



उत्पाद मैनुअल

कंक्रीट व मोर्टार के परिक्षण के लिए प्रयुक्त मशीन,

आईएस १४८५८ : २००० के अनुसार

PRODUCT MANUAL
COMPRESSION TESTING MACHINE USED FOR
TESTING OF CONCRETE AND MORTAR,
ACCORDING TO IS 14858: 2000

यह उत्पाद नियमावली सभी क्षेत्रीय/शाखा कार्यालयों और लाइसेंसधारियों द्वारा विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम, 2018 की योजना-I के अंतर्गत प्रमाणन के संचालन में एकरूपता और पारदर्शिता सुनिश्चित करने के लिए संदर्भ सामग्री के रूप में उपयोग की जाएगी। बीआईएस प्रमाणन प्राप्त करने के इच्छुक भावी आवेदक भी इस दस्तावेज़ का उपयोग कर सकते हैं।

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure uniformity of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification.

1.	मानक संख्या / IS No.	:	IS 14858: 2000
	शीर्षक / Title	:	COMPRESSION TESTING MACHINE USED FOR TESTING OF CONCRETE AND MORTAR
	संशोधनों की संख्या No. of amendments	:	1
2.	नमूनाकरण दिशानिर्देश / Sampling Guidelines		
a)	कच्चा माल Raw material	:	- <i>Note: This section indicates the requirements for raw material (if specified in the IS) for which compliance is to be established during Grant of Licence/Change in Scope of Licence/Factory Surveillance.</i>
b)	समूहीकरण दिशानिर्देश Grouping Guidelines	:	Compression testing machine of each capacity and display (Load scale indicator/Digital display) shall be tested to cover the particular variety tested.
c)	नमूने का परिमाण Sample Quantity	:	1 machine for all tests <i>Note: This section indicates the quantity of the sample of the product and/or the raw material (if applicable), required to be sent to the laboratory for testing, for the purpose of Grant of Licence/Change in Scope of Licence/ Factory Surveillance (incase of market surveillance, effort may be made to procure therequired quantity of product sample, as far as possible since raw material sample may not be</i>

			available in market)
d)	परीक्षण अनुरोध में घोषित किए जाने वाले पैरामीटर Parameters to be Declared in Test Request		Same as the scope of licence. <i>Note: Apart from the above, any other requirements/ parameters may also be declared as per the standard, as applicable.</i>
3.	परीक्षण उपकरण की सूची List of Test Equipment	:	Please refer ANNEX – A
4.	निरीक्षण एवं परीक्षण योजना Scheme of Inspection and Testing	:	Please refer ANNEX – B
5.	एक दिन में संभावित परीक्षण Possible tests in a day	:	All Test as per IS 14858 : 2000 <i>Note: This section is for the guidance of BIS Certification Officers/ Technical Auditors of BIS Authorized Outside Surveillance Agencies (OSAs) during factory inspection to provide ready reference regarding the tests which can be witnessed during the inspection in the factory by the officer/ auditor.</i>
6.	लाइसेंस का दायरा /Scope of the Licence:		
“License is granted to use Standard Mark as per IS 14858 : 2000 with the following scope:			
Name of the product		Compression Testing Machine Used for Testing of Concrete and Mortar	
Method of display		Load scale indicators/ Digital displays	
Capacity of compression testing machine in KN			
Equipped with automatic load control or without automatic load control			

भारतीय मानक ब्यूरो
 BUREAU OF INDIAN STANDARDS
 मानक भवन, ९, बहादुर शाह ज़फ़र मार्ग
 Manak Bhawan, 9, Bahadur Shah Zafar Marg
 नई ददल्ली- ११०००२
 New Delhi – 110002

ANNEX- A**List of Test Equipments**
(Indicative List, For Guidance Only)

Sl. No.	Tests used in with Clause Reference	Test Equipment
1.	Accuracy (Clause 5.4)	- Proving ring
2.	Rate of loading (Clause 5.7)	- Stop watch
3.	Machine platens (Clause 6.1)	- Hardness tester - Vernier calliper - Micrometer - Depth gauge - Protactor - Surface tester
4.	Bottom bearing blocks (Clause 6.2)	- Hardness tester - Vernier calliper - Surface plate - Dial gauge - Micrometer
5.	Auxiliary platens (Clause 7)	- Hardness tester - Vernier calliper - Surface plate - Dial gauge - Square arm - Squareness tester - Parallelism tester - Micrometer - Surface texture scales
6.	Spacing blocks (Clause 8)	- Hardness tester - Vernier calliper - Surface plate - Dial gauge - Square arm - Squareness tester - Parallelism tester - Micrometer

The above list is indicative only and may not be treated as exhaustive.

ANNEX B**Scheme of Inspection and Testing****1. QUALITY ASSURANCE PLAN**

1.1 It is expected that during operation of BIS licence manufacturers will implement a Quality Assurance Plan (QAP) i.e. a plan of regular testing and in-process controls, designed to ensure that the product bearing the Standard Mark conforms to all requirements of the Indian Standard.

1.2 The manufacturers shall define a Quality Assurance Plan (QAP) defining the control unit (i.e. lot/batch etc.), the levels of control (i.e. the frequency and number of samples for conducting the different tests as per the Indian Standard) and declare the arrangement for testing i.e. whether in-house or sub-contracting/ sharing for each applicable test and submit the same to BIS Branch Office for information. The manufacturer shall comply with the QAP and maintain test records in accordance with para 2.1.

1.3 Recommended Levels of Control/ Control Unit:

1.3.1 For the guidance of manufacturers, the recommended definition of control unit is: *All Compression Testing Machine Used for Testing of Concrete and Mortar of the same construction, type, size, capacity, material, method of display and additional description manufactured in a day shall constitute a control unit.*

1.3.2 For the guidance of manufacturers in preparing the Quality Assurance Plan, recommended levels of control are given in Table 1. Manufacturer has the discretion of declaring their own levels of control or accept the levels of control given in this document.

1.3.3 The manufacturer shall ensure inspection and testing as per the Quality Assurance Plan submitted by them on the whole production of the factory which is covered by this plan.

1.4 However, all manufacturers shall ensure compliance of their products to all the requirements of the Indian Standard.

2. ENSURING COMPLIANCE THROUGH TESTING

The manufacturers shall ensure compliance of their products to all the requirements of the Indian Standard for which they may have in-house test facilities. However, there is no obligation to maintain in-house laboratory. Licensee may use alternative arrangements for tests of the production as per the declared QAP. Various alternatives are available for operation of BIS certification as given below and the relevant guidelines for availing such relaxations by the manufacturers, as amended from time to time, are to be referred:

- i) Shared testing resources like common facility,
- ii) Cluster based testing facility,
- iii) Sub-contracting to outside laboratories which may either be:
 - a) BIS recognised/ empanelled laboratories, or
 - b) Any accredited laboratory as per ISO/IEC 17025

2.1 Test Records- The manufacturers shall maintain test records for the tests carried out (either in-house or at a sub-contracted or at shared test facility) to establish conformity of the product to the Standard for operation of licence. For the tests being subcontracted or conducted at a shared test facility, test results issued by the laboratories or test facilities, shall be made available for inspection by BIS.

3. PACKING AND MARKING

The Standard Mark as given in the Schedule of the licence shall be incorporated legibly and indelibly on compression testing machine provided always that the material so marked conforms to all requirements of the specification.

3.1 Marking on each compression testing machine shall be done as per Cl. 9 of IS 14858: 2000

3.2 **Additional Marking requirements:** Each compression testing machine shall also be marked with the following additional requirement on each packing:

a) “For BIS certification details please visit www.bis.gov.in”

4. REJECTION

The production which conforms to the Indian Standard and covered under the scope of this licence shall be marked with the Standard Mark. Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act, 2016.

TABLE-1*(Recommended Levels of Control by BIS- for Guidance Only)*

(1)				(3)		
Test Details				Levels of Control		
Cl.	Requirement	Test Methods		No. of Sample	Frequency	Remarks
		Clause	Reference			
3.	Construction					
3.1	General	3.1	IS 14858	Each Machine	-	-
4.	Design	4.1 to 4.3	IS 14848	Each Machine	-	-
5.	Loading					
5.1	Load control	5.1	IS 14858	Each Machine	-	-
5.2	Load pacers	5.2	IS 14858	Each Machine	-	-
5.3	Load scale indicator or digital display	5.3	IS 14858	Each Machine	-	-
5.4	Accuracy	5.4	IS 14858	Each Machine	-	-
5.6	Mean of applying load	5.6	IS 14858	Each Machine	-	-
5.7	Rate of loading	5.7	IS 14858	Each Machine	-	-
6.	Machine platens					
6.1	Machine platens (For hardness test)	6.1	IS 14858	Each block received	-	No further testing is required if material received with test certificate
	Machine platens (Other than hardness test)	6.1	IS 14858	Each Machine	-	-
6.2	Bottom bearing blocks	6.2	IS 14858	Each Machine	-	-
7.	Auxiliary platens (For hardness test)	7.1	IS 14858	Each block received	-	No further testing is required if material received with test certificate
	Auxiliary platens (Other than hardness test)	7.1 to 7.6	IS 14858	Each Machine	-	-
8.	Spacing blocks (For hardness test)	8.2	IS 14858	Each block	-	No further testing is required if material received with test certificate
	Spacing blocks (Other than hardness test)	8.1 to 8.3	IS 14858	Each Machine	-	-