

# NATIONAL STANDARDS COMMISSION

JE

5/6B/73 19/6/86

### NATIONAL MEASUREMENT (PATTERNS OF INSTRUMENTS) REGULATIONS

## **REGULATION 9**

### CERTIFICATE OF APPROVAL No 5/6B/73

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

Brooks Model BA-31 Flowmetering System

submitted by K J Baillie Pty Ltd 12 Whiting Street Artarmon NSW 2064.

Conditions of Approval

This approval is subject to review on or after 1/11/90.

Instruments purporting to comply with this approval shall be marked NSC No 5/6B/73.

This approval may be withdrawn if instruments are constructed and used other than as described in the drawings and specifications lodged with the Commission.

The Commission reserves the right to examine any instrument purporting to comply with this approval.

Auxiliary devices used with this instrument shall comply with the requirements of General Supplementary Certificate No S1/O.

Signed

Executive Director

#### Descriptive Advice

Pattern: approved 9/10/85

Brooks model BA-31 drum-filling flowmetering system.

Technical Schedule No 5/6B/73 describes the pattern.

Filing Advice

The documentation for this approval comprises:

Certificate of Approval No 5/6B/73 dated 19/6/86 Technical Schedule No 5/6B/73 dated 19/6/86 (including Test Procedure) Figures 1 and 2 dated 19/6/86



# NATIONAL STANDARDS COMMISSION

# TECHNICAL SCHEDULE No 5/6B/73

Pattern: Brooks Model BA-31 Flowmetering System

Submittor: K J Baillie Pty Ltd 12 Whiting Street Artarmon NSW 2064

# 1. Description of Pattern

A drum-filling flowmetering system using a Brooks model BA-31 flowmeter (Figure 1) which is approved for use with liquids having a viscosity range of 0.4 mPa.s to 8 mPa.s at any constant flow rate (within  $\pm$  5%) set in the range of 50 L/min to 220 L/min.

# 1.1 Drum-filling Flowmetering System (Figure 2)

The system comprises:

- (i) A supply tank.
- (ii) A pump of either positive displacement or centrifugal type in the latter case, the pump is mounted lower than the minimum height of the liquid in the supply tank; the supply pipe from the tank has a continuous fall to the pump. Provision is made for a pressure gauge to be connected downstream of the meter.

If the pump is not for the exclusive use of the flowmeter, the flow rate through the flowmeter is maintained at a constant flow rate marked on the nameplate (within  $\pm$  5%) for all combinations of uses of the pump.

- (iii) A non-return valve between the pump and the meter, or an arrangement of the components and piping to keep the system full of liquid at all times.
- (iv) A Brooks model BA-31 flowmeter with split compartment gas purger/strainer and a model 52350 shut-off valve with hookup linkage valve assembly.
- (v) The meter is fitted with a Veeder-Root model VR788951-009 preset register which is set to automatically repeat deliveries of 200 litres. The instrument is marked PRESET FOR 200 LITRES and is used with or without the following:
  - (a) Veeder-Root model VR788700 zero-start indicator, or
  - (b) Veeder-Root model VR789000 zero-start or accumulative single-handle indicator/ticket printer.
- (vi) The outlet valve is in the form of an open/close type nozzle for 200 L batch deliveries at constant flow rate.
- (vii) If the nozzle anti-drain valve retaining pressure is less than 55 kPa, a separate anti-drain valve must be fitted to the nozzle.

...../2

5/6B/73 19/6/86

## Technical Schedule No 5/6B/73

## 1.2 Markings

Instruments are marked with the following data, on one or more permanently attached nameplates:

Manufacturer's name or mark Meter model Serial number NSC approval number Nominal flow rate Type of liquid for which the meter is verified

NSC No 5/6B/73

In addition, the instrument is marked PRESET FOR 200 LITRES.

### 1.3 Sealing and Verification Provision

The indicator or ticket printer/indicator may be sealed by passing a sealing wire through the attachment-mounting bolts terminating in a lead seal. The calibrator is sealed by the lead stamping plug provided for verification.

## TEST PROCEDURE No 5/6B/73

The instrument should be tested with the liquid with which it will be used and which is marked on the data plate. The system is tested for 200 L batch deliveries.

The maximum permissible errors at verification are  $\pm$  0.15% for deliveries at a constant flow rate (i.e. within  $\pm$  5% of nominal) and at a constant temperature.

Page 2



5/68/73 19/6/86



**\rum Filling System - Schematic Diagram**