J.B.

NATIONAL STANDARDS COMMISSION

6/10B/49
19/5/87

NATIONAL MEASUREMENT (PATTERNS OF INSTRUMENTS) REGULATIONS

REGULATION 9

CERTIFICATE OF APPROVAL No 6/10B/49

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

Modern Weighbridge Model MW-2000 Weighing Instrument

submitted by Modern Weighbridge and Scale Service Pty Ltd
25 Davis Street
Wingfield SA 5013.

CONDITIONS OF APPROVAL

This approval is subject to review on or after 1/11/91.
This approval expires in respect of new instruments on 1/11/92.

Instruments purporting to comply with this approval shall be marked NSC No 6/10B/49.

This approval may be withdrawn if instruments are constructed other than in accordance with the drawings and specifications lodged with the Commission.

Auxiliary devices used with this instrument shall comply with the requirements of General Supplementary Certificates Nos S1/0 and S2/0, as appropriate.

The number of scale intervals applicable to the whole instrument shall be no greater than the number of verification scale intervals approved for the basework, or the load cell, or the headwork, whichever is the smallest.

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

Signed

Executive Director

Descriptive Advice

Pattern: approved 27/10/86

- Modern Weighbridge model MW-2000 self-indicating weighbridge of 60 tonne capacity.

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Variants: approved 27/10/86

1. In various capacities from 3 tonne to 200 tonne.

2. With the load cell and digital indicator replaced by a full capacity steelyard.

3. The instrument fitted with both a steelyard, and load cell and digital indicator.

Technical Schedule No 6/10B/49 describes the pattern and variants 1 to 3.

Filing Advice

The documentation for this approval comprises:

Certificate of Approval No 6/10B/49 dated 19/5/87
Technical Schedule No 6/10B/49 dated 19/5/87
Test Procedure No 6/10B/49 dated 19/5/87
Figures 1 to 3 dated 19/5/87

NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 6/10B/49

Pattern: Modern Weighbridge Model MW-2000 Weighing Instrument

Submittor: Modern Weighbridge and Scale Service Pty Ltd
25 Davis Street
Wingfield SA 5013

1. Description of Pattern

A self-indicating weighbridge of 60 t capacity approved for use with up to 3000 verification scale intervals (e).

1.1 Basework

(i) The lever system is approved for use with up to 3000e and comprises two or more main levers and may incorporate a number of transfer levers. The levers may be fabricated or cast and are connected by simple or compound vertical links. Figures 1 and 2 show various arrangements.

(ii) The load cell is a single Yamato US3-500-C2 500 kg load cell (as described in the documentation of NSC approval No S165) fitted in a pullrod from the nose-end knife-edge of the transfer lever. Alternatively, the load cell may be fitted directly in a pullrod from the nose-end knife edges of the main levers.

(iii) The platform is supported on the main lever knife-edges through a ball bearing support assembly. The lever fulcrum knife-edges are located on bearings mounted in fixed floor-mounted pedestals (Figure 3).

1.2 Headwork

A Gedge model GS1650 digital indicator as described in the documentation of NSC approval No S193 is used.

1.3 Markings

Instruments are marked with the following data, together in one location:

Manufacturer's name or mark		
Serial number		
NSC approval number		NSC No 6/10B/49
Accuracy class		(III)
Maximum capacity		Max ..... *
Minimum capacity		Min ..... *
Verification scale interval		e = d = ... *
Maximum subtractive tare		T = - .....
Load cell approval number)		
Headwork approval number)	where	
Basework approval number)	appropriate	
Load cell serial number #		

* These markings are repeated in the vicinity of each reading face.

\# The load cell serial number may alternatively be marked on a metal tag attached to the indicator via a lead and wire seal.

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1.4 Verification Provision

Provision is made for a verification mark to be applied to the indicator.

2. Description of Variants

2.1 Variant 1

In various capacities from 3 t to 200 t by varying lever ratios, using other Commission-approved load cells, and by using a modular system with each section being as per the pattern and as per either method shown in Figure 1. For larger capacity weighbridges up to three of these two-lever sections may be combined and the output from the load cells fed into a summing unit.

2.3 Variant 2

With the digital indicator and load cell replaced by a steelyard. The transfer lever is connected through a pullrod to a full capacity steelyard, or alternatively through an intermediate lever in the headwork cabinet. Tare bars may be fitted, in which case the markings shall be amended to include the maximum additive tare value.

2.4 Variant 3

With a steelyard fitted as well as a load cell and digital indicator. In this case the pullrod is connected to a headwork lever that has a load cell connected to one end and a steelyard to the other. Only one method of mass indication may be in use at any time; the other indicator shall be rendered inoperative.

TEST PROCEDURE No 6/10B/49

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. Eccentricity Test

At the position of each of n points of support of the load receptor, a test load equal to the fraction 1/(n-1) of the sum of the maximum capacity and the maximum additive tare effect (where applicable) is successively distributed on an area of the same order of magnitude as the fraction 1/n of the surface area of the load receptor.

Where two points of support are too close together for the abovementioned test load to be distributed as indicated above, the load is doubled and distributed on twice the area on both sides of the axis connecting the two points of support.

2. Instruments Fitted With a Load Cell and Digital Indicator

Any tests specified in the approval documentation for the digital indicator shall be applied.

3. Instruments Fitted With a Steelyard

Tests to be carried out in accordance with the Inspector's Handbook.

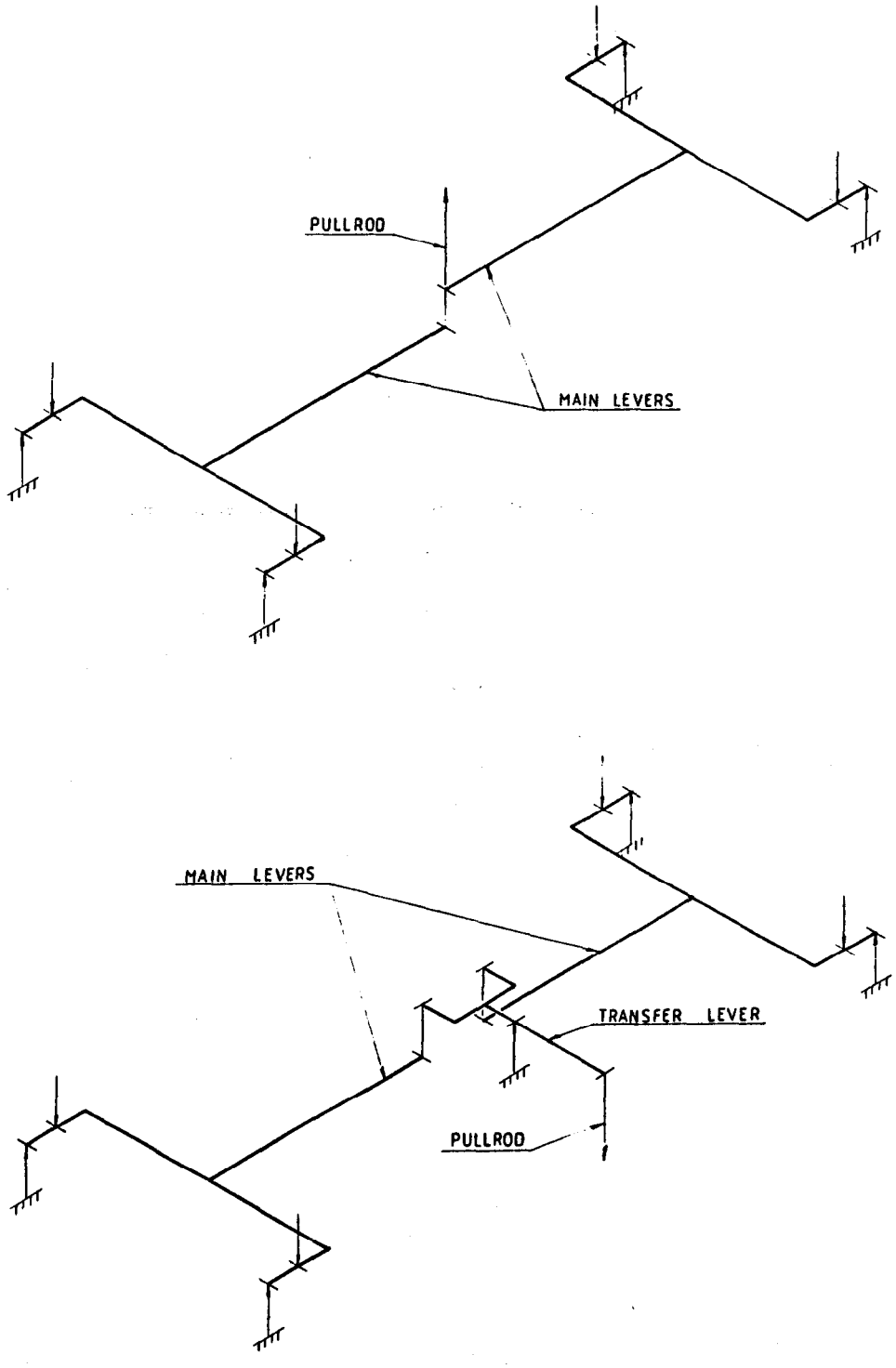
The load tests for the steelyard and digital indicator may be combined.

4. Multiple Indicators

Where more than one indicating system is used, the variation between indications or printings , taken two by two, for the same load shall not be greater than the absolute value of the maximum permissible error. In addition, the scale interval of each indicating device shall be the same.

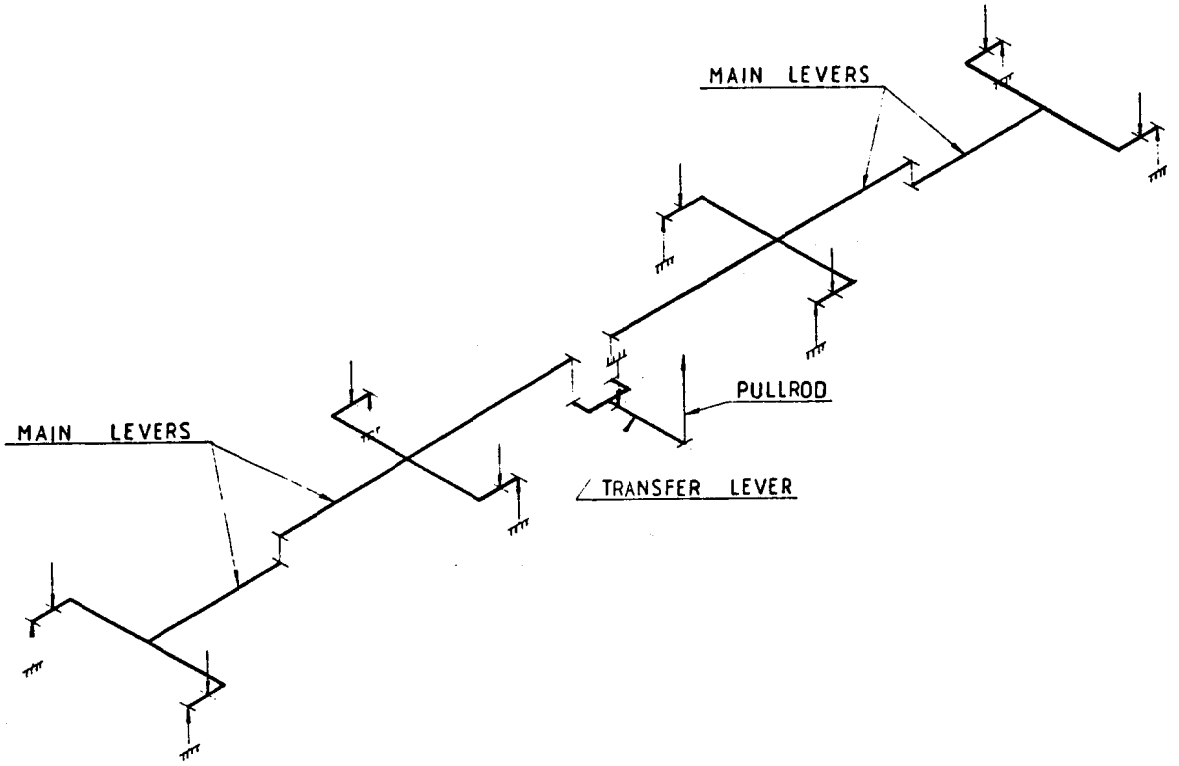
Note: For this test a graduated taring device is considered as an indicating device.

FIGURE 6/10B/49 - 1



Optional Lever Arrangements

FIGURE 6/10B/49 - 2



Optional Lever Arrangement

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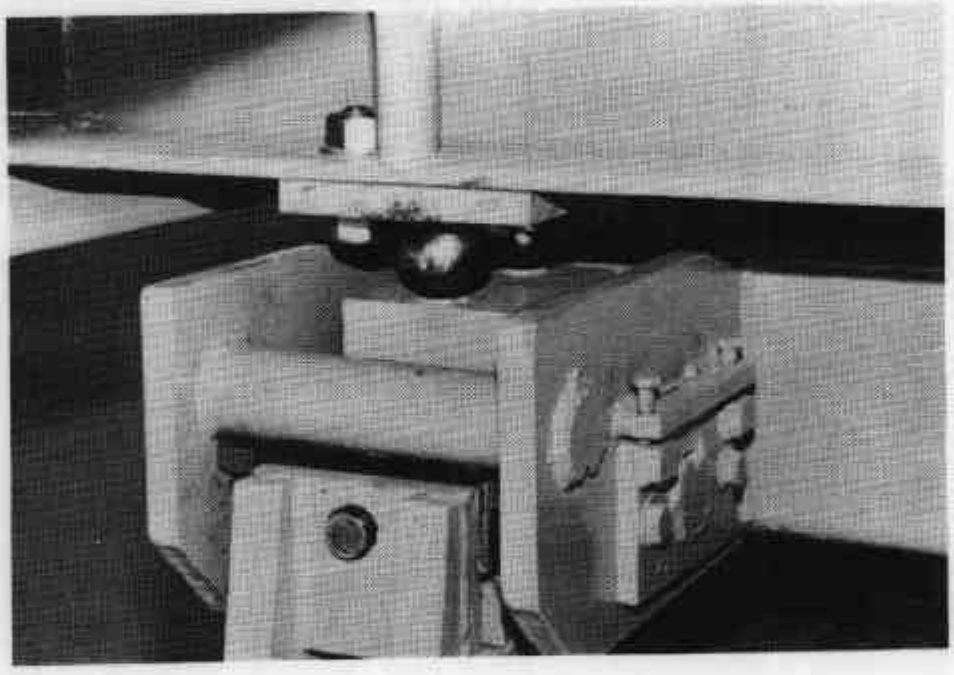
FIGURE 6/108/49 - 3



Floor-mounted Pedestal