

TEST CERTIFICATE

Certificate No. : 270332					Date : 20.12.2025			Po Number:BY MAIL		
Customer Name:					SO No : 403021466/90			Po date :12.12.2025		
Cust. Address :					SO Date : 12.12.2025			Packing Slip No :720293944		
					Truck No.: HR74B8272			Invoice No :0094462692		
								GST Invoice No : 26JH2110168128		
Heat No	Grade	Size (mm)	Length (mm)	ML (mm)	No. of Bundles	No. of PCS	Weight	Billet Size		
E255090	SAE52100	56.00 mm DIA	6,000.00 mm		2		4.570 MT	210 X 210 mm		

TDC NO : MFR_2090_REV_01 BIS Equivalent Grade :
Process Route : BF-EAF-LRF-VD-CCM (AMLC & EMS)-RM Reduction Ratio : 17.90 : 1
Specification:

CHEMICAL ANALYSIS																			Prod STD No : SAE52100			
Element	C%	Si%	Mn%	P%	S%	Cr%	Mo%	Ni%	B %	V%	Cu%	Pb%	Sn%	Ti%	Nb%	Zr%	As%	Sb%	Al%	Ca %	CE%	
MIN	0.9300	0.150	0.250			1.350																
MAX	1.0500	0.350	0.450	0.025	0.0080	1.600	0.100	0.300			0.250	0.002	0.030	0.0030			0.040	0.005	0.0500	0.0010		
Actual	0.977	0.212	0.340	0.016	0.007	1.420	0.004	0.014	0.0002	0.003	0.006	0.001	0.001	0.0025	0.001	0.000	0.001	0.000	0.002	0.0001	1.320	

Gas Levels : N ppm : [/] -56 O ppm : [/ 12] -9.0 H ppm : [/ 2.00] -1.40

MECHANICAL PROPERTIES :												
	Tensile Test ()				Hardness Test				Impact Test ()			
Cond.					As rolled				Spec.			
Spec.	YS	UTS	Elong.	RA	As Supply	As Quenched		As Q&T	Test Temp	Imp. Value (min)	Avg.	
			%	%	BHN				°C	J	°C	J
Min												
Max					380							
Actual					349							

Upset Type : Upset Test : % Upset Result :

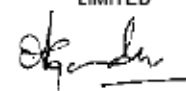
JOMINY HARDENABILITY ()																				Ideal Diameter (DI) : [/] -
Distance																				
MIN (HRC)																				
MAX (HRC)																				
Actual(HRC)																				

METALLURGICAL PROPERTIES & PHYSICAL INSPECTION															
	%C.SEG		Step Down Test		Non-metallic Inclusion K3		MPI Test		Pearlite Amount		Spark Test		Non-metallic Inclusion K4		Anti Mixup Check(100%)
Actual			Pass				100% OK				100% OK				
	Macro Etch Test		Micro Structure		CN		CZ Looser		CZ Closer		GBC Level		DEG. SPH		MFLT/ECT
Spec	C2R2S2 MAX				/ 5.7		/ 7.4		/ 6.3						
Actual	C2R1S1		Pearlite & Cementite		5.10		7.20		6.10						
	Grain Size	Decarb (mm)	Banding (µm)	A		B		C		D		DOS µm	Ultrasonic Test		
				Thin	Thick	Thin	Thick	Thin	Thick	Thin	Thick				
Spec	8.0 /	1.00 % of Dia Max	/	2.0	1.0	1.5	0.5	0.5	0.5	1.0	0.5				
Actual	8.00	0.170 mm		0.50		0.50				1.00			100% OK		

Inclusion Rating Test Standard: ASTM_E45 Grain Size Standard: ASTM_E112 Decarb Standard: SAE_J419
Macro Etch Test Standard: ASTM_E381 Banding Test Standard: UT Standard: ASTM_A388

JSW COLOR CODE : PINK+WHITE CUSTOMER COLOR CODE : PINK+WHITE

INSPECTION CERTIFICATE 3.1 ACCORDING TO EN 10204 : 2004
Supply Condition : AS ROLLED
Remarks :
Reference : WE HERE BY CERTIFY THAT THE MATERIAL SHIPPED UNDER THIS TEST CERTIFICATE DID NOT COME IN DIRECT CONTACT WITH ANY MERCURY, CADMIUM HEXAVALENT CHROMIUM CONTAINING DEVICES, FREE FROM RADIOACTIVE CONTAMINATION EMPLOYING A SINGLE BOUNDARY OF CONTAINMENT DURING THE MANUFACTURING PROCESS,TESTS, INSPECTION AND STORAGE.

WE CERTIFY THAT CONTENTS OF THIS REPORT ARE CORRECT AND ACCURATE AND MEET THE REQUIREMENTS OF THE PURCHASE ORDER,TECHNICAL DELIVERY CONDITION, GENERAL STEEL REQUIREMENTS ANDTHE MATERIAL CERTIFICATION REQUIREMENTS.			NOTE: 1. THE RESULTS RELATES ONLY TO THE ITEM TESTED. 2. CERTIFICATE SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN APPROVAL OF ISSUING AUTHORITY.			For BHUSHAN POWER AND STEEL LIMITED  ANIL KUMAR GOUDA			
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