

9544

Sample Results

Sample Result Name	Type	Measure Date Time	Recalculation Date Time	Origin
9544 (r-39) H.NO- E-42410	Unknown	Wednesday, June 18, 2014	11:55:48 AM	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
9544 (r-39) H.NO- E-42410

	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 %
1	0.065	0.22	0.46	0.016	0.029	1.05	0.18	0.11	0.032	<0.005	0.052	<0.005	<0.0010	0.021	<0.040	<0.010	0.011	<0.005	<0.003
2	0.065	0.22	0.46	0.019	0.035	1.04	0.18	0.11	0.031	<0.005	0.051	<0.005	<0.0010	0.021	<0.040	<0.010	0.011	<0.005	<0.003
3	0.065	0.21	0.45	0.020	0.036	1.04	0.18	0.10	0.031	0.005	0.050	<0.005	<0.0010	0.020	<0.040	<0.010	0.012	<0.005	<0.003
Rep	0.065	0.22	0.46	0.018	0.033	1.04	0.18	0.11	0.031	0.005	0.051	<0.005	<0.0010	0.020	<0.040	<0.010	0.011	<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	0.020	<0.040	<0.010	0.011	<0.005	0.003
Mean	0.065	0.22	0.46	0.018	0.033	1.04	0.18	0.11	0.031	<0.004	0.051	<-0.007	<-0.005	0.020	<-0.044	<0.001	0.011	<-0.008	<0.002
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	0.0006	<0.0005	97.7																
2	0.001	<0.0005	97.7																
3	0.0006	<0.0005	97.7																
Rep	0.0008	<0.0005	97.7																
Min Cal	0.0005	0.0005																	
Mean	0.0008	<-0.0001	97.8																
Max Cal	0.016	0.025																	

OK in 1008 Grade
Dupak



JSW STEEL LIMITED - SALEM WORKS

R-39 7700 Pas

Works: polaneri Village, Mecheri Post - 636 453, salem, india

Registered Office: "JSW CENTRE", Bandra Kurla Complex, Bandra (East), Mumbai - 400 051

TEST CERTIFICATE

Certificate No. : 23480

Customer Name: JSW Steel Ltd Depot - Rajkot, Veraval
Cust. Address : Survey NO. 171/1, Plot NO. - 2
Rajkot, Gujarat-111111, India

Date : 05.02.2014

SO No : 400115871

SO Date : 21.01.2014

Truck No.: TN52D3498

Po Number: EMAIL

Po date : 21.01.2014

Packing Slip No : 700682162

Ex. Invoice No : 1320060909

Heat No.	Grade	Size (mm)	Length (mm)	ML (mm)	No. of Bundles	No. of PCS	Weight	Prod STD No
E42410	SAE 1008	80.00 mm DIA	6,000.00 mm	0 mm	7	57	11.784 MT	ODQA06 660

TDC NO : SUN_FORGE_SAE_1008.0_0_SFPL_019_13_14.14.06.2013.14.06.2013

Process Route : BF_EOF_LRF_VD_CCM_EMS_BM

Billet/Bloom Size : 250MM_250MM

Reduction Ratio : / - 12.44 - 1

CHEMICAL ANALYSIS

Element	C%	Si%	Mn%	P%	S%	Cr%	Mo%	Ni%	B ppm	V%	Cu%	Pb%	Sn%	Ti%	Nb%	Zr%	As%	Sb%	Al%	Ca ppm	CE%
MIN			0.250																		
MAX	0.0800	0.200	0.400	0.030	0.0500																
Actual	0.050	0.090	0.280	0.016	0.005	0.050	0.002	0.018	2	0.004	0.008	0.000	0.001	0.0014	0.000	0.000	0.000	0.000	0.030	20	0.110

Other Elements:

Gas Levels : N ppm : [/] - 76

O ppm : [/] - 11.5

H ppm : [/] - 1.02

MECHANICAL PROPERTIES

Test Cond	YS	UTS	ELONG.	RA	As Rolled	As Quenched	As Quenched	As Q&T
UOM			%	%				
MIN								
MAX								
Actual								

Impact Test Temp	*Energy - T1	**Strength - T1	*Energy - T2	**Strength - T2	*Energy - T3	**Strength - T3
Impact Test Type	MIN					
Impact Notch Type	MAX					
Impact Test Cond	ACTUAL					
*J **Kgm/cm2	Test Temp					

Edge Radius (mm)

Upset Percentage :

Upsetability

JOMINY HARDENABILITY

Ideal Diameter (DI) : [/] -

Distance																					
MIN (HRC)																					
MAX (HRC)																					
Actual (HRC)																					

METALLURGICAL PROPERTIES & PHYSICAL INSPECTION

Surface Inspection	Step Down Test	BFT Test	MPI Test	Segregation Test	Spark Test	Spectra Test	Ni-Spot Test
Actual	OK		OK		OK	OK	

Macro Etch Test	Micro Structure	CN	CZ Looser	CZ Closer	GBC Level	Supply Condition
Actual	C2R2S2	Ferrite - Pearlite	/	/		AS ROLLED

Grain Size	Decarb (mm)	Banding (µm)	A Thin	A Thick	B Thin	B Thick	C Thin	C Thick	D Thin	D Thick	DOS µm	Ultrasonic Test
Actual	7.00	0.250 mm	1.00	0.50	0.50				1.00			Pass

Inclusion Rating Test Standard : ASTM E45 A

Grain Size Standard : ASTM E112

Decarb Standard : SAE J419

Macro Etch Test Standard : ASTM E381

Tensile Test Standard:

Jominy Test Standard

JSW COLOR CODE : WHITE

CUSTOMER COLOR CODE

INSPECTION CERTIFICATE 3.1 ACCORDING TO EN 10204 : 2004

Remarks : Spark test is 100% OK, Mobile Spectra Test is 100% OK, Metascope Test is 100% OK

Reference : WE HEREBY CERTIFY THAT THE MATERIAL SHIPPED UNDER THIS TEST CERTIFICATE DID NOT COME IN DIRECT CONTACT WITH ANY MERCURY, CADMIUM & HEXAVALENT CHROMIUM CONTAINING DEVICES, FREE FROM RADIO ACTIVE CONTAMINATION EMPLOYING A SINGLE BOUNDARY OF CONTAINMENT DURING THE MANUFACTURING PROCESS, TESTS, INSPECTION AND STORAGE

WE CERTIFY THAT CONTENTS OF THIS REPORT ARE CORRECT AND ACCURATE AND MEET THE REQUIREMENTS OF THE PURCHASE ORDER, TECHNICAL DELIVERY CONDITION, GENERAL STEEL REQUIREMENTS AND THE MATERIAL CERTIFICATION REQUIREMENTS.

For JSW STEEL LIMITED

CHIEF METALLURGIS

Mr 2002 Rev the reg. value