



उत्पाद मैनुअल
विद्युत जस्तीकृत तप्त बेल्लित एवं अतप्त लघुकृत कार्बन इस्पात की चादरें एवं पतियाँ
- विशिष्ट
IS 17404:2020 के अनुसार

Product Manual for
Electrogalvanized Hot Rolled and Cold Reduced Carbon Steel Sheets and Strips
According to IS 17404: 2020

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.	भारतीय मानक संख्या IS No.	:	IS 17404: 2020
	शीर्षक Title	:	Electrogalvanized Hot Rolled and Cold Reduced Carbon Steel Sheets and Strips
	संशोधनों की संख्या No. of amendments	:	01
2.	नमूना दिशानिर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	1) The base metal of electrogalvanized hot rolled carbon steel sheet and strip shall be as per IS 1079 or IS 5986 2) The base metal of electrogalvanized cold reduced carbon steel sheet and strip shall be as per IS 513 (Part 1) or IS 513 (Part 2) 3) The zinc used for galvanizing shall conform to any of the grades specified in IS 209

		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 Annex-A
c)	नमूने का परिमाण Sample Quantity	For Coating tests- 500 mm x full width minimum Physical/Chemical testing is not required If Base Metal is ISI marked. (If not please refer product manuals for IS 5986 or IS 513 Parts 1 or 2) 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 (in case of market surveillance, effort may be made to procure the required 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	Type, Coating class and Type, Dimension : Note: Apart from the above, any other requirements/parameters may also be declared as per the standard, as applicable.
3.	परीक्षण उपकरणों की सूची List of Test Equipment	: Please refer to Annex- B
4.	निरीक्षण और परीक्षण की स्कीम Scheme of Inspection and Testing	: Please refer to Annex- C
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 ready reference 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:	
	IS 17404: 2020 के अनुसार मानक मुहर का उपयोग करने के लिए लाइसेंस निम्नलिखित कार्यक्षेत्र के लिए प्रदान किया जाता है "Licence is granted to use Standard Mark as per IS 17404: 2020 with the following scope:	
7.	उत्पाद का नाम Name of the product	Electrogalvanized Hot Rolled and Cold Reduced Carbon Steel Sheets and Strips
	Type	Hot rolled and/or Cold Rolled ... Sheets and/or Strips

	Coating Class and Type	EG 000, EG005 .. EG 100. Differential/Equal/Single Surface Coating
	Dimensions	Width

BUREAU OF INDIAN STANDARDS
Manak Bhawan, 9, Bahadur Shah Zafar Marg,
New Delhi – 110002

Annex-A
To Product Manual for
Electrogalvanized Hot Rolled and Cold Reduced Carbon Steel Sheets and Strips
According to IS 17404:2020

GROUPING GUIDELINES

1. Grouping of product has been done based on Coating class and Type of coating (Uniform /Different coating mass) given on both surfaces of Sheet/Strip. Guidelines for drawing/testing of samples from each group are as under:
 - a) One sample of Highest class of coating to be drawn to cover the entire range as per table 1. (EG 100 is highest and EG000 is lowest class of coating)
 - b) Sample of differentially coated material may be tested to cover equally coated material and single-surface coated material.
 - c) Sample of equally coated material may be tested to cover single-surface coated material
2. It shall be ensured that the firm is having all the necessary manufacturing and testing facilities for the manufacture and testing of the sizes/grade designations to be included in the licence.
3. During the operation of licence, BO shall ensure that all the grade designations/ varieties covered in the license are drawn for independent testing on rotation over a period of time.

ANNEX – B

LIST OF TEST EQUIPMENTS
(INDICATIVE LIST, FOR GUIDANCE ONLY)

Major test equipment required to test as per requirements of Indian Standard.

Sl. No.	Test Equipment/Chemicals and Identification Numbers (Where applicable)	Tests Used in with Clause Reference
1	XRF Method: X Ray Fluorescence (XRF) apparatus as per IS 12860 (in case of differential coating coating mass to be determined by XRF method only) Or Weight Loss (Gravimetric) Method: Antimony Oxide, HCl, cotton cloth , Balance, Stop watch	Coating Mass cl 9.1.1
2	Bench vice, Mandrels	Coating Adherence cl 9.2
3	Vernier Calipers, Scale, Measuring Tape, Weighing scale, thickness guage	Dimensions, Shape and Tolerance (Clause 10)

Note: The above is an indicative list for the purpose of guidance only

ANNEX- C 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 subcontracting/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: For the purpose of this scheme, a control unit is defined as material from produced from the same heat/cast/consignment of base metal, of the same grade of base metal, same coating mass and type of coating processed in a single shift (of not more than 8 hours).

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.

2. ENSURING COMPLIANCE THROUGH TESTING- 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 license and Licence Number (i.e. CM/L...) shall be incorporated suitably on the top of each coil or package of sheets or on a tag attached to each coil or packet or on the Test Certificate, provided always that the product thus marked and packed conforms to all the requirement of the specification.

3.1 Packing and Marking shall be done as per the Indian Standard.

3.2 Additional Marking requirements: Additionally, the following shall also be marked on each package of the material or the test certificate:

- a) “For BIS certification details please visit www.bis.gov.in”
- b) Any other requirement not specified in the Indian Standard

4. TEST CERTIFICATE – For each consignment of BIS Certified material conforming to IS 17404:2020 there shall be a test certificate which shall contain the Standard Mark, the cast/Control Unit number and the corresponding test results (as given in Annexure-I enclosed).

5. 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)		(4)
TEST DETAILS				LEVELS OF CONTROL		REMARKS
Clause	Requirements	Test Method		No. of Samples	Frequency	
		Clause	Reference			
6.1, 6.2, 7, 8	Base Metal (Chemical and Physical Properties)	—	IS 5986/IS 513 part 1 or 2	One	Each Cast/heat	In case the base metal for production of electro galvanized steel sheets/strips is ISI marked and received with test certificate, no further testing is required
6.3	Zinc	—	IS 209	One	Each consignment	In case material is ISI marked or received with test certificate of the supplier, no further testing is required
9.1	Coating Mass	9.1 Table 1	IS 17404:2020	Three	Each Control Unit	—
9.2	Coating Adherence	9.2 Table 2	IS 17404:2020	Three	Each Control Unit	—
10	Dimensions, Shape and Tolerances	10	IS 17404:2020	One	One coil / 500 sheets (or part thereof)	—

Annexure-I
(Para 4 of the Scheme of Inspection and Testing)
XYZ IRON AND STEEL COMPANY
(Registered office Address and works address)

ISI Mark With IS No. and CM/L no.
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Test Certificate for Electrogalvanized Hot Rolled and Cold Reduced Carbon Steel Sheets and Strips
According to IS 17404:2020

TEST CERTIFICATE NO. _____

To M/s _____

Dated _____

We certified that the material described below fully conforms to IS 17404:2020. Chemical composition and Physical properties of the product as tested in accordance with the Scheme of Inspection and Testing contained in the BIS Certification Marks Licence No. CM/L _____ are as indicated below against each order No.

(PLEASE REFER TO IS 17404:2020 FOR DETAILS OF SPECIFICATION REQUIREMENTS)

TEST RESULTS

Order No. & Date	Designation of electrogalvanized steel sheet/strip	Batch number	Qty.	Chemical Composition of Base Metal (%)													Coating Mass per surface	Remarks
				C	Si	Mn	Ni	Cr	Mo	Ti	Nb	S	P	Se	Ta	N		

Remarks
Wagon No.
Truck No.

FOR XYZ IRON AND STEEL COMPANY

(It is suggested that size A4 paper be used for this test Certificate)