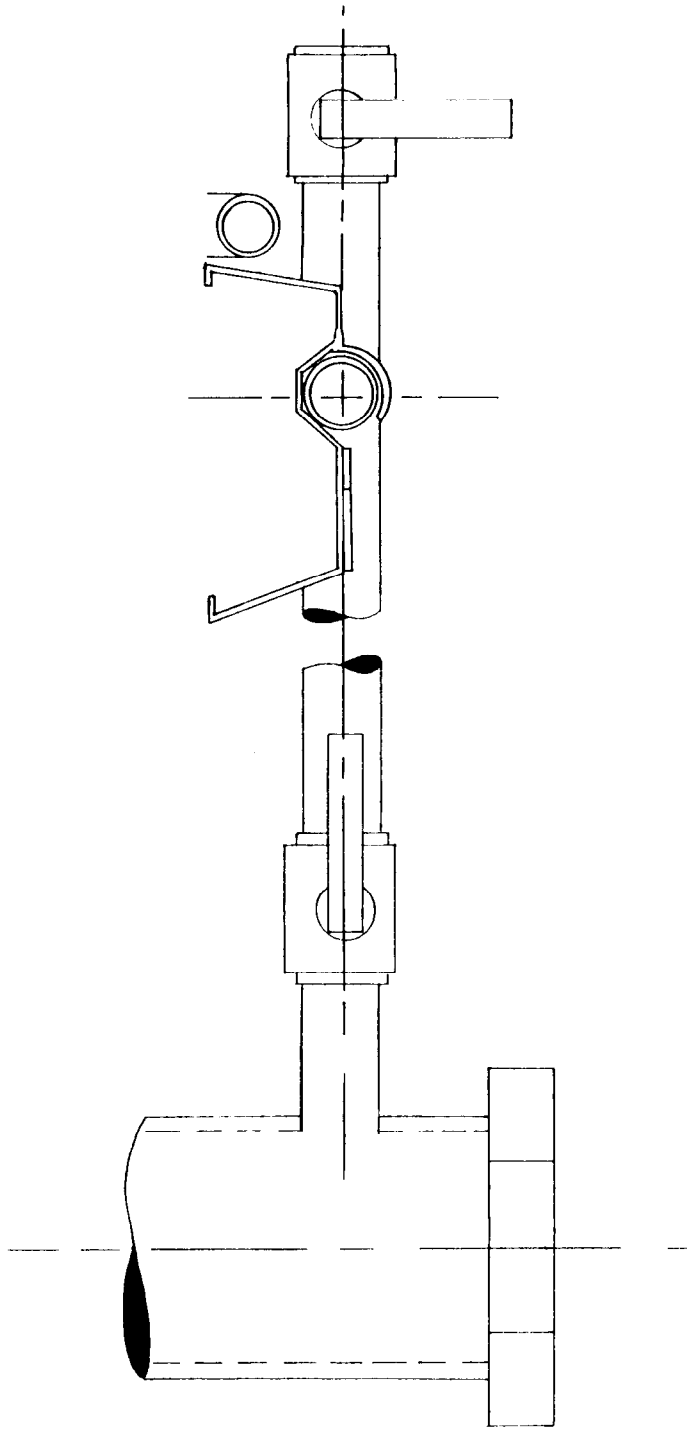
Showing Position of Agitator

FIGURE 8/37 - 3



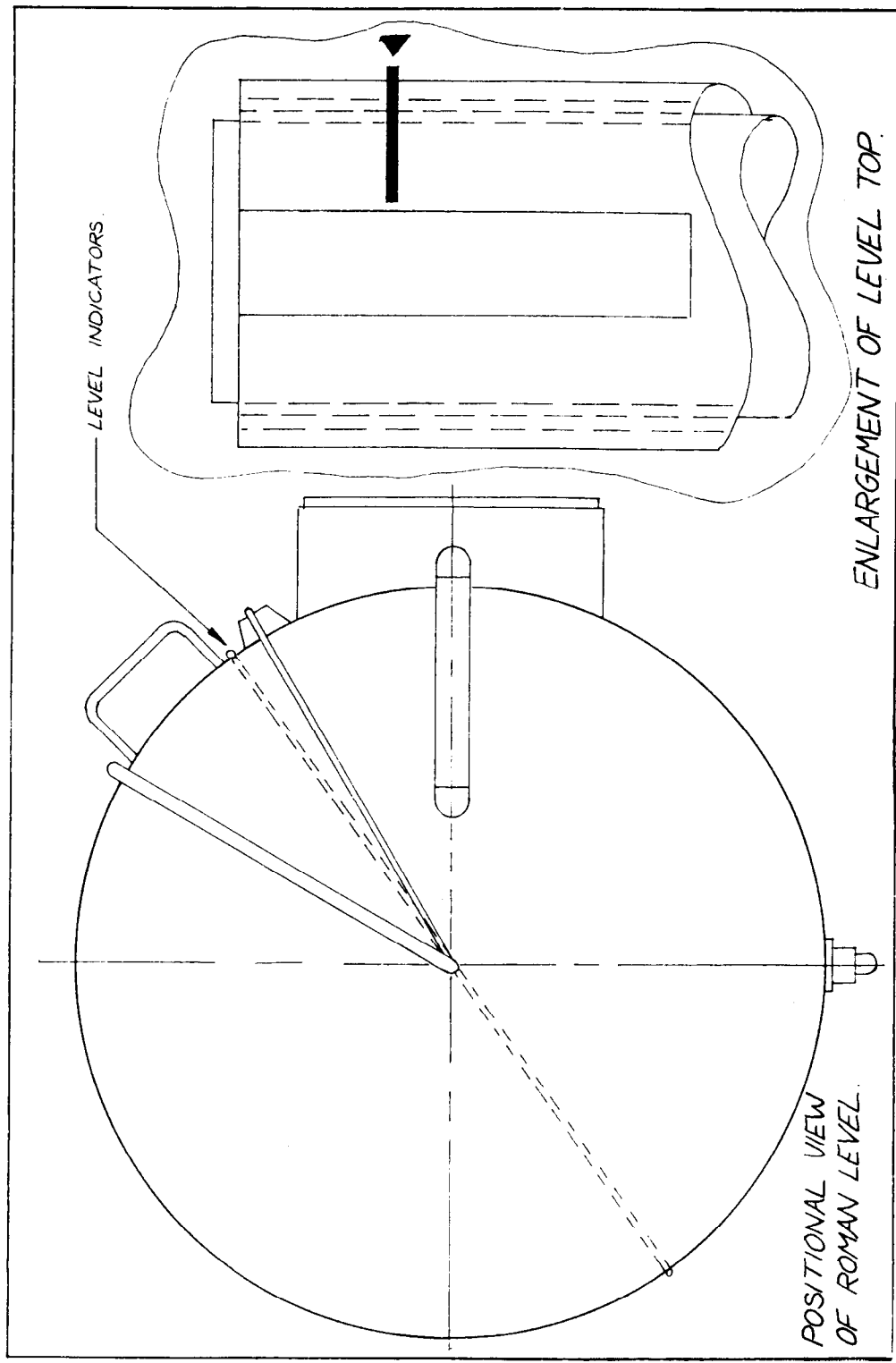
Elevation of Sight-Tube Valves

FIGURE 8/37 - 4



Plan of Sight-Tube Valves

FIGURE 8/37 - 5



Showing Roman Level