



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/3536 ✓
 PURCHASE ORDER NO : JCCMP - 2425001630 / 1566 / 1488 DATE : 23.03.2025
 DATE : 10.12.2024 INV NO : TI -809/24-25
 JC MDS NO: JC-MDS-202 REV.7 ✓ DATE : 23.03.2025
 INSPECTION AGENCY : MICROLAB

DESCRIPTION

SL NO	ITEM	QTY (Nos)	MATERIAL SPEC	H.NO	MARKING
1	HEX BOLT 7/16" 14 UNC X 32 T933U716114B7MZ	1820 ✓	ASTM A193 GR.B7M / 24	TI2456 ✓	B7M T ✓
2	HEX SCREW M8x1.25 x 65 T933M865B7M	50 ✓	ASTM A193 GR.B7M / 24	TI2456 ✓	
3	HEX SCREW M10X25 T933M1025B7MZ	50 ✓	ASTM A193 GR.B7M / 24	TI2456 ✓	

CHEMICAL ANALYSIS

H.NO		C	Mn	P	S	Si	Cr	MO	
	REQUIRED	0.38-0.48 ✓	0.75-1.00 ✓	0.035 max ✓	0.040 max ✓	0.15-0.35 ✓	0.80 - 1.10 ✓	0.15-0.25 ✓	- ✓
TI2456	ACTUAL	0.425 ✓	0.829 ✓	0.015 ✓	0.020 ✓	0.297 ✓	0.912 ✓	0.205 ✓	- ✓

MECHANICAL TEST RESULTS

H.NO		TENSILE STRENGTH MPa	YIELD STRENGTH min 0.2 % offset Mpa	% ELON G in 4D	% REDUCTION IN AREA Min	Toyo tested Hardness Max
	REQUIRED	690 ✓	550 ✓	18 ✓	50 ✓	235 HBW ✓
TI2456	ACTUAL	795 ✓	687 ✓	32.0 ✓	65.0 ✓	220-228 HBW ✓

IDENTIFICATION MARK:-

1. ABOVE MATERIAL AS CONFORMS TO ASTM A193 GR.B7M /24
Heat Treatment:-

Temp Min °F - 1150°F ✓

Recorded °F - 1170°F ✓

Soaking time (in minutes) : 120 ✓

Quanching medium : Air ✓

Remars:

1. Material is free from radioactive contamination,
2. 100% visual inspection carried out & found free from defects
3. Chemical ,Machanical hardness testing carried out at room 25°C
4. Sampling basis hardness testing is performed & found as per requireme
5. This Material confirm to NACE MRO175 / ISO 15156 ✓

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

FOR TOYO INDUSTRIES

R.PANDIYAN
MANAGER QC

