Australian Government
National Measurement Institute
Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI 6/10B/46C

Issued by the Chief Metrologist under Regulation 60
of the
National Measurement Regulations 1999

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

Mettler Toledo Model 7560 Weighing Instrument

submitted by Mettler-Toledo Limited
Unit 3, 220 Turner Street
Port Melbourne VIC 3207

NOTE: This Certificate relates to the suitability of the pattern of the instrument for use for trade only in respect of its metrological characteristics. This Certificate does not constitute or imply any guarantee of compliance by the manufacturer or any other person with any requirements regarding safety.

This approval has been granted with reference to document NMI R 76, *Non-automatic weighing instruments, Parts 1 and 2*, dated July 2004.

This approval becomes subject to review on **1/06/16**, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern and variants 1 to 3 approved – certificate issued	31/05/06
1	Variant 4 approved – interim certificate issued	20/12/07
2	Variant 4 – certificate issued	13/06/08
3	Pattern and variants 1 to 4 reviewed & updated – variants 5 & 6 approved – certificate issued	13/12/11

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with approval number 'NMI 6/10B/46C' and only by persons authorised by the submittor.

It is the submittor's responsibility to ensure that all instruments marked with this approval number are constructed as described in the documentation lodged with the National Measurement Institute (NMI) 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 document NMI P 106.

Auxiliary devices used with this instrument shall comply with the requirements of General Supplementary Certificates No S1/0/A or No S1/0B.

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

The pattern as approved herein or with substitute approved load cells and/or approved indicators and in other capacities, or with different platform sizes, shall comply with General Certificate of Approval No 6B/0.

Note: New instruments manufactured under this approval shall only use load cells and/or indicators with current Supplementary Certificates of Approval.

Signed by a person authorised by the Chief Metrologist to exercise his powers under Regulation 60 of the *National Measurement Regulations 1999*.

TECHNICAL SCHEDULE No 6/10B/46C

1. Description of Pattern **approved on 31/05/06**

A Mettler Toledo model 7560 self-indicating class (III) platform weighing instrument of 60 000 kg maximum capacity and approved for use with up to 4000 (*) verification scale intervals (VSI).

(*) Instruments used with more than 3000 VSI shall be provided with wind protection in accordance with clause **4. Wind Effects** of General Certificate of Approval No 6B/0.

1.1 Basework

The model 7560 basework has the platform fully supported by eight (8) load cells.

1.2 Load Cells

Mettler Toledo model MTX load cells of 25 kg capacity are used. The load cells are also described in the documentation of approval NSC S381.

1.3 Indicator

A Mettler Toledo model JagXtreme digital indicator is used. The indicator is described in the documentation of approval NSC S339.

1.4 Levelling

Where instruments are liable to be tilted (i.e. they are not installed in a permanently fixed location) they are provided with adjustable feet and a level indicator. Adjacent to the level indicator is a notice stating ‘instrument must be level when in use’, or similar wording.

1.5 Verification Provision

Provision is made for the application of a verification mark.

1.6 Descriptive Markings

Instruments are marked with the following data, together in one location, in the form shown at right:

Manufacturer’s mark, or name written in full	Mettler Toledo
Indication of accuracy class	(III)
Maximum capacity	*Max* ..... kg or t *
Minimum capacity	*Min* ..... kg or t *
Verification scale interval	*e* = ... kg or t *
Tare capacity (if less then *Max)*	*T* = - ..... kg or t
Serial number of the instrument	.....
Pattern approval mark for the instrument	6/10B/46C
Pattern approval mark for the load cells	S...
Pattern approval mark for the indicator	S...

* These markings shall also be shown near the display of the result if they are not already located there.

1.7 Sealing Provision

Provision is made for the calibration adjustments in the indicator to be sealed as described in the approval documentation for the indicator used.

2. Description of Variant 1 approved on 31/05/06

Other model weighing instruments of the 7000 series in capacities of:

- 1500 kg up to 14 999 kg; and
- 15 000 kg up to 149 999 kg,

with no less than 4 and with up to 24 approved load cells.

3. Description of Variant 2 approved on 31/05/06

Other model weighing instruments of the 7000 series with the load receptor in the form of a hopper or tank in capacities from 1500 kg up to 149 999 kg. Instruments are either:

(a) fitted with 3, 4 or 5 approved load cells (arranged symmetrically to ensure even loading of each cell) where the hopper is a vertical cylindrical or tank-type load receptor directly supported by the load cells; or

(b) fitted with 4 approved load cells where the hopper is a non-vertical cylindrical, or other hopper-type load receptor.

Note: Instruments with more than 4 load cells may be acceptable if prior written agreement from the National Measurement Institute is obtained.

Suitable provision must be made for the application of suitable verified masses to the instrument as required for verification and certification purposes. It may be necessary for such masses to be incorporated within the design of the instrument.

4. Description of Variant 3 approved on 31/05/06

The 7000 series instruments of 150 000 kg capacity or greater with up to 24 load cells. Instruments may use Mettler Toledo model MTX load cells installed in pairs as shown in Figure 1 and approved for use with up to 3000 verification scale intervals. The load cells are also described in the documentation of approval NSC S381.

5. Description of Variant 4 approved on 20/12/07

A version of the instrument with a U-shaped load receptor intended for the weighing of coils of metal (Figure 2). The instrument is installed in a permanently fixed location.

The instrument load receptor is in a U shape to facilitate loading and unloading of the coils, and is provided with pads forming a ‘V’ onto which the coils are loaded (to prevent them rolling).

The instrument is of 25 000 kg maximum capacity with a verification scale interval of 10 kg. The instrument uses four Mettler Toledo model MTX load cells of 25 000 kg maximum capacity (also described in the documentation of approval NSC S381) and a Mettler Toledo model JagXtreme indicator (also described in the documentation of approval NSC S339).

Note: The instrument is intended for weighing coils of steel in a production line, with a transport mechanism for the coils being provided between the two arms of the U-shaped platform. The symmetrical nature of the coils minimises the possibility of eccentric loading, particularly in the transverse direction.

In view of the special nature of the instrument, the instrument user shall provide a test platform designed to rest on the pads for application of test masses. An eccentricity test may be carried out predominantly in the longitudinal direction, by locating the test platform (with a load of 40 to 50% of maximum capacity) at the centre and then to either end of the instrument (in doing this the change in test platform location from end to end is around 300 mm).

A transverse eccentricity test may be carried out by moving the test masses (approximately 1/3 maximum capacity) to the extremities of the test platform – this may represent a shift of the centre of gravity of the masses of approximately 110 mm.

Note: Although the instrument, and machine of which it is part, is automated, it was considered that it has most features in common with a non-automatic weighing instrument and should therefore be approved as a class (III) non-automatic weighing instrument.

6. Description of Variant 5 approved on 13/12/11

With certain alternative approved Mettler Toledo digital load cells including the model SLC820. The model SLC820 cells may also be known as the model POWERCELL PDX and are described in the documentation of approval NMI S529.

7. Description of Variant 6 approved on 13/12/11

With certain alternative approved Mettler Toledo digital indicators including the models IND560 and IND780. The model indicators are described in the documentation of approvals NMI S483 and S502, respectively.

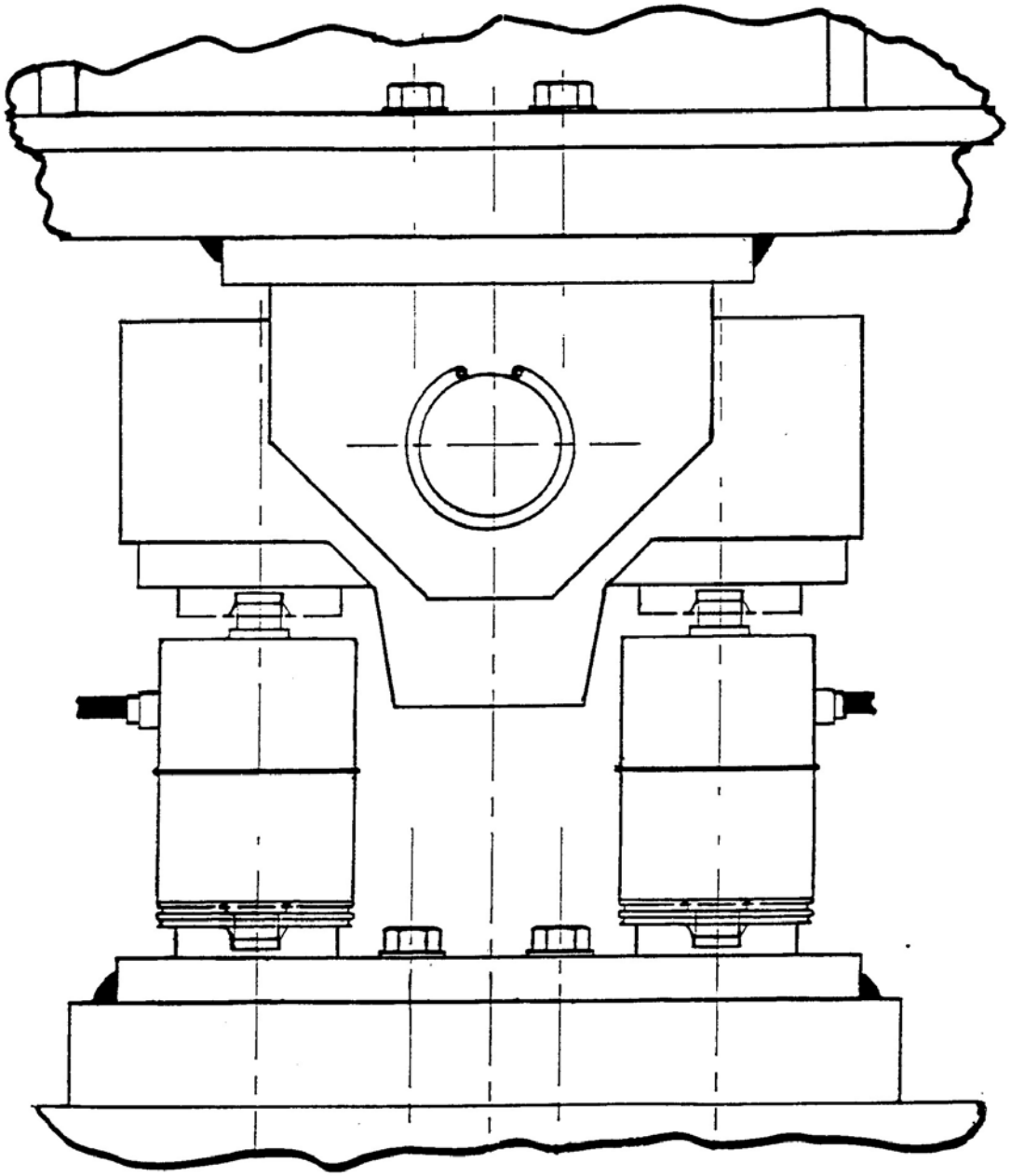
TEST PROCEDURE No 6/10B/46C

Instruments shall be tested in accordance with any relevant tests specified in the National Instrument Test Procedures.

Maximum Permissible Errors

The maximum permissible errors are specified in Schedule 1 of the *National Trade Measurement Regulations 2009*.

FIGURE 6/10B/46C – 1



Showing Load Cells Mounted in Pairs - Variant 3

FIGURE 6/10B/46C – 2

With U-shaped Load Receptor – Variant 4

~ End of Document ~