



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 TC NO : TI/LAB/3538
PURCHASE ORDER NO : JCCMP- 2425001768 DATE : 23.03.2025
DATE : 10.01.2025 INV NO : TI -809/24-25
JC MDS NO: JC-MDS-205- REV.4 DATE : 23.03.2025
INSPECTION AGENCY : MICROLAB

DESCRIPTION

SL NO	ITEM	QTY (Nos)	MATERIAL SPEC	H.NO	MARKING
1	STUD 9/16" 12 UNC SU916572721B8MCL2	25	ASTM A193 GR.B8M CL2 /24	TI-2089	B8MSH T
2	HEX BOLT 3/4" 10 UNC X 45 T933U3445B8MCL2	20	ASTM A193 GR.B8M CL2 /24	TI-2089	
3	HEX BOLT 9/16" 12 UNC X 38 T933U916112B8MCL2	20	ASTM A193 GR.B8M CL2 /24	TI-2089	

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-2089	ACTUAL	0.030	1.524	0.022	0.014	0.520	16.850	10.520	2.200

MECHANICAL TEST RESULTS

H.NO		TENSILE STRENGTH Mpa min	YIELD STRENGTH min 0.2 % offset Mpa	% ELON G in 4D Min	% REDUCTION IN AREA Min	Hardness max HRC
	REQUIRED	760	655	15	45	28 - 35
TI-2089	ACTUAL	889.00	810.00	35.00	62.00	29-34

IDENTIFICATION MARK:-

1. ABOVE MATERIAL CONFORMS TO ASTM A193 GR.B8M CL2 / 24
Heat Treatment:-

Carbide solution treated and Strain Hardened Condition
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
4. Sampling basis hardness testing is performed & found as per requirement
5. This Material confirm to NACE MRO175 / ISO 15156

FOR TOYO INDUSTRIES

R.PANDIYAN
MANAGER QC

JC Valvulas India Pvt. Ltd.
Chennai, Tamil Nadu, India
Verified & Accepted

Q.A.

