केन्द्रीय मुहर विभाग-2

हमारा संदर्भ : सीएमडी-2/16: 7904 05 07 2018

विषय : आई एस 7904:2018 की एस आई टी

1. आई एस 7904:2018 की एस आई टी अवलोकन हेतु संलग्न है ।

(अरुण पुछकायला)
वैज्ञानिक सी

प्रमुख (सी एम डी-2) (हस्ता/-)

सभी क्षेत्रीय/शाखा कार्यालयों/एमटीएडी को परिचालित

आई टी एस विभाग - बीआईएस इंट्रानेट पर अपलोड करने के लिए

CENTRAL MARKS DEPARTMENT -2

Ref: CMD-2/16: 7904 **05 07 2018**

Subject: SIT of IS 7904:2018

1. Please find enclosed SIT for IS 7904:2018 for kind consideration.

(Arun Pucchakayala)
Scientist C

Head (CMD-2) (sd/-)

Circulated to: All ROs/BOs/MTD

Copy to: ITSD for hosting on BIS Intranet

SCHEME OF INSPECTION AND TESTING
FOR CERTIFICATION OF
High Carbon Steel Wire Rods
According to IS 7904:2018 (Second Revision)

1. LABORATORY - A laboratory shall be maintained which shall be suitably equipped (as per the requirement given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

1.1 The manufacturer shall prepare a calibration plan for the test equipments.

2. TEST RECORDS – The manufacturer shall maintain test records for the tests carried out to establish conformity.

3. LABELLING, MARKING, PACKING – The Standard Mark as given in Schedule of the license and Licence Number (i.e. CM/L…….) shall be incorporated, and the marking and packing shall be done as per the provisions of the Indian Standard, provided always that the product thus marked and packed conforms to all the requirement of the specification.

4. CONTROL UNIT – For the purpose of this Scheme, a control unit is defined as wire rod of same cross-sectional dimensions manufactured by rolling continuously using steel of same heat and manufactured under uniform conditions of production in a day in the same place.

5. LEVELS OF CONTROL - The tests as indicated in column 1 of Table 1 and the levels of control in column 3 of Table 1, shall be carried out on the whole production of the factory which is covered by this plan and appropriate records maintained in accordance with paragraph 2 above.

5.1 All the production which conforms to the Indian Standards and covered by the licence should be marked with Standard Mark.

6. TEST CERTIFICATE-For each consignment of BIS Certified material conforming to IS 7904:2018 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)

7. REJECTIONS – 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. 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.

SCHEME OF INSPECTION AND TESTING
FOR CERTIFICATION OF
High Carbon Steel Wire Rods as per IS 7904:2018

TABLE 1: LEVELS OF CONTROL

(1)				(2)	(3)		(4)
TEST DETAILS					**LEVELS OF CONTROL**		
Clause	**Requirements**	**Test Method**		**Test equipment requirement** R: required (or) S: Sub-contracting permitted	**No. of Samples**	**Frequency**	**REMARKS**
		Clause	**Reference**				
5	Tensile Strength	5.2	IS 7904:2018 IS 1608	R S	i) One ii) -----	i)Each Control Unit ii) -----	i) Applicable for manufacturers producing grades classified on tensile strength. ii) Applicable for manufacturers producing grades classified on chemical composition only
6	Manufacture	6.1 6.2 6.3	IS 7904:2018	R	Sufficient discard shall be made from each ingot to ensure freedom from piping, segregation and other harmful defects. Adequate inspection to ensure that scales on wire rods shall be controlled to the minimum.		
7	Chemical Composition a) Ladle Analysis	5.1 7.1 Table-1	IS 7904: 2018 IS 228 (various parts)	R	i) One	i) Each Heat	i) Applicable for manufacturers with steel making facilities and producing grades classified on chemical composition.

				S	ii) ----	ii)-----	ii) Applicable for manufacturers producing grades classified on tensile strength or for manufacturers with no steel making facilities.
7	b) Product Analysis*	5.1 7.2 Table-3	IS 7904: 2018 IS 228 (various parts)	R	i)Nil	i)Nil	i) Applicable for manufacturers with steel making facilities and producing grades classified on chemical composition.
				R	ii)One	ii)Each Cast	ii) Applicable for manufacturers with no steel making facilities and producing grades classified on chemical composition(see Note-3).
				S	----	-----	iii) Applicable for manufacturers producing grades classified on tensile strength.
9	Dimensional Tolerance	9	IS 7904: 2018 IS/ISO 16124	R	Adequate inspection to ensure that finished products are within limits of the specification		
12	Surface Defects		IS 7904: 2018	R	One	Each Control Unit	One sample for every 100 tonnes or part thereof rolled out of billets and blooms from the same cast.
13	Decarburization Test	12 13, Table-5	IS 7904:2018 IS 6396	R	Two	Each Control Unit	
14	Non- Metallic Inclusions	8, 14.1,14.2, Table-6	IS 7904: 2018 IS 4163 (Method A)	S	Two	Each Control Unit	If specifically agreed to between purchaser and supplier.

15	Microstructure	8, 15, Table-7	IS 7904: 2018	S	Two	Each Control Unit	If specifically agreed to between purchaser and supplier.
16	Axial Segregation	8 16	IS 7904:2018	S	The method as well as assessment criteria shall be agreed upon at the time of ordering.		

Note-1: Whether test equipment is required or sub-contracting is permitted in column 2 shall be decided by the Bureau and shall be mandatory. Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empaneled by the Bureau.

Note-2: The control unit and levels of control as decided by the Bureau are obligatory to which the licensee shall comply with.

Note -3: No testing for product analysis is required if material fed to rolling mills is ISI marked and received with test certificate

Note -4 : ------- means the levels of control in Column(3) of Table-1 and the requirements are as agreed to between the manufacturer and purchaser.

BIS STANDARD MARK

ANNEXURE-I

(Para 6 of the Scheme of Inspection and Testing)
XYZ IRON AND STEEL COMPANY
(Registered office Address and works address)
TEST CERTIFICATE FOR High Carbon Steel Wire Rods as per IS 7904:2018

TEST CERTIFICATE No._____ DATE_____
TO M/s_____
We certified that the material described below fully conforms to 7904:2018 Chemical composition and Mechanical properties of the product, as tested in accordance with the Scheme of Testing and Inspection contained in the BIS Certification Marks LicenceNo.CM/L_____ are as indicated below against each order No.

(PLEASE REFER TO IS 7904:2018 FOR DETAILS OF SPECIFICATION REQUIREMENTS)
TEST RESULTS

Order No.	Dimensions	Control unit No.	Grade	Quantity (Tonnes)	Chemical Analysis								Decarburization test	Mechanical Properties		Non metallic inclusion (If required by purchaser)	Microstructure (If required by purchaser)
					C (%)	Si (%)	Mn (%)	S (%)	P (%)	Cr (%)	Al (%)	Micro alloy elements		Tensile Strength	RA		

Remarks:

SIGNATURE:
DESIGNATION:
FOR XYZ IRON & STEEL COMPANY

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