



# STEEL LIMITED

Vijayanagar Works, PO: Vidyanagar, Village : Tornagallu, Dist: Bellary, Karnataka-583275, INDIA

Regd. Office: JSW Centre, Bandra Kurla Complex, Bandra (East), Mumbai-400051.

## MILL TEST CERTIFICATE (According to EN 10204 - 3.1)

TO,  
DUFERCO S.A.  
SWITZERLAND, 690000  
CH

TC No 2016-17 / 0400603524 \_ 50 / 7020004333

Date 01.04.2017

Product: Cold Rolled Annealed, Skinpassed & Oiled									Chemical Composition & Mechanical Properties											Remarks		
Cast/Heat No.	Coil No.	T	X	W	X	L	Net Wt.	Gross Wt.	C %	Mn %	S %	P %	Si %	Al %	N %	YS MPa	UTS MPa	EL %	Ra $\mu$ m		GL mm	Bend Test
Specification : ASTM A_1008 CS_B		MIN	----->		-	-	-	-	-	-	-	-	-	-	-	140	-	30.00	0.70	-	-	-
		MAX	----->		0.1000	0.600	0.0350	0.030	-	-	1.0000	275	-	-	-	-	-	-	-	-	-	-
A350870	G348011000	1.210	X	914.0	X	Coil	8.100	8.170	0.032	0.170	0.007	0.008	0.010	0.047	0.0037	211	340	45.50	0.90	50MM	Pass	50.00
A350870	G347882000	1.210	X	914.0	X	Coil	8.315	8.380	0.032	0.170	0.007	0.008	0.010	0.047	0.0037	225	342	44.70	0.93	50MM	Pass	50.00
A350870	G347881000	1.210	X	914.0	X	Coil	8.065	8.135	0.032	0.170	0.007	0.008	0.010	0.047	0.0037	225	342	44.70	0.93	50MM	Pass	50.00
A350870	G348012000	1.210	X	914.0	X	Coil	8.295	8.370	0.032	0.170	0.007	0.008	0.010	0.047	0.0037	211	340	45.50	0.90	50MM	Pass	50.00
C350863	G347842000	1.210	X	914.0	X	Coil	8.235	8.305	0.029	0.200	0.010	0.015	0.009	0.053	0.0040	227	347	44.80	1.02	50MM	Pass	50.00
C350860	G349781000	1.210	X	914.0	X	Coil	8.055	8.125	0.038	0.210	0.010	0.015	0.013	0.044	0.0035	219	357	43.10	0.71	50MM	Pass	50.00
C350863	G347841000	1.210	X	914.0	X	Coil	8.020	8.090	0.029	0.200	0.010	0.015	0.009	0.053	0.0040	227	347	44.80	1.02	50MM	Pass	50.00
B350865	G348581000	1.210	X	914.0	X	Coil	8.070	8.140	0.036	0.180	0.010	0.020	0.009	0.055	0.0040	214	341	44.30	0.91	50MM	Pass	46.00
A350873	G351301000	1.210	X	914.0	X	Coil	8.140	8.210	0.030	0.200	0.009	0.007	0.009	0.050	0.0032	219	348	44.00	0.72	50MM	Pass	50.00
B350865	G348582000	1.210	X	914.0	X	Coil	6.965	7.030	0.036	0.180	0.010	0.020	0.009	0.055	0.0040	214	341	44.30	0.91	50MM	Pass	50.00
C350863	G349002000	1.210	X	914.0	X	Coil	8.120	8.190	0.029	0.200	0.010	0.015	0.009	0.053	0.0040	216	347	43.50	0.76	50MM	Pass	51.00
A350873	G351302000	1.210	X	914.0	X	Coil	8.280	8.350	0.030	0.200	0.009	0.007	0.009	0.050	0.0032	219	348	44.00	0.72	50MM	Pass	50.00
B350865	G349342000	1.210	X	914.0	X	Coil	8.290	8.355	0.036	0.180	0.010	0.020	0.009	0.055	0.0040	238	358	43.60	1.00	50MM	Pass	51.00
B350865	G349341000	1.210	X	914.0	X	Coil	8.095	8.155	0.036	0.180	0.010	0.020	0.009	0.055	0.0040	238	358	43.60	1.00	50MM	Pass	51.00
C350863	G351841000	1.210	X	914.0	X	Coil	8.040	8.110	0.029	0.200	0.010	0.015	0.009	0.053	0.0040	237	355	42.60	0.96	50MM	Pass	50.00
A350870	G351731000	1.210	X	914.0	X	Coil	8.080	8.150	0.032	0.170	0.007	0.008	0.010	0.047	0.0037	211	344	44.20	0.77	50MM	Pass	50.00
C350863	G349001000	1.210	X	914.0	X	Coil	8.105	8.175	0.029	0.200	0.010	0.015	0.009	0.053	0.0040	216	347	43.50	0.76	50MM	Pass	51.00



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Product: Cold Rolled Annealed, Skinpassed & Oiled									Chemical Composition & Mechanical Properties										Remarks
Specification : ASTM A_1008 CS_B	MIN	----->	C	Mn	S	P	Si	Al	N	YS	UTS	EL	Ra	GL	Bend Test	Hard			
			%	%	%	%	%	%	%	%	%	MPa	MPa	%	µm	mm	HRB		
			-	-	-	-	-	-	-	140	-	30.00	0.70						
			0.1000	0.600	0.0350	0.030	-	-	1.0000	275	-	-	1.60	-	-	-			
Cast/Heat No.	Coil No.	T X W X L (mm)	Net Wt.	Gross Wt.	C	Mn	S	P	Si	Al	N	YS	UTS	EL	Ra	GL	Bend Test	Hard	Remarks
					%	%	%	%	%	%	%	MPa	MPa	%	µm	mm		HRB	
A350870	G349282000	1.210 X 914.0 X Coil	8.340	8.410	0.032	0.170	0.007	0.008	0.010	0.047	0.0037	220	341	45.70	0.96	50MM	Pass	49.00	
C350863	G351842000	1.210 X 914.0 X Coil	8.265	8.335	0.029	0.200	0.010	0.015	0.009	0.053	0.0040	237	355	42.60	0.96	50MM	Pass	50.00	
A350870	G349281000	1.210 X 914.0 X Coil	8.060	8.130	0.032	0.170	0.007	0.008	0.010	0.047	0.0037	220	341	45.70	0.96	50MM	Pass	49.00	
<b>Total Weight in Metric Tonnes</b>			<b>161.935</b>	<b>163.315</b>															
<b>Total no of Batches</b>			<b>20</b>																



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We hereby certify that the material described herein have been tested and inspected with satisfactory results in accordance with the requirements of the above specification.

This is to certify that the above mentioned product produced & supplied by JSW Steel Ltd do not contain any radio active element higher than the natural level

The product or packing material does not contain any hazardous substances as per ROHS

Commercial Invoice : 7020004333  
Sales Contract Number : 4626  
Product: : PRIME COLD ROLLED STEEL  
COILS, SKINPASSED, MATTE  
FINISH, OILED  
with Trimmed Edge  
Process Route : BOF-LHF-CCM-HSM-PLTCM-CAL-  
APL

Legend: BOF = Basic Oxygen Furnace, LHF = Ladle Heating Furnace,  
CCM = Continuous Casting Machine, HSM = Hot Strip Mill, CPL =  
Continuous Pickling Line, CRM = Cold Rolling Mill, ECL = Electrolytic  
Cleaning Line, BAF = Batch Annealing Furnace, SPM = Skin Pass Mill, RCL =  
Recoiling Cum Inspection Line, APL = Automatic Packaging Line, PLTCM =  
Pickling Cum Tandem Mill,  
CGL = Continuous Galvanizing line CAL = Continuous Annealing Line, CTL =  
Cut to Length, HRS = HR Slitters, HTL = HR Cut to Length

T x W x T = Thickness x Width x Length, Chemistry = Ladle Sample Analysis,  
1MPa = 1N/mm<sup>2</sup>, YS = Yield Strength, UTS = Ultimate Tensile Strength, EL =  
%ge Elongation on Standard Gauge Length  
GSM = Grams per Square Meter  
Oil Type : Quaker or FUCHS

Certified By

*A Jindal*  
(ANVISH JINDAL)