G.H.

NATIONAL STANDARDS COMMISSION

6/10B/45A
31/3/89

NATIONAL MEASUREMENT (PATTERNS OF INSTRUMENTS) REGULATIONS

REGULATION 9

CERTIFICATE OF APPROVAL No 6/10B/45A

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

AND Mercury Model RVB-H20 Weighing Instrument

submitted by A & D Mercury Pty Ltd
32 Dew Street
Thebarton SA 5031.

CONDITIONS OF APPROVAL

This approval is subject to review on or after 31/1/89.
This approval expires in respect of new instruments on 31/1/90.

Instruments purporting to comply with this approval shall be marked NSC No 6/10B/45A.

This approval may be withdrawn if instruments are constructed other than as described in the drawings and specifications lodged with the Commission.

The values of the performance criteria (maximum number of scale intervals etc.) applicable to the instrument shall be within the limits specified in this approval or in any approval documentation for the components, where they are approved separately.

Auxiliary devices used with this instrument shall comply with the requirements of General Supplementary Certificate No S1/0.

The load cells used shall be subject to regular certification by the Commission.

The instrument as approved herein or with substitute load cells and/or indicator shall comply with General Certificate No 6B/0.

Signed

J. Birch

Executive Director

Descriptive Advice

Pattern: approved 23/12/83

- An A & D Mercury model RVB-H20 weighing instrument of various capacities and sizes.

Technical Schedule No 6/10B/45A describes the pattern.

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Variant: approved 5/12/88

1. With a hopper type load receptor.

Technical Schedule No 6/10B/45A Variation No 1 describes variant 1.

Filing Advice

Certificate of Approval No 6/10B/45A dated 30/1/84 is superseded by this Certificate and may be destroyed. Figure 2 dated 30/1/84 is obsolete and should be destroyed. The documentation for this approval now comprises:

Certificate of Approval No 6/10B/45A dated 31/3/89
Technical Schedule No 6/10B/45A dated 30/1/84
Technical Schedule No 6/10B/45A Variation No 1 dated 31/3/89
Test Procedure No 6/10B/45A dated 30/1/84
Figure 1 dated 30/1/84
Figures 2 and 3 dated 31/3/89

NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 6/10B/45A

Pattern: Mercury Model RVB-H20 Weighing Instrument

Submittor: Mercury Weighing and Control Systems Pty Ltd
32 Dew Street
Thebarton, South Australia, 5031.

1. Description of Pattern

A self-indicating weighbridge in various capacities and sizes. The weighbridge consists of a basework using HBM model C3H2 load cells of 20 tonnes maximum capacity (Figures 1 and 2) and a Mercury model 479 digital indicator. The dead load of the deck is 1.5 t/m for concrete and 0.85 t/m for steel construction.

1.1 Load Cells

1.1.1 Specifications

HBM C3H2 (seperately approved under NSC No S136)	
Maximum capacity	20 t
Maximum number of verification scale intervals	3000
Minimum dead load	1 t
Minimum value of verification scale interval	2 kg
Input impedance (nominal)	350 Ω
Supply voltage (AC or DC)	0.5 to 18 V
Output rating (nominal)	2 mV/V
Cable length (± 0.1 m)	3 m
Number of leads	4*

*There is also a shield cable.

1.1.2 Load Cell Marking

The following is the minimum data required to be marked on the load cell:

Manufacturer's name or mark
Model number
Serial number
Maximum capacity
Approval number

1.2 Indicator

Mercury model 479 digital indicator displaying up to 3000 scale intervals, with or without an output socket for the connection of peripheral or auxiliary equipment, and with functions as described in the documentation of Approval No 6/9C/67.

1.3 Markings

The instrument is marked with the following data, in one clearly visible location:

Manufacturer's name or mark	
Model number of instrument	
Serial number of instrument	
NSC approval number	NSC No 6/10B/45A
Accuracy class	(III)
Maximum capacity in the form:	Max .....
Minimum capacity in the form:	Min .....
Verification scale interval in the form:	e = d = ...
Maximum subtractive tare in the form:	T = - .....
Load cell NSC approval number)	
Headwork NSC approval number) where appropriate	
Basework NSC approval number)	

Load cell serial numbers may be marked on a nameplate attached to the indicator or marked on metal tags attached to the indicator via a lead and wire seal.

TEST PROCEDURE 6/10B/45A

All load applications to the instrument should be in accordance with the Commission's recommended testing procedure for the elimination of rounding error as set out in Document 104.

The maximum permissible errors are:

± 0.5e for loads between 0 and 500e;
± 1.0e for loads between 501e and 2000e; and
± 1.5e for loads above 2000e.

1. Zero Range

Check that the range of the zero adjustment is not more than 4% of the maximum capacity (± 2% approximately). With zero balance indicated, apply a load of, say, 2.5% of maximum capacity to the instrument, and attempt to set zero; this should not be possible.

2. Zero Balance

Check by means of the Commission's digital zero test as set out in Document 104 that, when the zero light is illuminated, zero is set within 0.25 scale intervals.

3. Range of Indication

The maximum mass indicated should not exceed by more than 10 scale intervals the maximum capacity (Max); above this indicated mass the indicator should be blank or show non-numerical characters.

4. Test Loads

Test loads are to be applied to the instrument in not less than 5 approximately equal steps increasing to maximum capacity, followed by decreasing loads of not less than 5 approximately equal steps.

The instrument should display these loads within the applicable tolerance as listed above.

5. Tare

Attempt to tare a mass above maximum capacity as determined in Test 3 above - this should not be possible.

6. Stability Test

Using the heaviest and most concentrated rolling load intended to be weighed (heaviest axle loading) conduct a stability test on one end of the weighbridge platform beyond the end cells; lifting of the opposite end should not be apparent.

Repeat this test at the other end of the weighbridge.

TECHNICAL SCHEDULE No 6/10B/45A

VARIATION No 1

Pattern: AND Mercury Model RVB-H20 Weighing Instrument.

Submittor: A & D Mercury Pty Ltd
32 Dew Street
Thebarton SA 5031.

1. Description of Variant 1

With a hopper type load receptor of 30 000 kg maximum capacity and approved for use with up to 3000 verification scale intervals.

1.1 Load Receptor

The instrument has load cells which fully support the cylindrical hopper load receptor (Figure 2).

1.2 Load Cells

Three AND Mercury model TR3K-50 load cells of 22 700 kg capacity are used as described in the documentation of NSC approval No S221, and mounted as shown in Figure 3.

1.3 Indicator

An AND Mercury model AD-4316 digital indicator is used as described in the documentation of NSC approval No S161.

TEST PROCEDURE

Instruments should be tested in conjunction with any tests specified in the approval documentation for the indicator used, and in accordance with any relevant tests specified in the Inspector's Handbook. The results shall not exceed the maximum permissible errors specified in Document 118, 2nd Edition, October 1986.

25/3/88

NATIONAL STANDARDS COMMISSION

NOTIFICATION OF CHANGE

VARIOUS CERTIFICATES OF APPROVAL

The following changes are made to the approval documentation for the approvals listed overleaf

submitted by Mercury Weighing and Control Systems Pty Ltd
32 Dew Street
Thebarton SA 5031.

In the Certificates and Technical Schedules listed, the following changes should be made:

1) The submittor should be changed to read;

A & D Mercury Pty Ltd

(the address remains unchanged)

2) Any Mercury instrument or component of an instrument approved in the documentation, may now also be known as "AND Mercury" or similar.

Signed

J. Birch.

Executive Director

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APPROVAL	PATTERN
TYPE: weighing instruments counter scales	
6/3/007	Model 92
6/3/008	Model 131
TYPE: counter machines semi-self-indicating	
6/4A/012	Model 304A
TYPE: counter machines freely-suspended < 30 kg (spring scales)	
6/5/011	Model 211 DA
TYPE: weighing instruments non-self-indicating	
6/9A/001	Models 692 and 682
6/9A/004	Model 522D
6/9A/007	Model 211
6/9A/008	Model 600
TYPE: weighing instruments self-indicating	
6/9C/005	Model 211D
6/9C/013	Up to 2500 lb or 1200 kg
6/9C/066	Model 522 AL
6/9C/067	Model SM100/479/522D
6/9C/081	Model SB-LP 1200
6/9C/088	Model 522D LT-10K
TYPE: weighbridges self-indicating	
6/10B/040	Model WB-LT
6/10B/045A	Model RVB-H20
TYPE: automatic weighing instruments (except belt conveyors)	
6/14B/012	Model HSD automatic hopper
TYPE: overhead weighing instrument (suspended load or receptor)	
6/18/005	With 211DA headwork
6/18/017	Model OHT 500
TYPE: digital indicators	
S114	Model 579
S128	Model 1300
S132	Model 900
S161	Model AD4316
S199	Model AD-4321
TYPE: load cells	
S117	Interface model SM25-12 kg
S163	Transducers model B5112.1K
S221	HBM model TRT-50 (Mercury model TRT3K-50)

F.G.

6/10B/45A
29/4/85

NATIONAL STANDARDS COMMISSION

NOTIFICATION OF CHANGE

CERTIFICATE OF APPROVAL No 6/10B/45A

CHANGE No 1

The following change is made to the approval documentation of the

Mercury Model RVB-H20 Weighing Instrument

submitted by Mercury Weighing and Control Systems Pty Ltd
32 Dew Street
Thebarton SA 5031.

In Test Procedure No 6/10B/45A dated 30/1/85,

paragraph 6. Stability Test should be deleted.

Signed

Executive Director

6/10B/45A
29/6/87

NATIONAL STANDARDS COMMISSION

NOTIFICATION OF CHANGE

CERTIFICATE OF APPROVAL No 6/10B/45A

CHANGE No 2

The following change is made to the approval documentation for the

Mercury Model RVB-H20 Weighing Instrument

submitted by Mercury Weighing and Control Systems Pty Ltd
32 Dew Street
Thebarton SA 5031.

1. In Technical Schedule No 6/10B/45A dated 30/1/84:

Delete the 3rd sentence from clause 1. Description of Pattern to remove any reference to the deadload of the deck.

Signed

J. Birch

Executive Director

G.4.

6/10B/45A
28/4/88

NATIONAL STANDARDS COMMISSION

NOTIFICATION OF CHANGE

CERTIFICATE OF APPROVAL No 6/10B/45A

CHANGE No 3

The following change is made to the approval documentation for the

AND Model RVB-H20 Weighing Instrument

(also known as a Mercury model RVB-H20)

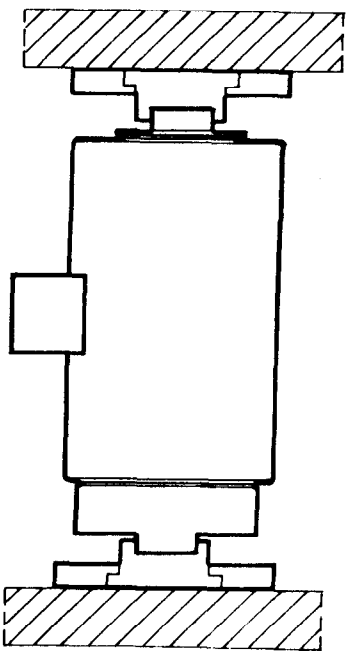
submitted by A & D Mercury Pty Ltd
(formerly Mercury Weighing and Control Systems Pty Ltd)
32 Dew Street
Thebarton SA 5031.

Figure 2 dated 30/1/84 is now obsolete and any reference to it in Certificate and Technical Schedule No 6/10B/45A should be deleted.

Signed

Executive Director

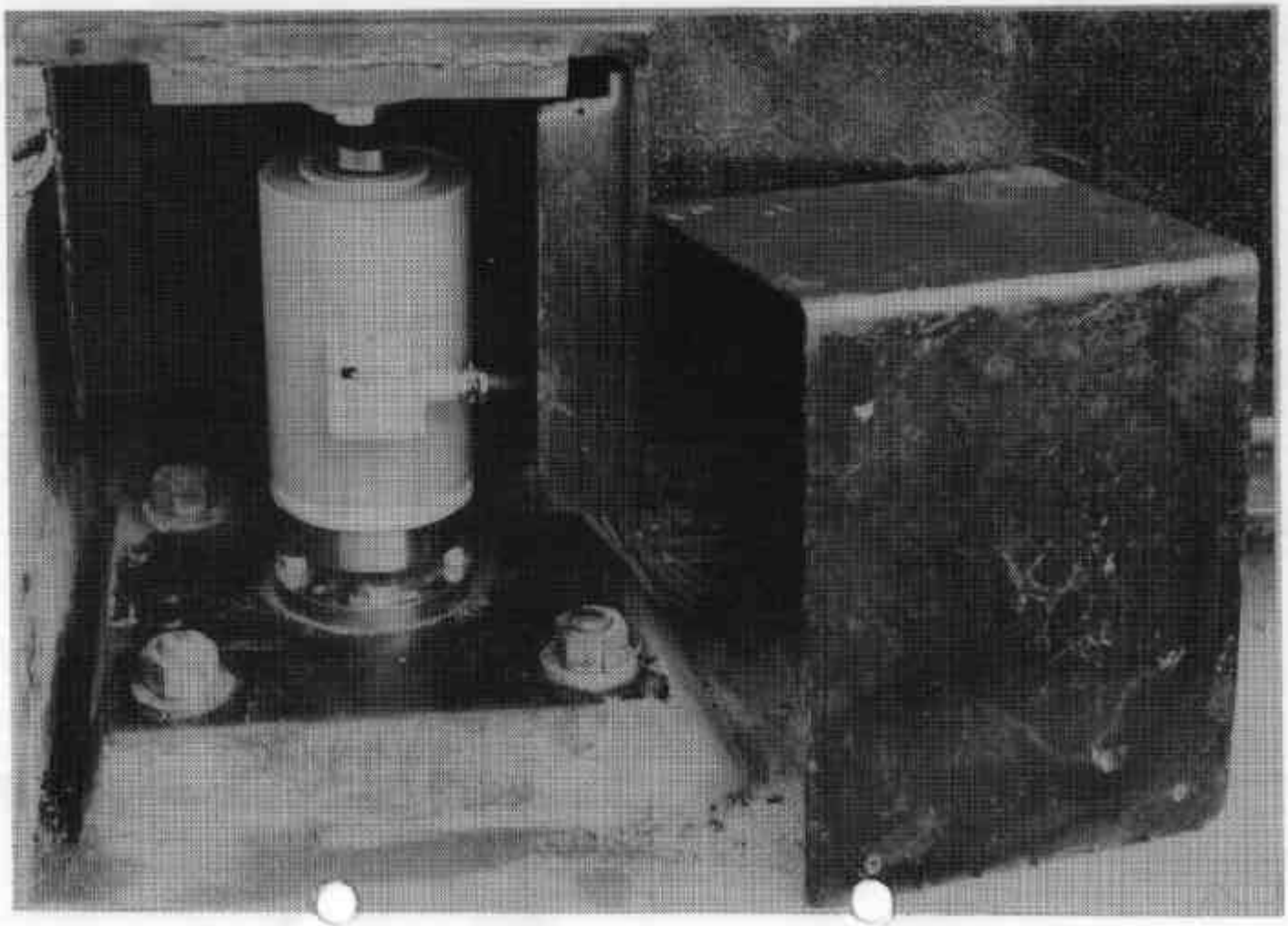
FIGURE 6/10B/45A - 1



Load Cell Mounting - Schematic Diagram

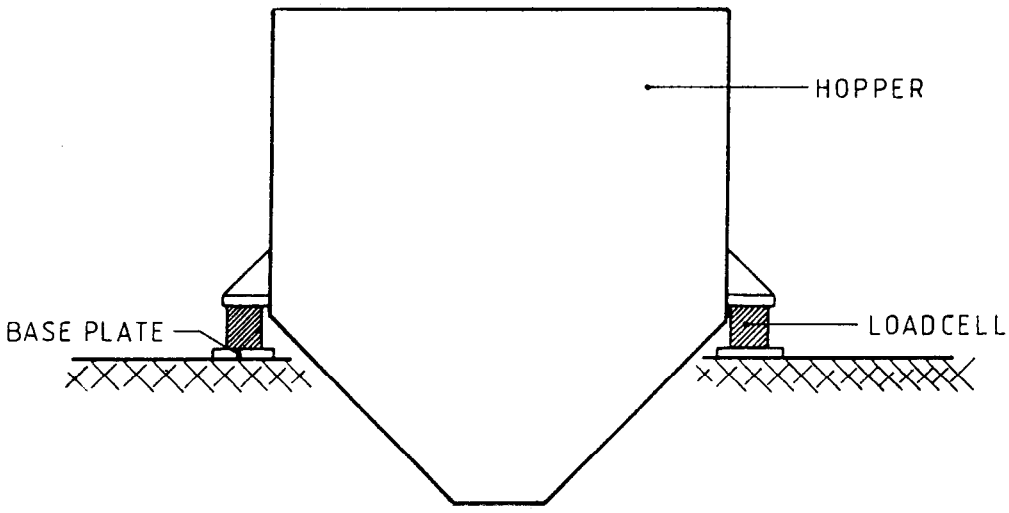
30/1/84

FIGURE 6/108/45A - 2



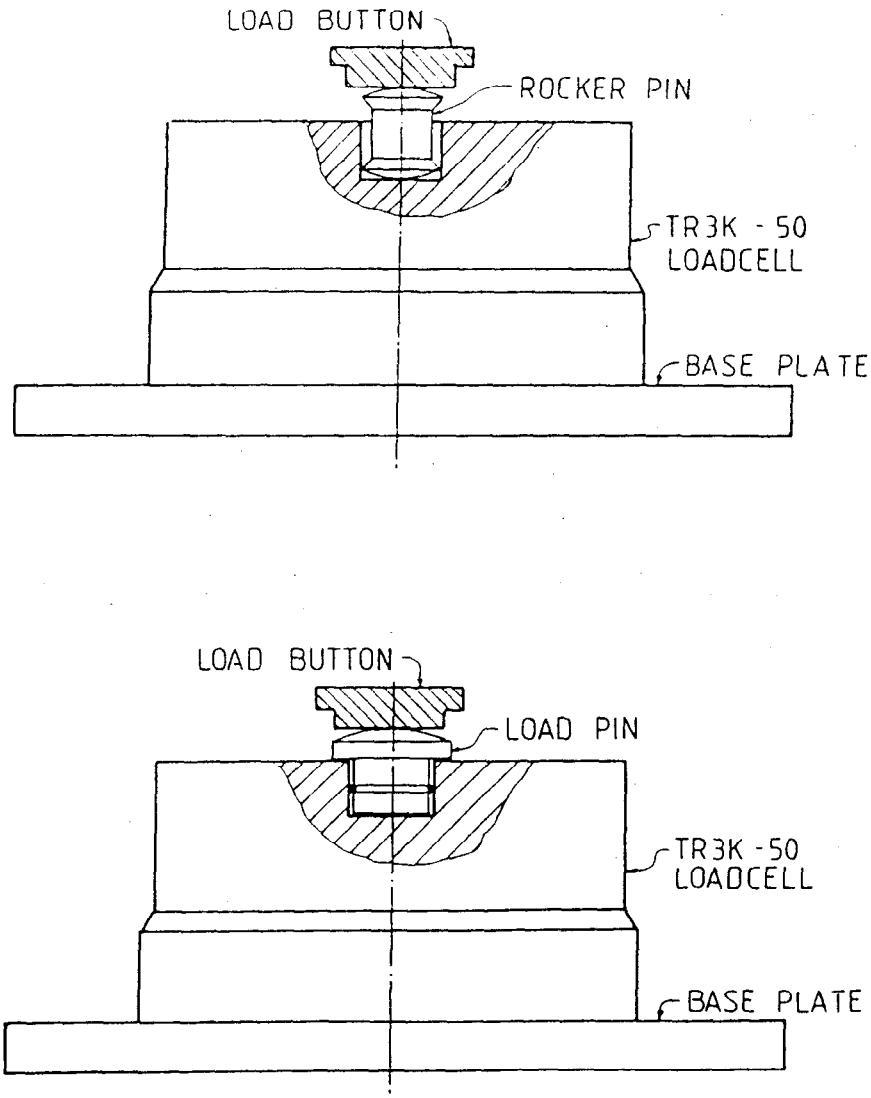
Load Cell With Sunshield Removed

FIGURE 6/10B/45A - 2



With a Hopper Type Load Receptor

FIGURE 6/10B/45A - 3



Typical Mounting Methods