

Sample Result Name	Type	Measure Date Time	Recalculation Date Time	Origin
10229 ht no. s-272	Unknown	Thursday, November 13, 2014	3:37:01 PM	Measured
Method Name	Method Version	Operator Name	Check Type	Check Status
Fe-10-MO		SARA SAE	None	Not Used
Grade Verification Name	Grade Verification Similarity	Correction Type	Type Corr Sample Name	Grade Search Name
	0	None		
Grade Search Similarity	Type	Status	Outlier Removal	
0	None	Not Used		

Sample Name	Grade
10229 ht no. s-272	

10229 ht no. S-272

	C Conc %	Si Conc %	Mn Conc %	P Conc %	S Conc %	Cr Conc %	Mo Conc %	Ni Conc %	Al Conc %	Co Conc %	Cu Conc %	Nb Conc %	Ti Conc %	V Conc %	W Conc %	Pb Conc %	Sn Conc %	As Conc %	Zr Conc %	
4	0.092	0.10	0.43	0.021	0.046	0.078	0.028	0.097	0.041	0.006	0.099	<0.003	<0.0010	0.003	<0.030	<0.010	0.003	<0.005	<0.003	
5	0.093	0.10	0.43	0.025	0.042	0.079	0.029	0.10	0.043	0.008	0.10	<0.003	<0.0010	0.002	<0.030	<0.010	0.002	<0.005	<0.003	
6	0.085	0.10	0.45	0.020	0.049	0.081	0.030	0.11	0.041	0.009	0.11	0.005	0.001	0.004	0.030	<0.010	0.003	<0.005	<0.003	
7	0.088	0.11	0.43	0.024	0.045	0.077	0.030	0.10	0.042	0.006	0.10	<0.003	<0.0010	0.003	<0.030	<0.010	<0.002	<0.005	<0.003	
Rep	0.089	0.10	0.43	0.023	0.045	0.079	0.029	0.10	0.042	0.007	0.10	0.003	0.001	0.003	0.030	<0.010	0.002	0.005	0.003	
Min Cal	0.005	0.005	0.004	0.003	0.002	0.005	0.003	0.005	0.003	0.002	0.002	0.003	0.0010	0.002	0.030	0.010	0.002	0.005	0.003	
Mean	0.089	0.10	0.43	0.023	0.045	0.079	0.029	0.10	0.042	0.007	0.10	<0.003	<0.0009	0.003	<0.013	<0.003	0.002	<0.003	<0.001	
Max Cal	1.80	24.00	2.76	0.16	0.30	10.10	10.20	6.48	2.40	2.52	1.44	0.39	1.20	1.32	3.72	0.31	0.18	0.17	0.28	
	Ca Conc %	Ce Conc %	B Conc %	Zn Conc %	La Conc %	Fe Conc %														
4	<0.0005	<0.006	<0.0005	0.003	<0.002	98.9														
5	<0.0005	<0.006	0.0006	0.003	<0.002	98.9														
6	<0.0005	<0.006	<0.0005	0.004	<0.002	98.8														
7	0.0009	<0.006	<0.0005	<0.003	<0.002	98.9														
Rep	0.0006	<0.006	0.0005	0.003	<0.002	98.9														
Min Cal	0.0005	0.006	0.0005	0.003	0.002															
Mean	0.0005	<0.002	<0.0000	0.003	<0.0007	98.9														
Max Cal	0.016	0.66	0.018	0.036	0.27															

Qualify in 1008 as per
for 26-615
Debate



SHARU STEELS (P) LTD.

B-48 & D-251, Phase-VII, Focal Point, LUDHIANA - 141 010.
Mobile : 98550-82559 E-mail : info@sharusteels.com & sales@sharusteels.com

QUALITY ASSURANCE DEPARTMENT
METALLURGICAL TEST REPORT

20645

F-QCD-03

ISO 9001 : 2008
Certified Company

TEST CERTIFICATE

M/S. SARA SAE PRIVATE LIMITED DIVISION-II A-2 SARA INDUSTRIAL ESTATE LTD. CHAKRATA ROAD, SELAQUI RAMPUR DEHRADUN (UTTRAKHAND)	T.C. No. 1467 Invoice No. Truck No. MP09HF/8633	Date 11-11-2014
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GRADE	SIZE	HEAT NO.	MANUFACTURING ROUTE	COLOUR CODE	SUPPLY COND.N.	QNTY. M.T.	NO. OF PCS.
SAE1008	90 MM	S-272	L/HT	YELLOW	AS ROLLED	6.180 MT	LOOSE

CHEMICAL COMPOSITION IN PERCENTAGE

	C	Mn	S	P	Si	Ni	Cr	Mo	V	Al	Cu	Sn	Ti	B	Ca
Min.	-	0.30													
Max.	0.10	0.50	0.040	0.040	0.10										
Actual	0.09 ✓	0.43 ✓	0.032 ✓	0.034 ✓	0.09 ✓					0.038					

METALLURGICAL RESULTS

INCLUSION RATING IS : 4163/JK CHART/ASTM E-45A									Aust. Grain Size ASTM No. (E-112)	6/7	Gas content (ppm)	
	A		B		C		D		Decarb. (MM)		O ₂	
	T	H	T	H	T	H	T	H			N ₂	
STD MAX												
ACTUAL	1.5		1.0		1.0		1.5		Micro-Structure	P/F	H ₂	

MECHANICAL PROPERTIES							MACRO	ULTRASONIC TEST	MIX UP TEST
	U.T.S.	Y.S.	EL %	RA %	Impact Value	Hardness B.H.N. / Rb	OK	OK	OK
Reqd.									
Actual						101			

HARDENABILITY (HRC) AS PER IS : 3848

Distance											
Regd.											
Actual											

Remarks :

REDUCTION RATIO = 7.33:1 ✓

OK As per Sec 26-615
Shobhit