



# GERDAU STEEL INDIA PVT. LIMITED

PLANT: TADIPATRI. DIST.: ANANTPUR. A.P.: 515411

## TEST CERTIFICATE

F/QA-TC/12 Rev. 01

TC No : 2017/00039847	Quantity : 12.960 TO	Rolling Input : 160X160 mm
Customer : PRITI INTERNATIONAL	S.O. No. / Date :	
PROCESS ROUTE :- BF>>BOF>>LRF>>VD>>CCM>>RM	Size : 65 Dia	Truck No.: AP04M 9271
Heat No:- 29567	Product : Rolled Bar	Colour Code: GREEN/BLACK
NO OF BUNDLES: NO OF BARS:	Grade :- SAE-8620	
TAS No. : 1952/2017	TDC No :- Isr no.22, Rev 00, dated:28.12.2017	Condition :As Rolled
	Reduction Ratio:	

## CHEMICAL COMPOSITION

CHEMICAL COMPOSITION															
Element	%C	%Mn	%Si	%P	%S	%Cr	%Ni	%Cu	%Mo	%Al	%Pb	%V	%Ti	%Ca	
Min.	0.18	0.70	0.20	-	-	0.40	0.40	-	0.15	0.020	-	-	-	-	
Max.	0.23	0.90	0.35	0.040	0.040	0.60	0.70	-	0.25	0.040	-	-	-	-	
Actual	0.21	0.84	0.23	0.026	0.024	0.52	0.56	-	0.17	0.025	-	-	-	-	
OTHER ELEMENTS												GAS LEVEL			
Element	%B	%Nb	%As	%Sb	%Co	%W	%Bi					O <sub>2</sub> PPM	H <sub>2</sub> PPM	N <sub>2</sub> PPM	
Min.	-	-	-	-	-	-	-					Min	-	-	-
Max.	-	-	-	-	-	-	-					Max	-	-	-
Actual	-	-	-	-	-	-	-					Actual	18	1.6	71

## MECHANICAL PROPERTIES


Requirement	Hardness (BHN)	Impact Strength (IZOD/CHARPY)	Yield Strength (Kg/mm <sup>2</sup> )	UTS (Kg/mm <sup>2</sup> )	%Elong.	%RA	JOMINY HARDENABILITY ( HRC )					
							J1.5	J5.0	J10.0	J15.0	J20.0	J30.0
Min.	-	-	-	-	-	-	Min.	-	-	-	-	-
Max.	240	-	-	-	-	-	Max.	-	-	-	-	-
Actual	186	-	-	-	-	-	Actual	-	-	-	-	-

## METALLURGICAL PROPERTIES

Requirement	Depth of Decarb (mm) (SAE J419 TYPE III)	Macro Etch (ASTM E 381)	Max. Depth of Surface Defect (mm)	Grain Size (ASTM E 112)	INCLUSION RATING AS PER ASTM E45 (METHOD A)							
					A		B		C		D	
Min.	-	-	-	5	Min	-	-	-	-	-	-	-
Max.	-	C2R2S2	-	8	Max	2.5	1.5	1.5	0.5	1.5	-	1.5
Actual	-	C1R1S1	-	6.5-7.5	Actual	2.0	1.0	1.0	-	-	1.0	-

Spark & Spectral Test:	100% OK	<b>Other Tests:</b> 1. MFL: 2. Step Turn: 3. Blue Fracture: 4. Upset Test:	-	Oil Quenched Core Hardness:  Min. in HRC Actual in HRC
Surface Inspection:	100% OK		100% OK	
Ultrasonic Test:	100% OK		Found Satisfactory	
MPI:	100% OK		-	
			-	
				-
				-

Remarks	Microstructure : Pearlite + Ferrite
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Length of Bar :- 6000 mm	"We certify that the contents of this report are correct & accurate & meet the requirements of the purchase order, technical delivery conditions, general steel requirements & the material certification requirements". Supplied material is free from radioactive element.	

Technical Service 08/01/2018

Corporate Office: 304/305 World Trade Centre. Brigade Gateway Complex. Malleswaram (West). Bangalore: 560046. India

Please contact in case of query e-mail id: inml.techservice@gerdau.com