



# LUDHIANA STEEL ROLLING MILLS

(AN ISO 9001:2015 & ISO 14001:2015 CERTIFIED CO.)

## METALLURGICAL TEST REPORT

T.C. No. : 240146

Date (mm/dd/yyyy): 10/24/24

Customer's Name M/S S.S.B ENGINEERS PVT. LTD.		Customer's P O No.	Our Invoice No.	
Manufacturing Process E.I.F	Condition AS ROLLED	Quantity (MT)	Quantity (Pcs)	0

### CHEMICAL ANALYSIS ASTM E415-14/IS 8811-1998 (ACCORDING TO EN10204, TYPE 3.1)

	%C	%Mn	%S	%P	%Si	%Ni	%Cr	%Mo	%Cu	%Al	%V
SPECIFICATION	.34-.42	.30-.60	.030 MAX	.030 MAX	1.10- 1.4	---	1.30- 1.60	---	---	---	---
ACHIEVED	.38	.55	.020	.020	1.15		1.37			.023	
Heat No. B-23958	Grade 38XC				Size 90-ROUND			Color Code BLACK			

### METALLOGRAPHIC PROPERTIES

Inclusion Rating IS : 4163/ ASTM E45A										Grain Size IS4748 /ASTM E112		Surface Decar. (mm) / IS 6396 / ASTM E1077	
A		B		C		D							
TH	TN	TH	TN	TH	TN	TH	TN						
1.0	2.0 - Max	1.0	1.5 - Max	1.0	1.5 - Max	1.0	2.0 - Max	5.0 To 8.0					
	2.0		0.5		1.0		1.5	6.5					
Micro Structure			Hardenability TEST (IS 3848 / ASTM A255, SAEJ406) J2/16 J3/16 J4/16 J5/16 J6/16 J7/16 J8/16					Surface Inspection IS 133352	INTERNAL SOUNDNESS ASTM E-381	STEP DOWN TEST IS 4075	MOBILE SPECTRO ' SPARK TEST		
			FERRIPEARLITE			----	----					----	----

### MECHANICAL PROPERTIES (IS 1608 / ASTM A370)

UTS N/mm <sup>2</sup>	YS N/mm <sup>2</sup>	Elongation %	Reduction In Area %	Bend Test	Impact Value Joules	SURFACE Hardness BHN
REQUIRED						
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### ULTRASONIC TEST ASTM A388 / IS 2417

NO RECORDABLE DISCONTINUITY INDICATION OBSERVED, ACCEPTABLE AS PER ASTM-SA388 100% UT OKAY

It is hereby certified that the above steel is satisfactory in quality and quantity in compliance with requirement specified in the contract.

We stand guarantee for full length material only,

For Ludhiana Steel Rolling Mills

Quality Assurance



**LUDHIANA STEEL ROLLING MILLS**  
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