

Sample Result Name	9754 (RINL) H NO 311885A (DIA-56)	Type	Unknown	Measure Date Time	Wednesday July 30 2014	Recalculation Date Time	12:37:48 PM	Origin	Measured
Method Name	FE-MO	Method Version		Operator Name	SARA SAE	Check Type	None	Check Status	Not Used
Grade Verification Name		Grade Verification Similarity	0	Correction Type		Type Corr Sample Name		Grade Search Name	
Grade Search Similarity	0	Type	None	Status	Not Used	Outlier Removal			

Sample Name
9754 (RINL) H NO 311885A (DIA-56)

	C	Si	Mn	P	S	Cr	Mo	Ni	Al	Co	Cu	Nb	Ti	V	W	Pb	Sn	As	Zr
1	0.19	0.66	0.94	0.057	0.049	0.14	<0.003	0.038	0.16	<0.005	0.046	<0.005	0.002	<0.002	<0.040	0.039	<0.002	0.015	<0.003
2	0.17	0.18	0.43	0.025	0.021	0.015	<0.003	0.007	0.012	<0.005	0.003	<0.005	<0.0010	<0.002	<0.040	<0.010	0.003	<0.005	<0.003
3	0.15	0.17	0.43	0.027	0.016	0.011	<0.003	0.007	0.010	<0.005	0.004	<0.005	<0.0010	<0.002	<0.040	<0.010	0.004	<0.005	<0.003
4	0.15	0.17	0.45	0.022	0.022	0.014	<0.003	0.011	0.009	<0.005	0.004	<0.005	<0.0010	0.002	<0.040	<0.010	0.005	<0.005	<0.003
Rep	0.16	0.30	0.56	0.033	0.027	0.044	<0.003	0.016	0.048	<0.005	0.014	<0.005	0.001	0.002	<0.040	0.017	0.004	0.008	<0.003
Min Cal	0.006	0.005	0.004	0.003	0.002	0.005	0.003	0.005	0.003	0.005	0.002	0.005	0.0010	0.002	0.040	0.010	0.002	0.005	0.003
Mean	0.16	0.30	0.56	0.033	0.027	0.044	<0.014	0.016	0.048	<0.007	0.014	<0.016	<0.003	<0.004	<0.037	<0.007	0.003	<0.002	<0.003
Max Cal	3.00	5.04	18.12	0.18	0.30	36.00	10.20	55.2	6.24	21.60	7.44	3.60	3.60	12.00	7.32	0.13	0.27	0.13	0.19

Ca	Conc	B	Conc	Fe	Conc
%	%	%	%	%	%
1	0.008	0.003	97.6		
2	0.001	<0.0005	99.1		
3	<0.0005	<0.0005	99.1		
4	<0.0005	<0.0005	99.1		
Rep	0.003	0.001	98.7		
Min Cal	0.0005	0.0005			
Mean	0.003	<0.0003	98.9		
Max Cal	0.016	0.025			

Quality in 1000s per
Gross 26-747
Dipak



RASHTRIYA ISPAT NIGAM LIMITED

VISAKHAPATNAM STEEL PLANT

QUALITY ASSURANCE & TECHNOLOGY DEVELOPMENT DEPARTMENT

VISAKHAPATNAM STEEL PLANT

17987

TEST CERTIFICATE

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DETAILS			CUSTOMER/DESTINATION			WAGON/TRUCK/TRAILOR NUMBERS	R.R. WEIGHT (TONS)
T.C.NO:	QMSR/QAD/RM/15M/2014-15/9180/000046	DATE: 26.07.2014	SARA SAE PRIVATE LIMITED UNIT - II, A-2, SARA INDUSTRIAL ESTATE LIMITED, RAMPUR, CHAKRATA ROAD, SELAQUI, DEHRADUN, Dehradun-Dist. Uttarakhand, India			HR04N 1233	28.520
INV NO:	7180400354	DATE: 26.07.2014					

HEAT / LOT NUMBER	SECTION	NOMINAL SIZE (mm)	NO. OF COILS/ BUNDLES/ BILLETS/ BLOOMS	CHEMICAL COMPOSITION										MECHANICAL PROPERTIES						COLOR CODE	GRADE/ DESIGNATION
				C	Mn	P	S	Si	AL	CR	CU	CE	YS	UTS	%EL	RA	BEND TEST	RE- BEND TEST			
															%	%			%		
311885A	MP	56	1	0.090	0.370	0.020	0.019	0.180	0.033	0.007	---	0.153	264,000	405,000	29,000	---	NA	NA	BLACK-PINK	SAE1010	

STANDARD SPECIFICATION:

CHEMICAL	C	MN	P	S	AL	CR	CU	CE
	0.080 - 0.130	0.300 - 0.600	<= 0.040	<= 0.050	0.020 - 0.150	<= 0.050	NA	0.130 - 0.240
MECHANICAL	YS	UTS	%EL	RA				
	200 - 380	300 - 450	>= 20	>= 20				

THE MATERIAL SUPPLIED CONFORMS TO THE STANDARD ROLLING AND MASS TOLERANCES

AVERAGE WEIGHT OF EACH BUNDLE/COIL/BILLET/BLOOM IS 28.520 TONS APPROXIMATELY
MANUFACTURING ROUTE: BOF-LF/IRUT-CCM-ROUND
REDUCTION RATIO: 24.36 : 1

Sandeep Kumar

RASHTRIYA ISPAT NIGAM LTD.

(A GOVT. OF INDIA ENTERPRISE)

1st Floor, 77 E.C. ROAD

DEHRADUN-248 001

FOR (QA & TD)
VISAKHAPATNAM STEEL PLANT

Ok as per spec 26-747
Quality in 1010
Durpal