

Material Test Certificate according to EN 10204-2004 : 3.1

Customer :				Material :	ASTM A453 GR.660 CL.A ED-2026			TC No. :	S84/26-XX
SWO No. :		Date :		Bar Shape :	Round Bar	Bar Size	16 mm	TC Date :	25/07/20XX
PO No. :		Date :		RM TC No. :	-	Lot No. :	U0XX	INV. No./Date	-

Chemical Composition Results %

Elements :	C	Mn	P	S	Si	Cr	Ni	Mo	Ti	Sn	Cu	Al	B	V	Ca
Min. :	-	-	-	-	-	13.50	24.00	1.00	1.900	-	-	-	0.0010	0.1000	-
Max. :	0.0800	2.00	0.040	0.030	1.0000	16.00	27.00	1.50	2.350	-	-	0.3500	0.0100	0.5000	-
Actual :	0.0420	1.258	0.0216	0.0145	0.443	14.53	24.57	1.10	1.94	-	-	0.122	0.0045	0.149	-
Lab TC No.:	XXXX	Lab Name :	XXXX	Result :	Satisfactory										

Heat Treatment Records

Heat Treatment Process	Hardening Temp. °C	Tempering Temp. °C	Solution Annealing Temp. °C
Temp. °C Min. :	72X°C	-	90X°C
Temp. °C Recorded :	72X°C	-	91X°C
Soaking Time :	16 HOURS	-	2 hours
Quenching Medium :	Air Cool	-	Water Quenched
HT BATCH NO. :	-	-	-

Mechanical Testing Results

Mechanical Properties		Tensile Strength (Mpa)	Yield Strength 0.2 % Offset (Mpa)		% Elongation (GL-50mm)	%Reduction Area	Hardness (HRC)		Proof Load (Kn)	
Specified	Min.	895	585		15	18	24		-	
	Max.	-	-		-	-	37		-	
Actual Results:		1092.90	807.06		22.29	47.35	34.8 , 35.2 , 35.6		-	
Impact Test Results		Charpy V Notch Impact Test				AVG Value (J)	Lateral Expansion			
		Specified Value (J)	-	-	-	-	Value 1	Value 2	Value 3	Avg. Value
		Achieved Value (J)	-	-	-	-	-	-	-	-

Lab TC No.:	260154XX	Lab Name :	M/s. BMT LAB LXX	Result :	Satisfactory.
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Item Details

Po Sr. No.	Item Code	Drawing No./Rev. No.	Item Description	Length	Quantity
1.	-	-	Stud Bolts 5/8" - 18 UNF , A453 Gr.660 CL.A	95 mm	15.00 NOS

Remarks: -
01) Material is free from objectionable contamination.
02) 100% visual inspection carried out & found free from defects.
03) Chemical, Mechanical & Surface test carried at room temperature 20°C.
04) Material fully up to the standard compliance requirements hence satisfactory.
05) No weld repair noticed.
06) Above mentioned items conform to with respect to test carried out in order to the Purchase order requirement.
07) All Dimensions are as per (ASME B18.2.1)
08) Above mentioned items are in line to the requirement of TC No. (If applicable)
09) Product surface finish is supplying as per Trade.

We confirm that above mentioned Items was Manufactured, Sampled, Tested and Inspected in accordance with the subjected Customer's Purchase Order and as applicable Drawings, Material Specifications, Codes & Standards and the results of the items have been determined to meet the users' requirements.

For Ananka Fasteners Pvt. Ltd.

For Client / TPI