

Material Test Certificate according to EN 10204-2004 : 3.1

Customer :		Material :	ISO 898-1 GR. 12.9 ED-2013	TC No. :	
SWO No. :		Date :		Bar Shape :	Round Bar
PO No. :		Date :		Bar Size :	42.3mm
		RM TC No. :	-	Lot No. :	A1XX
				INV. No./Date	

Chemical Composition Results %

Elements :	C	Mn	P	S	B	Cr	Ni	Mo	V	Sn	Cu	Al	B	Pb	Ca
Min. :	0.30	0.600	-	-	-	-	-	-	-	-	-	-	-	-	-
Max. :	0.50	-	0.025	0.025	0.003	-	-	-	-	-	-	-	-	-	-
Actual :	0.416	0.807	0.021	0.021	0.001	-	-	-	-	-	-	-	-	-	-

Lab TC No.:	QA94XX	Lab Name :	M/s. QTES LXX	Result :	Satisfactory
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Heat Treatment Records

Heat Treatment Process	Hardening Temp. °C	Tempering Temp. °C	Solution Annealing Temp. °C
Temp. °C Min. :	85X°C	42X°C	-
Temp. °C Recorded :	88X°C	44X°C	-
Soaking Time :	2 Hours	3 Hours	-
Quenching Medium :	Oil Quenched	Aircool	-

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.	1220	1100	8	44	39
	Max.	-	-	-	44	-
Actual Results:	1249.47	1123.88	13.50	47.257	41, 42, 41	-

Impact Test Results	Charpy V Notch Impact Test @ -101°C Temp.	AVG Value	Lateral Expansion @ -101°C Temp.
	Specified Value J	-	Value 1
	Achieved Value J	-	Value 2
		-	Value 3
		-	Avg. Value

Lab TC No.:	89/25-XX.	Lab Name :	AKXX	Result :	Satisfactory.
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Item Details

Sr. No.	Item Code	Drawing No./Rev. No.	Item Description	Length	Quantity
01	-	-	HT Stud (Double End Thread 100mm) M42 – 4.5P, Grade - 12.9	300 mm	50.00 NOS

Remarks: -
01) Material is free from surface contamination.
02) 100% visual inspection carried out & found free from defects.
03) Chemical, Mechanical & Hardness test carried out at room temperature 20°C.
04) Material fulfills all the standard compliance requirements hence satisfactory.
05) No weld repair performed.
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 the Specification.
08) Above mentioned items are in line to the requirement of TSC No. (if applicable)
09) Product surface finish is as per the requirement.

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