

Sample Result Name	Type	Measure Date Time	Recalculation Date Time	Origin
9563 (ZGF)	Unknown	Tuesday, June 10, 2014	5:17:25 PM	Measured
Method Name	Method Version	Operator Name	Check Type	Check Status
Fe-30-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
9563 (ZFG) BX-160	

	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 %
3	0.056	0.091	0.47	0.028	0.019	0.068	<0.003	0.040	0.028	<0.005	0.062	<0.005	<0.0010	<0.002	<0.040	0.011	0.003	<0.005	<0.003
4	0.045	0.090	0.47	0.029	0.015	0.072	<0.003	0.040	0.025	<0.005	0.060	<0.005	<0.0010	<0.002	<0.040	0.010	0.003	<0.005	<0.003
5	0.043	0.085	0.47	0.031	0.015	0.069	<0.003	0.037	0.021	<0.005	0.061	<0.005	<0.0010	<0.002	<0.040	<0.010	0.002	<0.005	<0.003
Rep	0.048	0.089	0.47	0.029	0.016	0.070	0.003	0.039	0.025	<0.005	0.061	<0.005	<0.0010	<0.002	<0.040	0.010	0.003	<0.005	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	0.048	0.089	0.47	0.029	0.016	0.070	<0.001	0.039	0.025	<0.003	0.061	<-0.022	<-0.005	<-0.004	<-0.036	0.010	0.003	<-0.007	<0.0006
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 %
3	0.005	<0.0005	99.1
4	0.004	<0.0005	99.1
5	0.004	<0.0005	99.1
Rep	0.005	<0.0005	99.1
Min Cal	0.0005	0.0005	
Mean	0.005	<-0.0005	99.2
Max Cal	0.016	0.025	

on in 1008
Dupali

1) Bx160
2) Bx159



R.L STEELS & ENERGY LTD

Gut No:81,Pangra Shivar,Chitegaon-Paithan Rd,
Aurangabad 431107

METALLURGICAL TEST CERTIFICATE



Customer: **M/S PHOENIX SPECIAL STEELS**

Invoice No: **5364**

Date: **12/12**

Approx Length: **18'-20'**

Certificate No:07-17800

Date:13/12/09

Truck No: **0310/47100**

Sr. No.	Heat No.	Grade & Size in mm	Specified	C%	SI%	Mn%	P%	S%	Cr%	Mo%	Ni%	Al%	Cu%	Sn%	V%	Colour Code	No. Of Bars	Qty MT
1	ZGF	SAE1006 110D1A	Actual	0.08	0.35	0.25	0.040	0.040								WHITE+YELLOW + WHITE		
				MAX	MAX	0.40	MAX	MAX										
				0.065	0.063	0.40	0.023	0.004				0.040						

METALLURGICAL TESTING															Colour Code		No. Of Bars	Qty MT
Sr No	INCLUSION RATING								Grain Size ASTM	Surface Decarb	As Rolled Micro Structure	Hardness in BHN	PHYSICAL PROPERTIES				REMARKS	
	A		B		C		D						Y.S. Kgf/mm2	U.T.S Kgf/mm2	Elongation	Impact Value J		
SPEC	T	H	T	H	T	H	T	H										
ACTL	2.0	-	0.5	-	-	-	-	-	1.5	0.5	6-7	-	P+F	114-119	-	-	-	C2R2S2 C2R2S2 ASPER ASTM E381

1)Condition of Supply -As Rolled

2)Calcium Silicide Treatment - Given

3)Billet Size - 240X280MM

4)MFG ROUTE:-EF/LD/LRF/VD/CCP

GAS CONTENT		
O ₂	18.60	PPM
N ₂	90.00	PPM

- 1) Condition of Supply -As Rolled
- 2) Calcium Silicide Treatment - Given
- 3) Billet Size - 240X280MM
- 4) MFG ROUTE:-EF/LD/LRF/VD/CCP

GAS CONTENT	
O ₂	18.60 PPM
N ₂	90.00 PPM
H ₂	1.09 PPM

R.L Steels & Energy Ltd

Quality Control

on in
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Deyat