केन्द्रीय मुहर विभाग-2

हमारा संदर्भ : के.मु.वि.-2/16:15914 03 04 2018

विषय: आई एस 15914:2011 वेल्डिड गैस सिलिंडरों के लिए उच्च तनन सामथर्य कीबेल्लित इस्पात प्लेट (6 मि मी तक), शीट एवं पती के लिए अनिमित एस टी आई Doc:STI/15914/1 अक्तूबर 2013का अनुपालन

उपमहानिदेशक (प्रमाणन) द्वारा अनुमोदित भा.मा. 15914:2011 के अनुरूप, उक्त उत्पाद के लिए जांच व निरीक्षण प्रणाली (डॉक एसटीआई/15914/1, अक्तूबर 2013) संलग्न है । इससे पूर्व एसटीआई **Doc:STI/15914/13 अक्तूबर 2013** उपमहानिदेशक (WRO) द्वारा वैकल्पिक रूप से अनुमोदित थी ।

अनिमित एस टी आई में केवल दस्तावेज़ नम्बर बदला है **Doc:STI/15914/1 अक्तूबर 2013**, तथा पहले वालीवैकल्पिक रूप से अनुमोदित एस टी आई से अन्यथा अपरिवर्तित है । सभी शाखा कार्यालयों से इसका तत्काल प्रभाव से अनुमोदन करने का अनुरोध किया जाता है ।

(अरुण पुच्छाकायला)
वैज्ञानिक सी

प्रमुख (सीएमडी-2)(हस्ता/-)
सभी क्षेत्रीय/शाखा कार्यालयों को परिचालित
प्रतिलिपि : आई टी एस विभाग - बी आई एस इंट्रानेट पर प्रस्तुत करने हेतु

CENTRAL MARKS DEPARTMENT-2

Our ref: CMD-2/16: 15914 03 04 2018

Subject: Implementation of finalized STI, Doc:STI/15914/1 October 2013 for IS 15914:2011 , High Tensile Strength flat Rolled Steel Plate (up to 6mm), sheet and Strip for the Manufacture of Welded Gas Cylinder

Please find enclosed, STI, Doc: STI/15914/1 October 2013 for implementation of IS 15914:2011, High Tensile Strength flat Rolled Steel Plate (up to 6mm), sheet and Strip for the Manufacture of Welded Gas Cylinder duly approved by the Competent Authority . Earlier the STI, Doc: STI/15914/13 October 2013was tentatively approved by DDGW.

In the Finalized STI, only the document number has been changed to Doc: STI/15914/1 October 2013and remains unchanged otherwise to that of tentatively approved STI earlier.All BOs are requested to implement the same with immediate effect.

(Arun Pucchakayala)
Scientist C

Head (CMD-2) (sd/-)
Circulated to: All ROs/BOs

Copy to: ITS for hosting on BIS Intranet

SCHEME OF TESTING AND INSPECTION FOR CERTIFICATION OF HIGH TENSILE STRENGTH FLAT ROLLED STEEL PLATE (UPTO 6 mm), SHEET AND STRIP FOR THE MANUFACTURE OF WELDED GAS CYLINDER, ACCORDING TO IS 15914:2011

1. LABORATORY – 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 specification.

1.1 All testing apparatus / measuring instruments shall be periodically checked and calibrated and records of such checks / calibration shall be maintained.

2. TEST RECORDS – All records of tests, inspection and calibration shall be kept in suitable forms approved by the Bureau.

NOTE : The existing forms etc., as being retained. These forms however, shall contain all the information required for operating this scheme of Testing and Inspection.

2.1 Copies of any records and other connected papers that may be required by the Bureau shall be made available at any time on request.

3. QUALITY CONTROL – 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 [Sec IS 397 (Part I):2003, to IS 397 (Part 4):2003]

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

4. STANDARD MARK – The Standard Mark, as given in column (I) of the First Schedule of the licence is specified for hot rolled steel plate, sheet and strip covered in 15914:2011.

4.1 TEST CERTIFICATE – Each consignment of BIS certified material conforming to IS 15914:2011 shall be accompanied by a test certificate which shall contain the standard mark, the cast number / coil number and the corresponding test results (as given in Annexure 1) depending upon supply conditions (See Clause 11 of specification).

4.1.1 Steel plates and sheets shall be supplied in bundles and strips in coils. The mass of the bundle or coil shall be as agreed to between the purchaser and the manufacturer. Each plate and sheet in each bundle shall be legibly marked with the cast/coil number. The top sheet in each bundle shall also be marked with the name of the manufacturer or trade mark. Each bundle shall further carry a metal tag bearing the cast/coil number and the manufacturer's name or trade mark or such information may be given on the top of the steel envelope containing the sheets during packing. In case of coils, each coil shall be legibly marked with the cast/coil number and manufacturer's name or trade mark.

4.2 CONDITION OF DELIVERY – Plate, Sheet and strips may be supplied in hot rolled and normalized or hot rolled under controlled condition.

4.2.1 The products can however, also be delivered in other conditions such as,
a) hot rolled, b) hot rolled and pickled, c) cold rolled and d) cold rolled and annealed.

4.2.2 When agreed with the purchaser, the manufacturer may supply the material after pickling and leveling with a suitable protection treatment in accordance with IS 13566.

5. LEVELS OF CONTROL – The tests, as indicated in Table 1 attached and at the level of control specified therein, shall be carried out on the whole production of the factory which is covered by this scheme and appropriate records and charts maintained in the accordance with paragraph 2.0 above. All the production which conforms to the Indian Standards and covered by the licence shallbe marked with certification mark of the Bureau.

5.1 METHOD OF MANUFACTURE – Manufacturing process(es) toward steel making and rolling shall be declared by the Manufacturer. The steel shall be of fully Al-Killed and non-ageing quality. However, other elements which, by binding the nitrogen, have a similar effect may also be used instead of, or in addition to aluminium.

5.2 CHEMICAL COMPOSITION – Ladle analysis of plate and sheets obtained by analyzing three samples from each heat of 100 tonnes and above and two samples from each heat of less than 100 tonnes shall conform to the requirements laid down in Table 1 of the specification. Product analysis shall be carried out at the rate of one sample for every heat and the permissible variation in the case of product analysis shall be as laid down in Table 2 of the specification. Occasional analysis for Nitrogen Content shall be carried out in the product and the record is to be maintained.

5.3 FREEDOM FROM DEFECTS – The finished material shall be free from harmful defects such as Seams, Pipe, laminations, cracks, slivers, rolled-in-scale, blisters and pitted surface which will impair the drawability.

5.4 DIMENSIONS AND TOLERANCES – Unless otherwise specified, the dimensions of steel plates, sheet and strip shall conform to the dimensions as given in IS 1730.

5.4.1 Unless otherwise specified, the dimensional and shape tolerances of steel plate, sheet and strip shall conform to the requirements as given in IS/ISO 16160.

5.5 WELDABILITY – The steels are weldable by the usually fusion welding process.

5.6 TENSILE TEST – Test pieces to be drawn and tested as per clause 7 of the specification.

5.6.1 Periodic calibration shall be done on the tensile testing machine. The frequency of such calibration should preferably be once in six months, and in any case, not more than one in a year.

5.7 RETEST – If a test does not give the specified results, two additional tests shall be carried out at random on the same lot. Both retests shall conform to the requirement of this standard otherwise, the lot shall be rejected.

5.8 In respect of all other clauses of the specification, the factory will maintain appropriate control and checks to ensure that their product conforms to the requirement of these clauses.

6. REJECTIONS – A separate record shall be maintained giving information relating to the rejection of the production not conforming to the requirements of the specification and the method of its disposal. Such material shall in no circumstances be stored together with that conforming to the specification.

7. SAMPLES – The licensee shall supply, free of charge, the samples required in accordance with the Bureau of Indian Standards (Certification) Regulations 1988, as subsequently amended, from the factory or godowns. The Bureau shall pay for the samples taken by it from the open market.

8. REPLACEMENT – Whenever a complain is received soon after the goods with Standard Marks have been purchased and used, and if there is adequate evidence that the goods have not been misused, defective goods or their components are replaced or repaired free of cost by the licensee in case the complaint is proved to be genuine and the warranty period (where applicable) has not expired. The final authority to judge the conformity of the product to he Indian Standard shall be with the Bureau. The firm shall have own complaint investigation system as per IS/ISO 10002.

8.1 In the event of any damages caused by the goods bearing the Standard Mark, or 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 licensee and BIS shall not in any way be responsible in such cases.

9. STOP MARKING – The marking of the product shall be stopped under intimation to the Bureau 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. The marking may be resumed as soon as the defects are removed under intimation to Bureau.

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

10. PRODUCTION DATA – The licensee shall send to BIS a per the enclosed proforma-1 to be authenticated by a Chartered Accountant, a statement of quantity produced, marked and exported by him and the trade value thereof at the end of each operative year of the licence.

IS 15914:2011
HIGH TENSILE STRENGTH FLAT ROLLED STEEL PLATE (UPTO 6 MM), SHEET AND STRIPFOR THE MANUFACTURE OF WELDEDGAS CYLINDER,
TABLE 1 LEVELS OF CONTROL
(Clause 5 of the Scheme of Testing and Inspection)

Cl.	Requirement	Test Methods		No. of speci men	Lot size	Frequency	Remarks
		Clause	Reference				
6.	Chemical Composition	Relevant part of IS 228 or any other established instrument/ Chemical method. Alternatively the method specified in relevant ISO/IEC standard may be used					
6.1	Ladle Analysis	6.1 and Table 1	IS 15914:2011	3	One heat	Each heat of over 100 tonnes capacity	3 Samples shall be drawn from the beginning, middle and end of teeming. For heat less than 100 tonnes capacity, one from the beginning and the other from the end of the teeming.
		6.1 and Table 1	-do-	2	One heat	Each heat of less than 100 tonnes capacity	
6.2	Product Analysis	6.2 Table 1 & 2	-do-	1	One heat		
7	Tensile Test	7.1 to 7.2 and Table 3	IS 15914:2011 IS 1608	Two Three Four	One heat/Cast One case One cast	Heat/Cast up to 100 tones Cast between 100-200 tones Cast over 200 tones	

IS 15914:2011
HIGH TENSILE STRENGTH FLAT ROLLED STEEL PLATE (UPTO 6 MM), SHEET AND STRIPFOR THE MANUFACTURE OF WELDEDGAS CYLINDER,
TABLE 1 LEVELS OF CONTROL
(Clause 5 of the Scheme of Testing and Inspection)

TEST DETAILS				LEVEL OF CONTROL			
Cl.	Requirement	Test Methods		No. of specimen	Lot size	Frequency	Remarks
		Clause	Reference				
9	Freedom from defects	9	IS 15914:2011				Each sheet shall be inspected for surface defects & laminations and defective sheets to be segregated. In case of coils adequate inspection will be carried out and rejections to be made as per Note under the relevant Clause of the specification (Cl. 9)
10	Dimensions and Tolerances	10.1 & 10.2	IS 15914:2011 IS 1730 IS/ISO 16160			Adequate inspection to ensure each item to be within the specified limit	
13.1	Mass of the bundle or plates / sheets or coil	13.1	IS 15914:2011	As per agreement between the manufacturer and the purchaser			

Annexure-1

Standard Mark

(Para 4.1 of the Scheme of Testing and Inspection)
XYZ Iron and Steel Company
(Registered Office address and works address)
TEST CERTIFICATE FOR HIGH TENSILE STRENGTH FLAT ROLLED STEEL PLATE (UPTO 6 MM), SHEET AND STRIP
FOR THE MANUFACTURE OF WELDED GAS CYLINDERS

TEST CERTIFICATE NO……. DATE ……..

To M/s.

It is certified that the material described below fully conform to IS 15914:2011. Chemical and Mechanical Properties of the product as tested in accordance with the Scheme of Testing and Inspection contained in the BIS Certificate Marks Licence CM/L…… are indicated below against each order No. etc.

(PLEASE REFER TO IS 15914:2011 FOR DETAILS SPECIFICATION REQUIREMENT)

TEST RESULTS

Order No. & Date	Size	Cast No.	Coil No./ Packet No	Quantity (Tonne)	CHEMICAL COMPOSITION						MECHANICAL PROPERTIES			Remarks
					C %	Mn %	Si %	S%	P%	Al %	Yield Strength MPa	Tensile strength MPa	Elongation %	

The material supplied conform to the specified dimensions and tolerances.

Remarks
SHIPPING ADVICE NO.
WAGON/TRUCK

SIGNATURE
Chief Metallurgist
FOR XYZ IRON AND STEEL CO.

(It is suggested that size A-4 paper (210 x 297 mm) be used for this Test Certificate.)

PROFORMA-1 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 CertificationMark 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	