

केन्द्रीय मुहर विभाग-2

हमारा संदर्भ : के.मु.वि-2/16:277

16 04 2018

विषय : आई एस 277:2018 के अनुपालन हेतु एस टी आई ।

यह उपर्युक्त विषय के संदर्भ में है।

सक्षम प्राधिकारी ने उपरोक्त एस टी आई को अनुमोदित कर दिया है ।

सभी शाखा कार्यालय से अनुरोध है कि वे उपरोक्त एस टी आई का अनुपालन सुनिश्चित करें ।

(अरुण पुच्छकायला)
वैज्ञानिक-सी

प्रमुख (के.मु.वि -2)(हस्ता/-)

सभी क्षेत्रीय/शाखा कार्यालय

आई टी एस विभाग - बीआईएस इंटरनेट पर डालने हेतु

Central Marks Department-2

Ref: CMD-2/16:277

16 04 2018

Subject: STI for implementation of revised IS 277:2018 “Galvanized Steel Strips and Sheets (Plain & Corrugated)”.

This has reference to the subject mentioned above.

The above STI has been approved by the Competent Authority.

All ROs/BOs are requested to ensure implementation of the above STI.

(Arun Pucchakayala)
Scientist-C

Head (CMD-2)(sd/-)

Circulated to: All ROs/BOs

Copy to: ITS-for hosting on Intranet please

**SCHEME OF TESTING AND INSPECTION
FOR CERTIFICATION OF
Galvanized Steel Strips and Sheets (Plain & Corrugated)
ACCORDING TO IS 277:2018 (Seventh Revision)**

1. LABORATORY

1.1 A laboratory shall be maintained which shall be suitably equipped and staffed, where different tests given in the Specification shall be carried out in accordance with the methods given in the Indian Standard.

1.2 All test equipments shall be periodically checked, verified and calibrated and records of such checks/verification/calibration shall be maintained.

2. TEST RECORDS

2.1 All records of tests as per this Scheme of Testing and Inspection shall be kept in suitable forms.

2.2 Copies of any such records that may be required by BIS shall be made available at any time on request.

3. QUALITY CONTROL

3.1 It is recommended that, as far as possible, Statistical Quality Control (SQC) methods may be used for controlling the quality of the product during production as envisaged in this Scheme [see IS 397 (various parts)].

3.2 In addition, effort should be made to gradually introduce a Quality Management System in accordance with IS/ISO 9001.

4. STANDARD MARK

4.1 The Standard Mark, as given in Column (1) of the First Schedule of the licence, as specified for Galvanized Steel Strips and Sheets (Plain & Corrugated) as per IS 277:2018 shall be legibly marked on top of each package of sheets (Plain and corrugated) and strips, provided always that material to which this Mark is thus applied conforms to every requirement of the specification.

4.2 **Test Certificate** - For each consignment of BIS certified material conforming to IS 277: 2018 there shall be a test certificate which shall contain the standard Mark, the cast number, Designation, Grade, class of coating and the corresponding test results (as given in Annex-I)

5. MARKING

5.1 The following markings shall legibly be marked on top of each sheet or on a tag attached to each bundle. In case of coils, the marking shall be done on tag attached to each coil or on the body of the coil)

- a) Name of the manufacturer and/or registered trade mark, if any;
- b) Size & Net Weight
- c) Month and year of manufacturer
- d) Identification code of coil
- e) License Number (CM/L.....)

f) For BIS Marks Licence, visit the website www.bis.gov.in

6. MANUFACTURE

6.1 Galvanizing shall be carried out by first pickling and/ or by cleaning the base steel and then dipping in a bath of molten zinc at a temperature suitable to produce a complete and uniformly adhesive zinc coating.

6.2 Passivation and/or oiling shall be carried out on the surface. However, untreated surface, without any passivation and / or oiling can be supplied as agreed to between the purchaser and manufacturer.

6.3 Class of coating, spangle type (N or M), Coating finish type and surface treatment may be as agreed at the time of placing the order.

7. LEVELS OF CONTROL

7.1 The tests as indicated in Table 1, and at the levels of control specified therein, shall be carried out on the whole production of the factory covered by this scheme and appropriate records maintained in accordance with clause 2 above and charts may be maintained as per clause 3 above. All the production which conforms to the Indian Standard and covered by this licence shall be marked with Standard Mark.

7.2 Control Unit: For the purpose of this Scheme, a control unit is defined as Strips or sheets of same dimensions and class of coating manufactured under essentially similar conditions using steel of one cast and zinc Ingots of same cast.

7.3 On the basis of the test results, decision regarding conformity or otherwise of the production shall be made.

7.4 In respect of all other clauses of the Specification and at all stages of manufacture, the factory shall maintain appropriate control and checks to ensure that the product conforms to various requirements of the Specification.

8. REJECTIONS

8.1 Any rejected material which is potentially re-salable be sheared or cut or deformed in such a manner that it cannot be used for any other purpose except re-melting. A separate record shall be maintained giving information on quantity and cast number/coil number/control unit number, as applicable, relating to all such rejections/defective/sub-standard material of the production not conforming to the requirements of the Specification and the method of its disposal. Such material shall in no case be stored together with that conforming to the Specification. The Standard Mark (if already applied) on rejected material should be defaced..

9. SAMPLES

9.1 The licensee shall supply, free of charge, the samples required in accordance with the Bureau of Indian Standards (Certification) Regulations, 1988, as amended from time to time, from the factory or godown. BIS may draw samples from the open market, if available.

10. REPLACEMENT

10.1 Whenever a complaint is received soon after the goods with Standard Mark have been purchased and used, and if there is adequate evidence that the goods have not been misused, defective goods shall be replaced free of cost by the licensee in case the complaint is found to be genuine and the warranty period (where applicable) has not expired. The final authority to judge the conformity of the product to the Indian Standard shall be with BIS.

10.2 In the event of any damage caused by the goods bearing the Standard Mark, or any claim being filed by the consumers against BIS Standard Mark and not “conforming to” the relevant Indian Standard, entire liability arising out of such non-conforming product shall be of the licensee and BIS shall not in any way be responsible in such cases.

11. STOP MARKING

11.1 The marking of the product shall be stopped under intimation to BIS if, at any time, there is some difficulty in maintaining the conformity of their product to the Specification, or the testing equipment goes out of order or due to any other reason. The marking may be resumed as soon as the defects are removed under intimation to BIS.

11.2 The marking of the product shall be stopped immediately if directed to do so by BIS for any reason. The marking may then be resumed only after permission by BIS. The information regarding resumption of marking shall also be sent to BIS.

12. PRODUCTION DATA

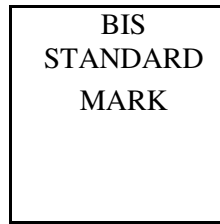
12.1 The licensee shall send to BIS a statement of quantity produced, marked and exported by him and the value thereof at the end of each operative year of the licence as per the enclosed proforma which has to be authenticated by a Chartered Accountant.

Table-1....

IS 277:2018
Galvanized Steel Strips and Sheets (Plain and Corrugated)
TABLE 1 LEVELS OF CONTROL
(Clause 7 of the Scheme of Testing and Inspection)

TEST DETAILS			LEVELS OF CONTROL			
Clause	Requirements	Test Method		No. of Specimen	Frequency	Remarks
		Clause	Reference			
5	Manufacture	IS 228 or any other established instrumental/ chemical method				
	a) Product Analysis	5.1,5.1.1, Table-1	IS 277:2018 IS 228 (in various parts)	One	Each Cast	In case the steel sheets/strips obtained for production of galvanized steel sheets/strips is ISI marked and received with test certificate, no further testing is required
	b) Zinc Ingots	5.2	IS 209 IS 13229	One	Each Consignment	In case material is received with test certificate of the supplier's own lab or test certificate from a NABL accredited lab indicating its conformity to relevant specification no further testing is required.
6	Mechanical properties (If required by the purchaser) a) Yield Stress b) Tensile Strength c) Elongation	6, 8.1,8.1.1, 8.1.2, 8.1.3, 8.1.4, Table-2	IS 277:2018 IS 1608	1000 sheets or part thereof or one coil	Each Control Unit	If any test sample fails to meet test requirements given in two more set of test samples shall be taken for the specific test requirements from the same lot. If any of the retest sample fails to meet the requirements of this standard, the entire control unit represented by the sample shall be deemed as not conforming to the standard
7	Zinc Coating a) Mass of Coating	7.1,7.2, 7.3,7.4, 7.5,10, 10.1,10.1.1, 10.2 Table-3, Table-4	IS 277:2018 IS 6745	-do-	-do-	
	b) Coating Finish Type c) Surface treatment	7.6 7.7	IS 277:2018	As agreed between the supplier and the purchaser.		

8	Mechanical Testing a) Bend test	8.2,8.2.1, 8.2.1.1,8. 2.1.2,8.2, 1.3,8.3, Table-5	IS 277:2018	1000 sheets or part thereof or one coil	Each Control Unit	If any test sample fails to meet test requirements given in two more set of test samples shall be taken for the specific test requirements from the same lot. If any of the retest sample fails to meet the requirements of this standard, the entire control unit represented by the sample shall be deemed as not conforming to the standard
9	Coating surface finish classes and designation	10	IS 277:2018	As agreed between the supplier and the purchaser.		
12	Freedom from defects	12.1,12.2	IS 277:2018	Adequate inspection to ensure that finished product is free from defects.		
13	Mass	13.1,13.2 Table-6	IS 277:2018	1000 sheets or part thereof or one coil	Each Control Unit	
14	Dimensions & Tolerances of plain sheets/strips	14.1, 14.2.1, 14.2.2, 14.2.3, 14.2.4, 14.2.5	IS 277:2018 IS 513, IS 1079, IS/ISO 16163	1000 sheets or part thereof or one coil	Each Control Unit	
15	Dimensions & Tolerances of corrugated sheets	15.1.15.1, 15.1.2, 15.1.3,15. 1.3.1, 15.2, 15.2.1, Table-7,8 &9	IS 277:2018	1000 sheets or part thereof or one coil	Each Control Unit	On agreement between the purchaser and the manufacturer sheets of other profile, depth and pitch of corrugation may also be supplied subject to fulfillment of required condition for imposed load on roofs as per 4.2 of IS 875 (Part 2).



ANNEXURE-I
 (Para 4.2 of Scheme of Testing and Inspection)
 XYZ IRON AND STEEL COMPANY
 TEST CERTIFICATE FOR
 Galvanized Steel Strips and Sheets (Plain and Corrugated)

Test Cert. No.: _____

Date: _____

To M/s _____

We certify that the material described below fully conforms to IS 277:2018 chemical composition and Mechanical properties of product as tested in accordance with the Scheme of Testing and Inspection contained in BIS certification marks license No. CM/L-_____ are as indicated below against each order No. etc.
 (Please refer to IS 277:2018 for details of specification requirements)

TEST RESULTS

Order No.	Dimensions	Batch No.	Profile & Designation	Quantity (Tonnes)	Chemical Analysis						Weight of coating (g/m ²)	Mechanical Properties				Class of coating	Coating finish type / surface treatment/coating surface finish designation (If applicable)
					C (%)	Si (%)	Mn (%)	S (%)	P (%)	Al (%)		Yield Stress Test (N/mm ²)	Tensile Stress (N/mm ²)	Elongation (%)	Bend Test		

Remarks:

SIGNATURE DESIGNATION FOR
 XYZ IRON & STEEL COMPANY

(It is suggested that size A-4 paper (210X297 mm) be used for this certificate)

PROFORMA FOR OBTAINING PRODUCTION DETAILS

Period covered	
Name of Licensee	
CM/L No.	
Name of Articles (s)	IS No.
Grade/Type/Size/Variety/Class/Rating	
Brand/Trade/Name(s) of Product covered under BIS Certification Mark	
Total production of the articles(s) licensed for certification marking	
Total production of the article(s) conforming to Indian Standard	
Production covered with BIS Certification Mark and its Value :	
a) Quantity	
b) Value (Rs.)	
Brand Name used on production covered under BIS Certification Mark	
Calculation of marking fee on unit-rate basis; Marking Fee per unit	
a) Unit	
b) Quantity covered with BIS Certification Mark	
c) Marking fee rounded off in whole rupees as obtained by applying unit rates given in (a) on quantity given in (b)	
NOTE: In case a clause is not applicable, suitable remarks may be given against it	
Quantity not covered with BIS Certification Mark, if any.	
Reasons for such non-coverage	
Brand Name under which non-ISI goods were sold	
Quantity exported with BIS Standard Mark and its value	
Brand Name under which BIS Certified goods are exported	
Authentication by Chartered Accountant	