



उत्पाद मैनुअल
चटखनियों : भाग 2 - अलौह धातु
आई एस 204 (भाग 2):1992 के अनुसार

PRODUCT MANUAL FOR
TOWER BOLTS : PART 2 – NON-FERROUS METALS
ACCORDING TO IS 204 (PART 2):1992

विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो) अनुरूपता मूल्यांकन (विनियम, 2018 की योजना -I के तहत प्रमाणन के संचालन में एकरूपता और पारदर्शिता के लिए इस उत्पाद मैनुअल का उपयोग सभी क्षेत्रीय / शाखा कार्यालयों और लाइसेंसधारियों द्वारा संदर्भ सामग्री के रूप में किया जाएगा। दस्तावेज़ का उपयोग बीआईएस प्रमाणन प्राप्त करने के इच्छुक संभावित आवेदकों द्वारा भी किया जा सकता है।

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 204 (Part 2) : 1992
	शीर्षक Title	:	Tower Bolts : Part 2 – Non-Ferrous Metals
	संशोधनों की संख्या No. of amendments	:	4
2.	नमूना दिशानिर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	Please refer to Annex-A 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
b)	समूहीकरण दिशानिर्देश Grouping Guidelines	:	Please refer to Annex-B
c)	नमूने का परिमाण Sample Quantity	:	5 nos of Tower Bolts 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 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
3.	परीक्षण उपकरणों की सूची List of Test Equipment	:	Please refer to Annex-C
4.	निरीक्षण और परीक्षण की स्कीम Scheme of Inspection and Testing	:	Please refer to Annex-D
5.	एक दिन में संभावित परीक्षण Possible tests in a day		
	All tests 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 readyreference regarding the tests which can be witnessed during the inspection in the factory by the officer/auditor.		
6.	लाइसेंस का दायरा /Scope of the Licence:		
	Licence is granted to use Standard Mark as per IS 204 (Part 2): 1992 with the following scope:		
	Name of the product	Tower Bolts - Non-Ferrous Metals	
	Description and Type	Barrel tower bolt (Type 1,2,3,4,5)/ Skeleton tower bolt (Type 6,7,8,9)	
	Size		

भारतीय मानक ब्यूरो
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ANNEX- A

Details of Raw Materials

Raw Material	Indian Standard
Aluminium alloy tubes	Aluminium alloy tubes shall conform to designation 63400 WP or 63400 P of IS 1285.
Aluminium alloy extruded rods	Aluminium alloy extruded rods shall conform to designation 63400 WP or 65032 WP of IS 733
Brass Sheets	Brass Sheets shall conform to alloy designation CuZn 40 condition HB of IS 410
Cast brass	Cast brass shall conform to grade CB-2 of IS 292
Extruded brass	Extruded brass shall conform to grade 2, half hard condition of IS 319
Zinc base alloy die casting	Zinc base alloy die casting shall conform to alloy Zn Al4, die casting of IS 742

ANNEX-B

Grouping Guidelines

1. Tower Bolts (Non-ferrous metals) as per IS 204 (Part 2) : 1992 are classified based on the following:

Description	Type	Material	Size
Barrel tower bolt	Type 1, 2, 3	Brass	75 mm, 100 mm, 125 mm, 150 mm, 175 mm, 200 mm, 225 mm, 250 mm, 300mm
	Type 4	Aluminium Alloy	
	Type 5	Zinc Alloy	
Skeleton tower bolt	Type 6, 7	Brass	375 mm, 450 mm, 600 mm, 750 mm, 900mm
	Type 8	Aluminium Alloy	
	Type 9	Zinc Alloy	

2. Considering the above, one sample each of the smallest and highest size from each type of tower bolt shall be tested to cover all sizes in that size-range for that particular type of tower bolt.
3. The Firm shall declare the varieties of various Tower Bolts they intend to cover in the Licence. The Scope of Licence may be restricted based on the manufacturing and testing capabilities of the manufacturer.
4. During operation of the licence, BO shall ensure that all the varieties covered in the licence are tested in rotation to the extent possible.

ANNEX-C

List of Test Equipment

(INDICATIVE LIST, FOR GUIDANCE ONLY)

Sl. No.	Tests used in with Clause Reference	Test Equipment
1.	Manufacture (Clause 5)	a) Micrometre b) Countersunk head of Wood Screws as per IS 6760
2.	Dimensions and Tolerances (Clause 6, Table 1 & Table 2)	a) Vernier Calliper b) Micrometre c) Countersunk head of Wood Screws as per IS 6760
3.	Finish (Clause 7)	Anodizing coating thickness gauge Or Test equipment, chemicals as per IS 1868

ANNEX D

SCHEME OF INSPECTION AND TESTING

1. QUALITY ASSURANCE PLAN

1.1 It is expected that manufacturers (licensees/applicants) will implement a Quality Assurance Plan 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 defining the control unit (i.e. lot/batch etc.) and the levels of control (i.e. the frequency and number of samples for conducting the different tests as per the Indian Standard) and submit the same to BIS Branch Office for information. The manufacturer shall comply with the same and maintain test records in accordance with para 2.4.

1.3 RECOMMENDED LEVELS OF CONTROL/CONTROL UNIT:

1.3.1 For the guidance of manufacturers in preparing the Quality Assurance Plan, recommended levels of control are given in **Table 1**.

1.3.2 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. Alternatively, the manufacturer has the option of adherence to the quality plan as per levels of control recommended in column 3 of Table 1.

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

2 ENSURING COMPLIANCE THROUGH TESTING- It is expected that manufacturers (licensees/applicants) will establish a suitably equipped and staffed in house laboratory (In house testing facility) for testing at least those parameters of the Indian Standard which require routine testing for ensuring quality of the product. This includes in-process controls as may be defined and put in place by the manufacturer and testing parameters/requirements which can only be performed in the factory.

2.3 For the guidance of manufacturers, Table 1 giving the recommended levels of control is given below. Column 2 of Table 1 indicates routine tests where test equipment is required in house as “R” or other tests which can be subcontracted as “S”. Subcontracting is permitted to BIS recognized/empanelled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025.

2.4 For MSME manufacturers, the requirement of maintaining a laboratory/in-house testing facility for routine tests (indicated as “R” in Column 2 of Table 1) is also optional.

2.4.1 MSME manufacturers may utilize common cluster based facilities as per guidelines for the utilization of cluster based test facilities by MSMEs or the provisions of Sharing of testing facilities or get testing done from BIS recognized/empaneled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025.

2.5 Large Scale manufacturers shall maintain an in-house laboratory equipped at least with test facilities for routine tests (indicated as “R” in Column 2 of Table 1), where different tests given in the specification shall be carried out in accordance with the method given in the specification. They shall also implement a calibration plan for the in-house test equipment.

2.5.1 Alternatively, in lieu of an in-house laboratory, large scale manufacturers can also utilize the provisions of Sharing of testing facilities as per the Guidelines for Grant of Licence available on BIS website www.bis.gov.in. (Under Conformity Assessment>Product Certification Process). Even for subcontracted tests, provisions for sharing of testing facilities can be utilized.

2.6 **TEST RECORDS**- The manufacturers maintaining an in-house laboratory or utilizing common cluster based facilities or shared test facilities shall maintain test records for the tests carried out to establish conformity. For the tests being subcontracted to BIS recognized/empanelled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025, test reports issued by the laboratories shall be available for inspection by BIS.

3 **PACKING AND MARKING** - The Standard Mark as given in the Schedule of the licence shall be clearly marked on each tower bolt, provided always that the product so marked conforms to all requirements of the specification.

3.3 Packing and Marking shall be done as per Clause 8 and Clause 10 of IS 204 (Part 2):1992 respectively.

3.4 **Additional Marking requirements:** Each tower bolt or its packaging shall also be marked with the following detail:

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

4 **REJECTION** - All 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
(ONLY FOR GUIDANCE PURPOSE)

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control		
Cl.	Requirement	Test Method			No. of Sample	Frequency	Remarks
		Clause	Reference				
4	Material	Cl. 4	IS 204 (Part 2)	S	One	Each consignment	No further testing is required if accompanied with test certificate or ISI marked.
5	Manufacture	Cl.5.1, 5.2	IS 204 (Part 2)	R	Firm to have adequate in-process controls to check compliance of this parameter as per the tolerances given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity.		
6	Dimension	Cl. 6, Table 1 & Table 2	IS 204 (Part 2)	R			
7	Finish (Visual)	Cl. 7.1	IS 204 (Part 2)	R			
	Anodizing (for aluminium alloy tower bolts)	Cl. 7.1	IS 204 (Part 2)	R	3	From aluminium alloy anodized in a shift of production of anodizing	