



TOYO INDUSTRIES

(ISO 9001 - 2015 Certified Company)

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MATERIAL TEST CERTIFICATE

THE CERTIFICATE HAS BEEN PREPARED AS PER EN 10204:3.1

CUSTOMER NAME : M/s. Jc Valvulas India Pvt Ltd

PURCHASE ORDER NO : JCCMP-2526-01518

DATE : 26.11.2025

JC MDS NO: JC-MDS-204- REV.9

INSPECTION AGENCY : MICROLAB

TC NO : TI/LAB/4327

DATE : 21.04.2026

INV NO : TI -052/26-27

DATE : 21.04.2026

DESCRIPTION

SL NO	ITEM	QTY (Nos)	MATERIAL SPEC	H.NO	MARKING
1	HEX BOLT M16x2 X 45 CODE: T800N040B8M	1200	ASTM A193 GR.B8M CL1 /24a	TI-2574	B8M T

CHEMICAL ANALYSIS

H.NO		C	Mn	P	S	Si	Cr	Ni	Mo
	REQUIRED	0.08 max	2 max	0.045 max	0.03 max	1 max	16.00-18.00	10.00-14.00	2.00-3.00
TI-2574	ACTUAL	0.030	1.54	0.021	0.013	0.487	16.91	10.64	2.54

MECHANICAL TEST RESULTS

H.NO		TENSILE STRENGTH	YIELD STRENGTH	% ELONG	% REDUCTION IN AREA	Hardness max
	REQUIRED	515 min	205 min	30 min	50 min	HRB 96
TI-2574	ACTUAL	687.00	486.00	57.00	69.00	95, 96, 95

IDENTIFICATION MARK:-

1. ABOVE MATERIAL CONFORMS TO ASTM A193 GR.B8M CL1 / 24a

Heat Treatment:-

Carbide solution treated

Temp Min °C - 1040°C

Temp Recorded °C - 1080°C

Soaking time (in minutes) : 60

Quenching medium : Water

Remarks:

1. Material is free from radioactive contamination,
2. 100% visual inspection carried out & found free from defects
3. Chemical, Mechanical hardness testing carried out at room 25°C
4. Sampling basis hardness testing is performed & found as per requirement
5. This Material confirm to NACE MRO175 / ISO 15156
6. Raw material reduction Ratio shall be minimum 4:1

JC Valvulas India Pvt. Ltd.

Chennai, Tamil Nadu, India

Verified & Accepted

Q.A.

FOR TOYO INDUSTRIES

R.PANDIYAN
MANAGER QC