

Correspondence: Executive Officer
P.O. Box 282 NORTH RYDE
N.S.W. 2113
Telegrams: NATSTANCOM SYDNEY
Telephone: 888 3922

CERTIFICATE OF APPROVAL No 5/6E/4

VARIATION No 1

This is to certify that the following modification of the patterns of the
Diessel (Milk) Flowmeter

approved in Certificate No 5/6E/4 dated 22 February 1978

submitted by Bell Bryant Pty Ltd,
37 Herbert Street,
St Leonards, New South Wales, 2065,

has been approved under the Weights and Measures (Patterns of Instruments)
Regulations as being suitable for use for trade.

Date of Approval: 29 September 1978

The approved modification, described in Technical Schedule No 5/6E/4 -
Variation No 1 and in drawings and specifications lodged with the
Commission, provides for a drip-tube milk sampler.

The approval is subject to review on or after 1 July 1982.

All instruments conforming to this approval shall be marked with the
approval number "NSC No 5/6E/4".

Signed



Executive Officer



NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 5/6E/4

Pattern: Diessel (Milk) Flowmeter

Submittor: Bell Bryant Pty Ltd,
37 Herbert Street,
St Leonards, New South Wales, 2065.

Date of Approval: 7 July 1977

This Technical Schedule replaces Technical Schedule No 5/6E/4 dated 20 June 1974.

Conditions of Approval:

1. The flow rate is limited to a maximum of 300 l/min.
2. The outlet of any farm milk tank connected to the system is below the suction inlet of the pump.
3. The outlet of the metering system is above the top of the air purger and the meter.
4. After each pick-up the quantity retained in the hose is included in the quantity indicated by draining the hose into the gas purger with the pump still running.
5. The acceptance tolerance is $\pm 0,5\%$.
6. The service tolerance after three months from initial verification is 1,5 times the acceptance tolerance.
7. The system is either primed with milk before commencing the first pick-up each day or, if the system is not primed before commencing the first pick-up, the priming quantity marked on the instrument data plate is added to the quantity measured on the first pick-up.
8. The instrument data plate is marked in whole litres with a priming quantity which is not less than the maximum quantity required to prime the system.
9. All instruments conforming to this approval shall be marked "NSC No 5/6E/4".

Description:

The pattern (see Figures 1, 2 and 3) is a vehicle-mounted instrument for the pick-up of milk.

The flowmeter comprises:

1. Hose — up to 6 m of 50-mm bore hose.
2. Positive displacement pump mounted on the assembly so that it is higher than the outlet of any storage vat from which it measures milk.
3. Strainer.
4. Milk sampler — consisting of an electrically actuated valve which takes samples of the milk at set intervals from a point upstream of the meter (see Figures 1 and 3). The calibration of the meter takes into account the quantity of the milk passing through the sampler. The milk sampler adjustment is located inside a box which is sealed by lead plugs which prevent removal of the manufacturer's nameplate (see Figure 4).
5. Gas purger — consisting of a tank fitted with a float-operated vent valve. The float is guided at the top and bottom and the cone-shaped vent valve seats in a rubber ring fitted in the air vent.

The diameter of the float is not less than 175 mm; its height is not less than 150 mm and its weight, including the vent valve, is not more than 2,3 kg (see Figure 1).

6. Meter — Diessel NW 505 (see Figure 5).
7. Siemens indicator and ticket printer — the ticket printer has 0,1-litre increments and the indicator has 1-litre graduations; the first element of the indicator is marked with ten graduations numbered from 0 to 9 with nine interpolation marks between each graduation (see Figure 5).
8. Non-return valve — spring-loaded to open at pressure above 20 kPa.
9. Outlet — the metering system discharges the milk above the maximum level of the milk in the receiving tank; the outlet is above the top of the gas purger and the meter.
10. Marking — the quantity reading face (see Figure 5) is marked:
 - (a) "approved for milk only", and
 - (b) "maximum priming quantity ...x... litres", x being not less than the maximum quantity required to prime the instrument.

Special Tests:

The instrument should be tested with milk.

Priming quantity and the instrument calibration may both be checked using a single measure with, say, four proving runs, the first run with the metering system unprimed. The difference between the primed and unprimed readings should be not greater than the priming quantity marked on the instrument data plate.

Minimum Pick-up:

1. The non-flow-dependent errors are up to:
 - (a) 0,1-litre reading error for the ticket printer with 0,1-litre increments.
 - (b) 0,2-litre reading error for the indicator with 1-litre graduation.
 - (c) 3,5-litre variation in the quantity contained upstream of the meter after a pick-up.
2. The minimum pick-up for which the relative error from all sources would not exceed 1,5% is 350 litres.

Operator Tests:

As damage may occur when the instrument is disassembled for daily cleaning or during use, the following procedures carried out on a regular basis by the user of the instrument will check that the instrument calibration remains correct:

A verified measure containing not less than 1500 litres of milk is connected to the primed system to simulate a typical pick-up from a farm milk tank, and the milk pumped through the instrument.

The meter calibration is correct if the reading on the meter is the quantity which was contained in the measure, say, 1500 litres, $\pm 0,5\%$.



NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 5/6E/4

VARIATION No 1

Pattern: Diessel (Milk) Flowmeter

Submittor: Bell Bryant Pty Ltd,
37 Herbert Street,
St Leonards, New South Wales, 2065.

Date of Approval of Variation: 29 September 1978

The modification described in this Schedule applies to the patterns described in Technical Schedule No 5/6E/4 dated 27 February 1978.

All instruments conforming to this approval shall be marked "NSC No 5/6E/4".

Description:

The approved modification provides for a non-adjustable milk sampler in accordance with AS 1374-1976, consisting of a constant-flow-rate drip tube. The calibration of the meter takes into account the quantity of the milk sample.



NATIONAL STANDARDS COMMISSION

NOTIFICATION OF CHANGE

CERTIFICATE OF APPROVAL No 5/6E/4

CHANGE No 1

The following changes are made to the description of the
Diessel (Milk) Flowmeter

given in Certificate of Approval No 5/6E/4 and its Technical Schedule,
both dated 27/2/78:

1. Delete Condition of Approval No 2 from the Certificate and from page 1 of the Technical Schedule.
2. Delete the words "--mounted on the assembly so that it is higher than the outlet of any storage vat from which it measures milk." from page 2, paragraph 2 of the Technical Schedule.

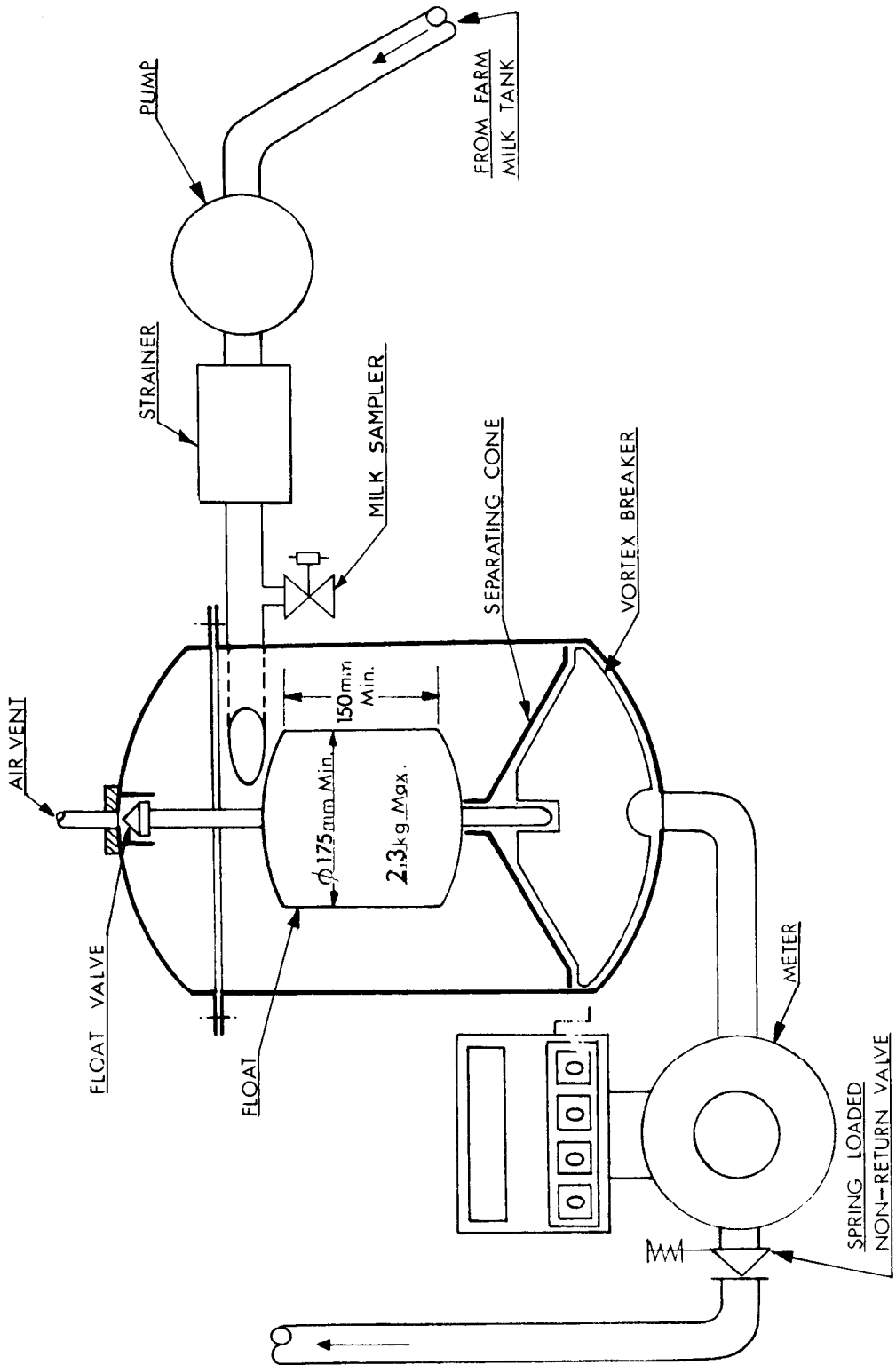
Note: The outlet of the storage tank may be above or below the pump without affecting the accuracy of measurement of the meter.

Signed

Executive Director

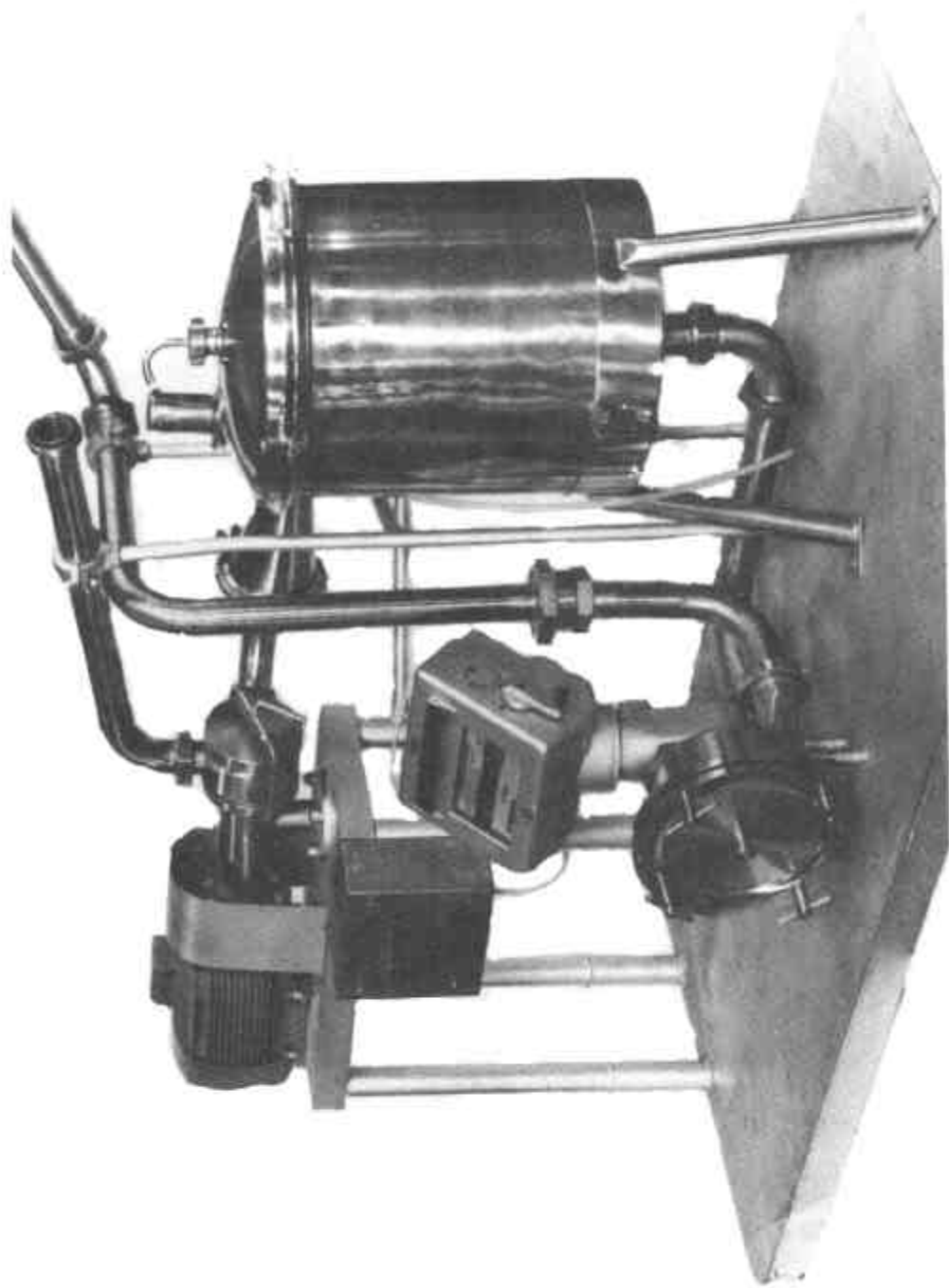
5/6/81

FIGURE 5/6E/4 - 1



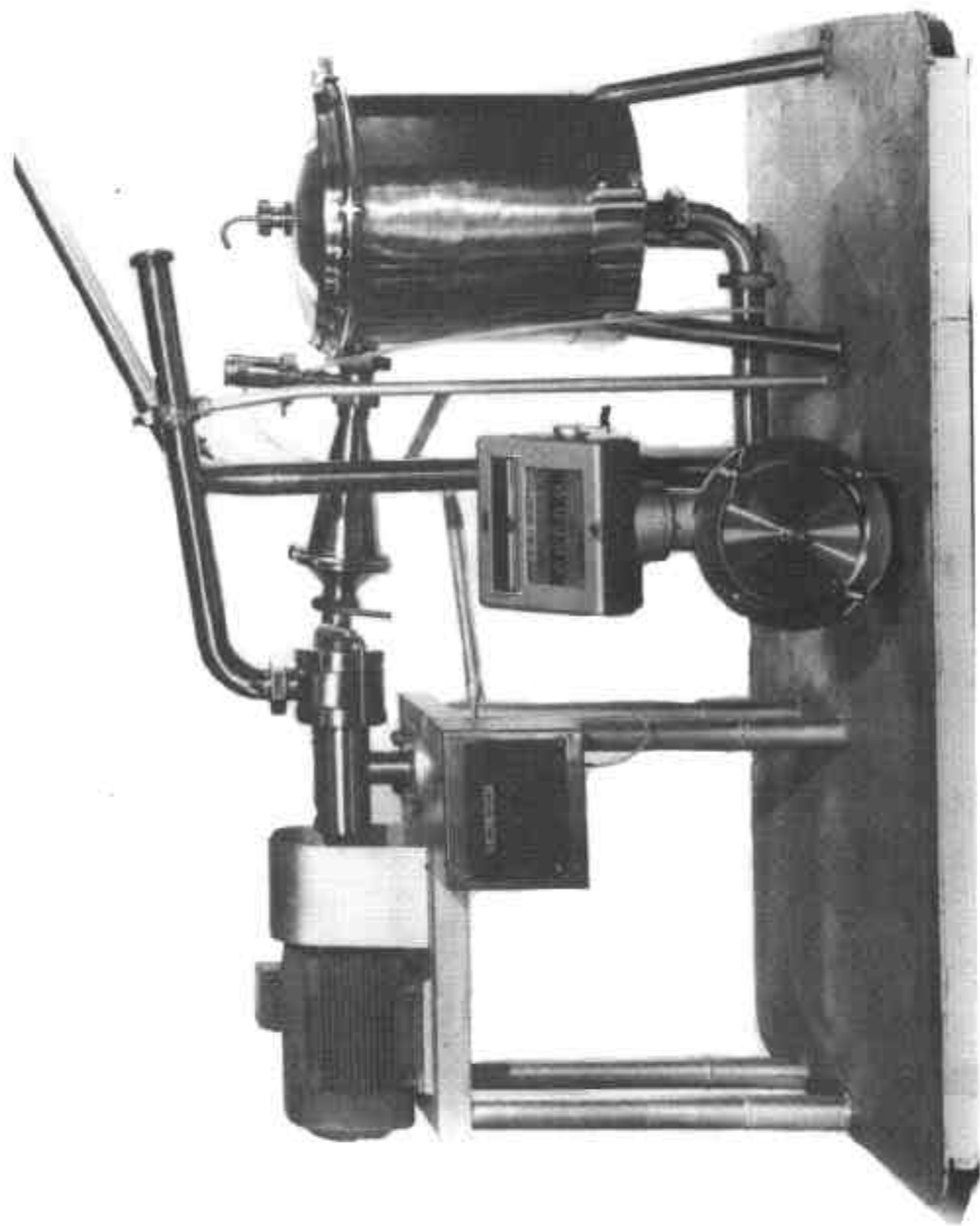
Diesel Milk-metering Flowmeter

FIGURE 5/6E/4 - 2



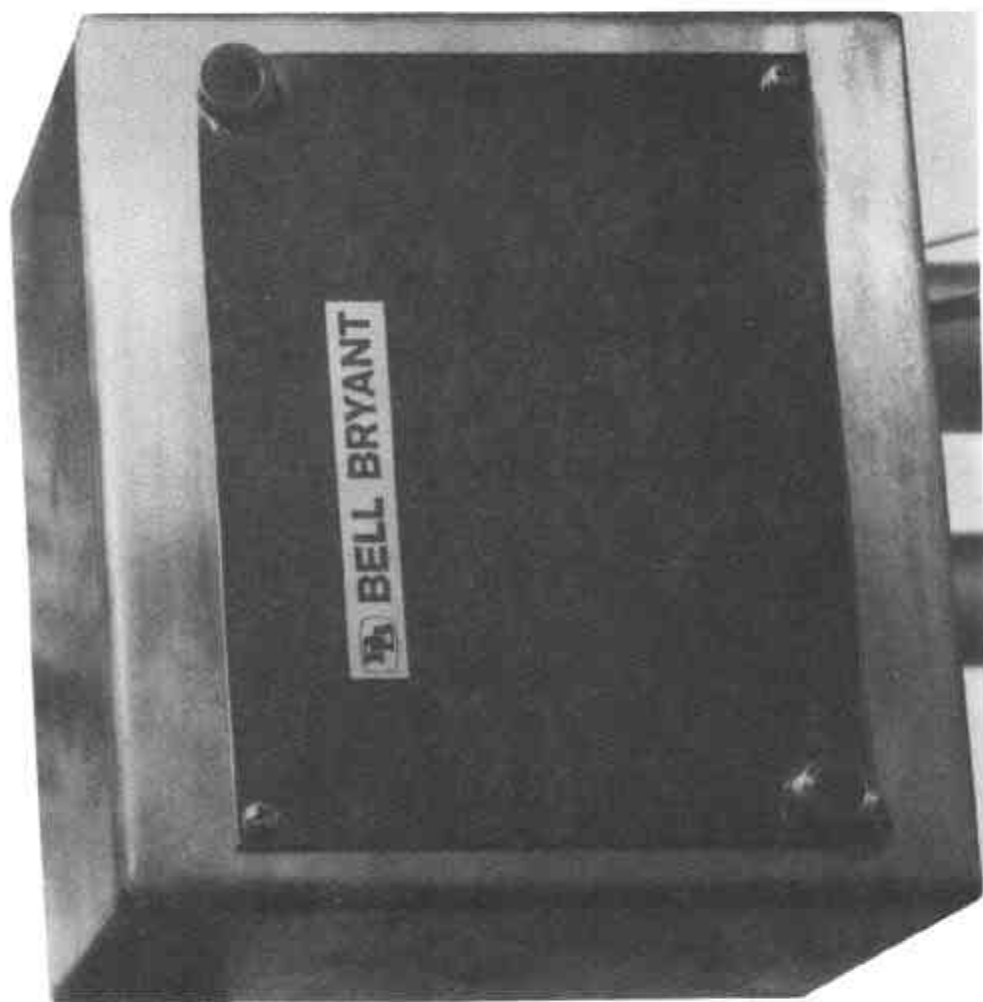
Diesel (Milk) Flowmeter

FIGURE 5/6E/4 - 3



Diesel (Milk) Flowmeter

FIGURE 5/6E/4 - 4



Sealing of Milk Sampler Adjustment

FIGURE 5/6E/4 - 5



Diessel NW 505 Meter and Siemens
Indicator and Ticket Printer

27/2/78