NATIONAL STANDARDS COMMISSION

WEIGHTS AND MEASURES (PATTERNS OF INSTRUMENTS) REGULATIONS

REGULATION 9

CERTIFICATE OF APPROVAL No 6/18/12 CANCELLED 0/3

This is to certify that an approval has been granted by the Commission that the pattern and variants of the

Yamato Model OTS 300 Overhead-track Weighing Instrument

submitted by Yamato Scale (Australia) Pty Ltd
16 Gertrude Street
Arncliffe, New South Wales, 2205

are suitable for use for trade.

The approval is subject to review on or after 1/4/87.

Instruments purporting to comply with this approval shall be marked NSC No 6/18/12.

The approval may be withdrawn if instruments are used other than as described in the drawings and specifications lodged with the Commission.

Signed

Executive Director

Descriptive Advice

Pattern: approved 23/3/82

. A self-indicating overhead-track weighing instrument of 300 kg capacity and approved for use with up to 3000 scale intervals.

Variants: approved 23/3/82

1. With a model EDI-500 digital indicator, in lieu of the model EDI-500W of the pattern.

2. With model UB7-200-C3E 200 kg load cells, in lieu of those of the pattern, with a capacity of either 150 kg (known as model OTS 150) or 200 kg (known as model OTS 200) and with up to 3000 scale intervals.

Technical Schedule No 6/18/12 dated 14/4/82 describes the pattern and variants 1 and 2.

Variant: approved 24/1/84

3. Model OTS 600 of 600 kg capacity and with a weigh-rail up to 1225 mm long.

Technical Schedule No 6/18/12 Variation No 1 dated 15/2/84 describes variant 3.

Filing Advice

Certificate of Approval No 6/18/12 dated 14/4/82 is superseded by this Certificate and may be destroyed. The documentation for this approval now comprises:

Certificate of Approval No 6/18/12 dated 15/2/84
Technical Schedule No 6/18/12 dated 14/4/82
Technical Schedule No 6/18/12 Variation No 1 dated 15/2/84
Test Procedure No 6/18/12 dated 14/4/82
Figures 1 and 2 dated 14/4/82.

NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 6/18/12

Pattern: Yamato Model OTS 300 Overhead Track Weighing Instrument

Submittor: Yamato Weighing Systems Pty Ltd,
16 Gertrude Street,
Arncliffe, New South Wales, 2205.

1. Description of Pattern

The pattern is a self-indicating overhead track weighing instrument consisting of a Yamato model EDI-500W digital indicator (Figure 1) and a weigh rail up to 0.6 m long, supported by two Yamato model UB7-300-C3E 300.0 kg load cells (Figure 2), in a permanent installation. The instrument has a maximum capacity of 300.0 kg and is approved up to 3000 scale intervals.

1.1 Zero

Zero to within 0.25e, indicated by the CENTRE ZERO light illuminating, may be obtained either;

(a) Semi-automatically, using the ZERO push-button.

or

(b) Automatically, whenever the instrument comes to rest within 0.5e of zero.

1.2 Tare

1.2.1 Use of Tare

(a) Use of tare is indicated by the TARE light illuminating and the tare value being displayed on the TARE mass indicator.

(b) A tare may only be entered when the NET light is illuminated.

(c) Only one method of tare may be used at a time.

1.2.2 Semi-Automatic Tare

Use of the push-button marked T allows a mass on the weigh rail to be tared to within 0.25e, indicated by the zero light illuminating. On removal of this tared mass, the tare value, prefixed by a minus sign, is displayed on the mass indicator.

This tare is subtractive and has a capacity of up to 300.0 kg.

1.2.3 Digital Tare

Use of the keypad allows a tare to within 0.5e to be entered and displayed as a negative value on the mass indicator.

When the gross mass on the weigh rail is equal to or greater than, maximum capacity (Max), the mass indicator will blank, irrespective of entered digital tare.

1.2.4 Clearing Tare

Use of the push-button marked C, clears any entered tare.

1.3 Gross/Net Button

Use of this button allows either the gross or net mass on the weigh rail to be displayed, indicated by the appropriate lights illuminating.

1.4 Markings

The instrument is marked with the following data grouped together in one location (Figure 1):

Manufacturer's name or mark	
Serial number	
NSC approval number	NSC No 6/18/12
Accuracy class in the form:	(III)
Maximum capacity in the form:	Max .....kg*
Minimum capacity in the form:	Min .....kg*
Scale interval in the form:	d = e = ...kg*
Maximum subtractive tare	T = - .....kg
Load cell serial numbers	(Refer paragraph 1.5.2)

Note: Digital tare scale interval may be included and marked d_T = ..kg.

1.5 Sealing

1.5.1 Indicator

Access to the indicator cabinet via the cover plate, is prevented by lead and wire seals on two retaining brackets fitted to the cover (Figure 1).

1.5.2 Serial Numbers

Load cell serial numbers are on metal tags sealed to the indicator (Figure 1).

1.5.3. Nameplate

A stamping plug seals the nameplate (Figure 1).

1.6 Display Check

When power is applied, the indicator flashes all "8's", then blank, before zero is balanced.

2. Description of Variants

2.1 Variant 1

With a model EDI-500 indicator (having push-button panel) replacing the model EDI-500W (which has flush mounted keypad).

2.2 Variant 2

With model UB7-200-C3E 200.0 kg load cells replacing the 300.0 kg load cells of the pattern. With these load cells installed the instrument is then known as either:

(a) Model OTS 150, having a maximum capacity, and maximum subtractive tare, of 150.0 kg.

or

(b) Model OTS 200, having a maximum capacity, and maximum subtractive tare, of 200.0 kg.

* These markings should be repeated in the vicinity of the mass indicator.

TEST PROCEDURE No 6/18/12

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;
± 1e 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). Satisfactory setting may be checked by the following method:

(a) With zero balance indicated, apply a load of, say 2.5% of maximum capacity to the instrument, and press the ZERO button; the instrument should not re-zero; and

(b) reduce the load to say, 1.5%, and again press the ZERO button; the instrument should indicate zero balance.

2. Zero Test

As the automatic zero tracking resets zero when the weighing mechanism is in equilibrium within 0.5e of zero, zero should be checked as described in Document 104, with a load equal to, say, 10e on the load receptor. The indications with 0.25e and 0.75e additional mass on the load receptor will then be 10e and 11e respectively.

3. Range of Indication

(a) The maximum mass indicated should not exceed the maximum capacity (Max) by more than 10 scale intervals; above this indicated mass the indicator should be blank.

(b) Below zero the indicator should display a negative quantity.

4. Taring

Attempt to tare a mass above maximum capacity. On removal of the mass no tare should have been entered, and the indicator should display all zeroes.

5. Test Loads

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

NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 6/18/12

VARIATION No 1

Pattern: Yamato Model OTS 300 Overhead-track Weighing Instrument

Submittor: Yamato Scale (Australia) Pty Ltd
16 Gertrude Street
Arncliffe, New South Wales, 2205.

1. Description of Variant 3

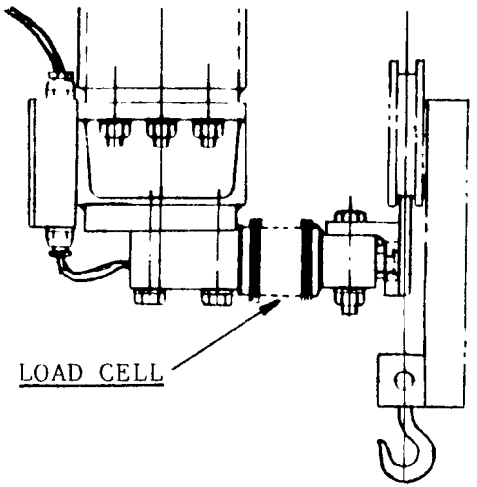
Model OTS 600 of 600 kg capacity, with a weigh rail up to 1225 mm long and approved for use with up to 3000 scale intervals. This instrument uses 2 model UB7-600-C3E load cells of 600 kg capacity.

FIGURE 6/18/12 - 1

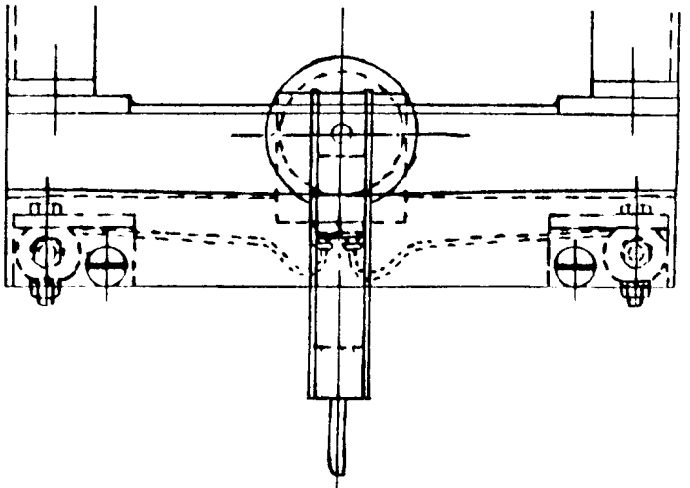
Yamato Model EDI-500W Indicator

14/4/82

FIGURE 6/18/12 - 2



SIDE VIEW



FRONT VIEW

Weigh Rail Assembly Including Load Cells