

R 618036

MATERIAL TEST REPORT



ARCELORMITTAL TUBULAR PRODUCTS SHELBY LLC
 132 WEST MAIN STREET
 SHELBY, OH 44875-1471
 Telephone: 419-347-2424 Fax: 419-342-1437

ISO 9001:2015 IATF 16949:2016

CUSTOMER	SPECIFICATIONS(S): ASTM A513 2018	CUSTOMER ORDER NO.: P899503-423	SHELBY ORDER NO.: 531271 VR	PAGE 01 OF 01
	PRINT NO.	CUSTOMER PART NO.: 140411	NDT	MELT SOURCE
			NDT PER ASTM E570	AM CLEVELAND
			S# 00427377	STEEL BAR/STRIP MFG PROCESS CONTINUOUS/STRAND CAST

GRADE 1026	SIZE (O.D. X I.D. X WALL) 4.500 X 3.250 X .625	QUANTITY 12473 LB 482.33 FT	21 PC	SHIPPED DATE: 01/15/2019	TODAY'S DATE: 01/15/2019
AM-SHELBY ITEM NO: 50000091		PRODUCT DESCRIPTION: EW DOM STRESS RELIEVE ANNEAL			

CHEMICAL COMPOSITION (% WEIGHT)																			
Heat No.	Sample	C	Mn	P	S	Si	Ni	Cr	Mo	Cu	V	Al	Sn	Ca	O	N	Ti	B	Cb
4172227	Heat	0.24	0.67	0.011	0.002	0.02	0.01	0.04		0.03	0.001	0.040	0.002	0.0029		0.0045	0.002		

MECHANICAL PROPERTIES													D.I.		Grain Size	
Tensile Properties													Hardness			
Heat No.	Bundle No.	Yield Strength	Units	Method	Yield Strength	Units	Method	Tensile Strength	Units	%Elongation In 2 inches	% Reduction of Area	HBW	HRBW	HRC		
4172227	T7713571	81600	PSI	0.20%OFF				95500	PSI	22			93			

Charpy Impact Properties							
Size	Orientation (Test direction)	Temp.	Energy 1st	Energy 2nd	Energy 3rd	Energy Avg.	Energy Units

METALLURGICAL PROPERTIES																				
Jominy Hardenability (EXPRESSED IN 16THS)																	Magnaflux			
Heat No.	1	2	3	4	5	6	7	8	9	10	12	14	16	18	20	24	28	32	Freq	Sev.

Hot Reduction Ratio 12.9:1	OTHER INSPECTION Melted and Manufactured in USA 100% NDT TESTED NON-DESTRUCTIVE TESTED EN 10204 3.1	THIS TEST REPORT NOTARIZED WHEN REQUIRED SWORN AND SUBSCRIBED BEFORE ME THIS DAY OF	NOTARY PUBLIC
		<i>Frank Simeone</i> Frank Simeone, Chief Metallurgist Frank.Simeone@Arcelormittal.com	

MATERIAL PRODUCED TO THE SPECIFICATION(S) SHOWN ABOVE. NO ADDITIONAL SPECIFICATION(S) IS IMPLIED OR WARRANTED. THIS TEST REPORT SHALL NOT BE ALTERED OR REPRODUCED EXCEPT IN FULL. PRODUCTS DO NOT CONTAIN MERCURY OR COME IN CONTACT WITH MERCURY BEARING INSTRUMENTS OR PROCESSING CHEMICALS. MATERIAL HAS NO REPAIRS BY WELDING.

P.O. # 5369
Part # D3 - 702201

DESC: CPA MIXER PROTOTYPE
4 NPS SLEEVE TUBE

INS March 18, 2020