



उत्पाद मैनुअल
पूर्व ढालित कंक्रीट का केबल का कवर
आई एस 5820 : 2024 के अनुसार

PRODUCT MANUAL FOR
PRECAST CONCRETE CABLE COVERS
ACCORDING TO IS 5820: 2024

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 5820 : 2024
	शीर्षक Title	:	Precast Concrete Cable Covers
	संशोधनों की संख्या No. of amendments	:	Nil
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	:	2 Numbers 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)

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 test requirements as per IS 5820:2024 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 5820 : 2024 with the following scope:		
	Name of the product	Precast Concrete Cable Covers	
	Class & Description	- Reinforced precast cable cover with peak (RP) / - Unreinforced precast cable cover with peak (UP) / - Reinforced precast cable cover with flat (RF) / - Unreinforced precast cable cover with flat (UF) / - Reinforced precast cable cover with arch (RA) / - Unreinforced precast cable cover with arch (UA)	

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ANNEX A
Raw Material

Raw Material	Indian Standard
Cement (Cl 4.1)	Cement used for the manufacture of precast concrete cable covers shall be ISI marked conforming to the relevant Indian Standard as mentioned in Clause 4.1 of IS 5820.
Aggregates (Cl 4.2)	The aggregates shall conform to IS 383 & Clause 4.2 of IS 5820. If source and/or size and types of coarse and fine aggregate has changed, it shall be treated as additional raw material.
Pulverized Fuel Ash (Cl 4.3)	Pulverized fuel ash shall conform to IS 3812 (Part 1)
Water (Cl 4.4)	Water used in production shall conform to 5.4 of IS 456.
Steel Wire or Rod (Cl 4.5)	Steel wire or rod for reinforcement shall conform to IS 432 (Part 1), IS 432 (Part 2), IS 1566, IS 2062 or IS 1786. If different type and/or sizes of steel for reinforcement are used, it shall be treated as additional raw material.
Chemical admixtures (Cl 4.6)	Chemical admixtures, when used, shall confirm to IS 9103.
Concrete (Cl 5)	The concrete used in the manufacture of cable covers shall conform to IS 456. The minimum grade of concrete shall not be lower than M35.

ANNEX-A

Grouping Guidelines

1. IS 5820: 2024 covers Precast Concrete Cable Covers which are categorized as given below:

- Class & Description :
- Reinforced precast cable cover with peak (RP) /
 - Unreinforced precast cable cover with peak (UP) /
 - Reinforced precast cable cover with flat (RF) /
 - Unreinforced precast cable cover with flat (UF) /
 - Reinforced precast cable cover with arch (RA) /
 - Unreinforced precast cable cover with arch (UA)

2. Considering the above, following grouping guidelines is developed for GoL/CSoL:

- Sample of each class & description of cable cover shall be tested for all requirements to cover that particular class & description in the scope of the licence.

3. The Firm shall declare the varieties (i.e. class & description) of Precast Concrete Cable Covers intended to be covered in the Licence. The Scope of Licence may be restricted based on the Manufacturing and Testing capabilities of the Manufacturer.

4. The manufacturer shall declare the overall dimension and interlocking features of cable covers. Manufacturers shall provide the design along with the drawing of cable covers.

5. During the operation of the Licence, BO shall ensure that all the varieties covered in the Licence are tested in rotation, to the extent possible.

6. Cement Concrete cubes shall be casted in the factory during surveillance visits and the quality of concrete as per IS 456 used in manufacturing of concrete cable covers shall be assessed through independent testing. Details of mix design of concrete may also be obtained from the firm.

ANNEX-B

List of Test Equipment

(INDICATIVE LIST, FOR GUIDANCE ONLY)

Sl. No.	Tests used in with Clause Reference	Test Equipment
1.	Size of aggregates (Clause 4.2.2)	- IS sieve 10 mm
2.	Dimensions and Tolerances (Clause 7.2)	- Steel Scale - Vernier Calliper, - Outside Calliper - Depth gauge
3.	Compressive strength of concrete cubes (Clause 5)	- 150 x 150 mm Cube Moulds, - Concrete cube vibrating machine, - Measuring jars, - Weighing Balance, - Curing tank, - Compression Testing Machine,
4.	Reinforcement cage(Clause 6)	- Weighing balance - Micrometer - Vernier calliper - Steel scale - Steel tape
5.	Impact Strength(Clause 7.3)	- Impact Testing Apparatus as per Annex-B and Fig 4 of IS 5820: 2024 with all accessories

ANNEX C 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, the recommended definition of control unit: All cables covers of same class and description manufactured under similar conditions of manufacturing in day (from same consignment of cement, same mix design for concrete and similar curing condition) 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**.

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. 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.

2.4.2 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.

2.5.2 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 legibly and indelibly marked on each cable cover, provided always that the product so marked conforms to all requirements of the specification.

3.3 Marking shall be done as per Clause 11 of IS 5820:2024.

3.4 Additional Marking requirements: Each cable cover/ package 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	Materials						
4.1	Cement	4.1	IS 5820	S	One	Each consignment	Cement received shall be ISI marked and accompanied with test certificate.
4.2	Aggregates	4.2	IS 5820 IS 383	S	One	Once in year for each type and size.	Additional sample shall be tested wherever there is change in the source of raw material.
4.3	Pulverized Fuel Ash	4.3	IS 5820 IS 3812 (Pt 1)	S	One	Each consignment	No further testing is required, if received with test certificate or ISI marked.
4.4	Water	4.4	IS 5820 IS 456	S	One	Once in a year or whenever there is a change in source of water, whichever is earlier	
4.5	Steel wire or rod	4.5	IS 5820 IS 432 (Part 1) IS 432 (Part 2) IS 1566 IS 1786/ IS 2062	S	One	Each consignment	No further testing is required, if received with test certificate or ISI marked.
4.6	Chemical admixtures	4.6	IS 5820 IS 9103	S	One	Each consignment	No further testing is required, if received with test certificate or ISI marked.

5	Manufacture	5	IS 5820	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	Design	6	IS 5820	R			
7.1	General	7.1	IS 5820	R			
7.2	Dimensions	7.2 Table 1	IS 5820	R			
5	Compressive Strength test on concrete cubes	5	IS 5820 IS 456	R	One sample consisting of 3 cubes from each consignment of cement	Supply of cement executed against order spread over up to three months shall be taken as one consignment for this test only. One sample may be tested in a month in case same mix is used for different class & description of cable covers.	
7.3	Impact Strength	7.3 Appendix B	IS 5820	R	One	Each control unit	-