



TEST CERTIFICATE FOR HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL

Test Certificate No.: 7105511288

Date : 20.04.2023
Product : Hot Rolled Coils
SO No. : 401826784
SO Date : 03.03.2023

Test Methods : Chemical Composition: IS 8811:1998,ASTM E415:2021
Tensile: IS 1608-1:2022
Bend : IS 1599:2019
Impact: IS 1757-1:2020

To,
Valmont Structures Private Ltd
PLOT NO A - 20 PLOT NO A - 20,PUNE

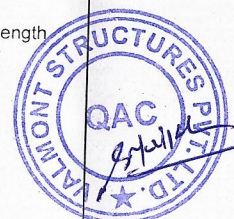
We certified that the material described below fully conforms to IS 2062:2011. Chemical composition and Mechanical properties of the product, as tested in accordance with the Scheme of Testing and Inspection contained in the BIS Certification Marks Licence No.CM/L-7189081, are as indicated below against each order No.
(PLEASE REFER TO IS 2062:2011 FOR DETAILS OF SPECIFICATION REQUIREMENTS)

Specification : IS 2062:2011 E350A					Chemical Composition																			
Specification Requirements					Min	C %	Mn %	S %	P %	Si %	Al %	N ppm	B ppm	Nb %	V %	Ti %	Cr %	Mo %	Ni %	Cu %	MAE %	C Eq%	Killing	
					Max	0.200	1.500	0.045	0.045	0.450		120											0	
Cast / Heat No.	Coil No. / Packet No.	Nominal Size (mm) T X W X L	Pcs	Qty. MT	Test Results																			
A014367	0223039331/1	2.50 x 726 x C		7.390	0.1550	1.155	0.0040	0.016	0.014	0.035	45.0		0.012							0.016	0.012	0.3486		
A014365	0223038424/1	2.50 x 726 x C		7.280	0.1600	1.200	0.0050	0.020	0.011	0.035	48.0		0.013	0.002	0.002					0.021	0.017	0.3614		
A014367	0223039331/3	2.50 x 726 x C		7.390	0.1550	1.155	0.0040	0.016	0.014	0.035	45.0		0.012	0.002	0.002					0.016	0.016	0.3486		
Total weight in Metric Tonnes				22.060	Grand total of coils / packets								3											
Specification : IS 2062:2011 E350A					Mechanical Properties																			
Specification Requirements					Tensile	YS	UTS	GL	EI	YS/UTS	Bend	Bend	Bend	CVN Impact	CVN Impact	CVN Impact	Hardness	Hardness	GS	IR	HER	ECV	SET	
					direction	MPa	MPa	mm	%	ratio	direction	dia., mm	result	direction	temp., °C	avg.energy .J	HV ₁₀	HRb	No.		%	mm		
					Min	T	350.0	490.0		22.0		T												
					Max																			
Cast /	Coil No. /	Nominal Size (mm)	Pcs	Qty.	Test Results																			

This is to certify that the above mentioned products produced and supplied by JSW Steel Ltd, Dolvi works do not contain any radioactive element higher than the natural level. The product or packing material does not contain any hazardous substances as per RoHS norms

Billing Doc No. :7105511288
Invoice No. :23DO2700018691
Mode of transport :Truck
Vehicle No. :MH46BM0902

Process Route : BOF-ARS-LHF-CCM-HSM
Fully killed steel
Legends : BOF = Basic Oxygen Furnace, ARS = Argon Rinsing station LHF =Ladle Heating Furnace
CCM = Continuous Casting Machine,RH = RH Degasser,HSM = Hot Strip Mill T x W x L = Thickness x Width x Length
Chemical analysis = Ladle sample analysis, 1 MPa = 1N/mm2
GL = Gauge Length,YS = Yield Strength,UTS = Ultimate Tensile Strength ,EI= Total elongation on standard GL,
CVN = Charpy V-notch, L = Longitudinal, T = Transverse. °C = Degree Centigrade, GS = ASTM Grain Size,
IR = Inclusion Rating, ECV = Erichsen Cupping Value, SET = Strainage Embrittlement Test,
MAE = Micro Alloying Elements, C Eq%= Carbon Equivalent = [C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15],
HER = Hole Expansion Ratio,RoHS = Restriction of Hazardous Substances
The material supplied conforms to the specified dimensions and tolerances
We certify that material comply the certification as per EN 10204:2004 type 3.1.



Pankaj Khasne
Deputy General Manager
Quality and System
For JSW Steel Ltd.



TEST CERTIFICATE FOR HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL

Test Certificate No.: 7105511288

Date : 20.04.2023
Product : Hot Rolled Coils
SO No. : 401826784
SO Date : 03.03.2023

Test Methods : Chemical Composition: IS 8811:1998,ASTM E415:2021
Tensile: IS 1608-1:2022
Bend : IS 1599:2019
Impact: IS 1757-1:2020

To,
Valmont Structures Private Ltd
PLOT NO A - 20 PLOT NO A - 20,PUNE

Specification Requirements					Mechanical Properties																
					Tensile	YS	UTS	GL	EI	YS/UTS	Bend	Bend	Bend	CVN Impact	CVN Impact	CVN Impact	Hardness	Hardness	GS	IR	HER
					direction	MPa	MPa	mm	%	ratio	direction	dia., mm	result	direction	temp., °C	avg.energy .J	HV ₁₀	HRb	No.		%
					Min	T	350.0	490.0		22.0	T										
					Max																
Cast / Heat No.	Coil No. / Packet No.	Nominal Size (mm) T X W X L	Pcs	Qty. MT	Test Results																
Heat No.	Packet No.	T X W X L		MT																	
A014367	0223039331/1	2.50 x 726 x C		7.390	T	478.00	561.00	5.65SR	28.00	0.852	T	2.0t	Ok								
A014365	0223038424/1	2.50 x 726 x C		7.280	T	486.00	577.00	5.65SR	27.00	0.842	T	2.0t	Ok								
A014367	0223039331/3	2.50 x 726 x C		7.390	T	478.00	561.00	5.65SR	28.00	0.852	T	2.0t	Ok								

This is to certify that the above mentioned products produced and supplied by JSW Steel Ltd, Dolvi works do not contain any radioactive element higher than the natural level. The product or packing material does not contain any hazardous substances as per RoHS norms

Billing Doc No. :7105511288
Invoice No. :23DO2700018691
Mode of transport :Truck
Vehicle No. :MH46BM0902

Process Route : BOF-ARS-LHF-CCM-HSM
Fully killed steel
Legends : BOF = Basic Oxygen Furnace, ARS = Argon Rinsing station LHF=Ladle Heating Furnace
CCM = Continuous Casting Machine,RH = RH Degasser,HSM = Hot Strip Mill T x W x L = Thickness x Width x Length
Chemical analysis = Ladle sample analysis, 1 MPa = 1N/mm2
GL = Gauge Length,YS = Yield Strength,UTS = Ultimate Tensile Strength ,EI= Total elongation on standard GL,
CVN = Charpy V-notch, L = Longitudinal, T = Transverse. °C = Degree Centigrade, GS = ASTM Grain Size,
IR = Inclusion Rating, ECV = Erichsen Cupping Value, SET = Strainage Embrittlement Test,
MAE = Micro Alloying Elements, C Eq%= Carbon Equivalent = [C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15],
HER = Hole Expansion Ratio,RoHS = Restriction of Hazardous Substances

The material supplied conforms to the specified dimensions and tolerances
We certify that material comply the certification as per EN 10204:2004 type 3.1.



Pankaj Khasne
Deputy General Manager
Quality and System
For JSW Steel Ltd.



TEST CERTIFICATE FOR HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL

Test Certificate No.: 7105521058

To,
 Valmont Structures Private Ltd
 PLOT NO A - 20 PLOT NO A - 20,PUNE

Date : 24.04.2023
 Product : Hot Rolled Coils
 SO No. : 401826784
 SO Date : 03.03.2023

Test Methods : Chemical Composition: IS 8811:1998,ASTM E415:2021
 Tensile: IS 1608-1:2022
 Bend : IS 1599:2019
 Impact: IS 1757-1:2020

We certified that the material described below fully conforms to IS 2062:2011: Chemical composition and Mechanical properties of the product, as tested in accordance with the Scheme of Testing and Inspection contained in the BIS Certification Marks Licence No.CM/L-7189081, are as indicated below against each order No.
 (PLEASE REFER TO IS 2062:2011 FOR DETAILS OF SPECIFICATION REQUIREMENTS)

Specification : IS 2062:2011 E350A

Chemical Composition

Specification Requirements				Min	C %	Mn %	S %	P %	Si %	Al %	N ppm	B ppm	Nb %	V %	Ti %	Cr %	Mo %	Ni %	Cu %	MAE %	C Eq%	Killing
				Max	0.200	1.500	0.045	0.045	0.450	0.020										0		
Cast / Heat No.	Coil No. / Packet No.	Nominal Size (mm) T X W X L	Pcs	Qty. MT	Test Results																	
A014365	0223038426/1	2.50 x 726 x C		7.390	0.1600	1.200	0.0050	0.020	0.011	0.035	48.0		0.013	0.002	0.002				0.021	0.017	0.3614	
A014365	0223038426/3	2.50 x 726 x C		7.380	0.1600	1.200	0.0050	0.020	0.011	0.035	48.0		0.013	0.002	0.002				0.021	0.017	0.3614	
A014363	0223039650/1	2.50 x 726 x C		7.400	0.1520	1.185	0.0040	0.019	0.016	0.036	52.0		0.012	0.002	0.002				0.021	0.017	0.3614	
Total weight in Metric Tonnes				22.170	Grand total of coils / packets								3									

Specification : IS 2062:2011 E350A

Mechanical Properties

Specification Requirements				Min	Tensile direction	YS MPa	UTS MPa	GL mm	EI %	YS/UTS ratio	Bend direction	Bend dia., mm	Bend result	CVN Impact direction	CVN Impact temp., °C	CVN Impact avg.energy J	Hardness HV10	Hardness HRb	GS No.	IR	HER %	ECV mm	SET
				Max	T	350.0	490.0		22.0		T												

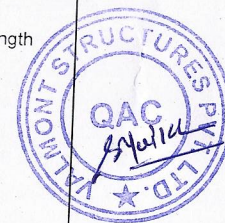
Test Results

This is to certify that the above mentioned products produced and supplied by JSW Steel Ltd, Dolvi works do not contain any radioactive element higher than the natural level. The product or packing material does not contain any hazardous substances as per RoHS norms

Billing Doc No. :7105521058
 Invoice No. :23DO2700023228
 Mode of transport :Truck
 Vehicle No. :MH46BF3109

Process Route : BOF-ARS-LHF-CCM-HSM
 Fully killed steel

Legends : BOF = Basic Oxygen Furnace, ARS = Argon Rinsing station LHF =Ladle Heating Furnace
 CCM = Continuous Casting Machine,RH = RH Degasser,HSM = Hot Strip Mill T x W x L = Thickness x Width x Length
 Chemical analysis = Ladle sample analysis, 1 MPa = 1N/mm2
 GL = Gauge Length,YS = Yield Strength,UTS = Ultimate Tensile Strength ,EI= Total elongation on standard GL,
 CVN = Charpy V-notch, L = Longitudinal, T = Transverse, °C = Degree Centigrade, GS = ASTM Grain Size,
 IR = Inclusion Rating, ECV = Erichsen Cupping Value, SET = Strainage Embrittlement Test,
 MAE = Micro Alloying Elements, C Eq% = Carbon Equivalent = [C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15],
 HER = Hole Expansion Ratio,RoHS = Restriction of Hazardous Substances
 The material supplied conforms to the specified dimensions and tolerances
 We certify that material comply the certification as per EN 10204:2004 type 3.1.



Pankaj Khasne
 Deputy General Manager
 Quality and System
 For JSW Steel Ltd.



TEST CERTIFICATE FOR HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL

Test Certificate No.: 7105521058

Date : 24.04.2023
 Product : Hot Rolled Coils
 SO No. : 401826784
 SO Date : 03.03.2023

Test Methods : Chemical Composition: IS 8811:1998,ASTM E415:2021
 Tensile: IS 1608-1:2022
 Bend : IS 1599:2019
 Impact: IS 1757-1:2020

To,
 Valmont Structures Private Ltd
 PLOT NO A - 20 PLOT NO A - 20,PUNE

Specification Requirements					Mechanical Properties																
					Tensile	YS	UTS	GL	EI	YS/UTS	Bend	Bend	Bend	CVN Impact	CVN Impact	CVN Impact	Hardness	Hardness	GS	IR	HER
					direction	MPa	MPa	mm	%	ratio	direction	dia., mm	result	direction	temp., °C	avg.energy J	HV ₁₀	HRb	No.	%	mm
					Min	T	350.0	490.0			T										
					Max																
Cast / Heat No.	Coil No. / Packet No.	Nominal Size (mm) T X W X L	Pcs	Qty. MT	Test Results																
Heat No.	Packet No.	T X W X L		MT																	
A014365	0223038426/1	2.50 x 726 x C		7.390	T	486.00	577.00	5.65SR	27.00	0.842	T	2.0t	Ok								
A014365	0223038426/3	2.50 x 726 x C		7.380	T	486.00	577.00	5.65SR	27.00	0.842	T	2.0t	Ok								
A014363	0223039650/1	2.50 x 726 x C		7.400	T	499.00	583.00	5.65SR	26.00	0.856	T	2.0t	Ok								

This is to certify that the above mentioned products produced and supplied by JSW Steel Ltd, Dolvi works do not contain any radioactive element higher than the natural level. The product or packing material does not contain any hazardous substances as per RoHS norms

Billing Doc No. :7105521058
 Invoice No. :23DO2700023228
 Mode of transport :Truck
 Vehicle No. :MH46BF3109

Process Route : BOF-ARS-LHF-CCM-HSM
 Fully killed steel
 Legends : BOF = Basic Oxygen Furnace, ARS = Argon Rinsing station LHF =Ladle Heating Furnace
 CCM = Continuous Casting Machine,RH = RH Degasser,HSM = Hot Strip Mill T x W x L = Thickness x Width x Length
 Chemical analysis = Ladle sample analysis, 1 MPa = 1N/mm²
 GL = Gauge Length,YS = Yield Strength,UTS = Ultimate Tensile Strength ,EI= Total elongation on standard GL,
 CVN = Charpy V-notch, L = Longitudinal, T = Transverse, °C = Degree Centigrade, GS = ASTM Grain Size,
 IR = Inclusion Rating, ECV = Erichsen Cupping Value, SET = Strainage Embrittlement Test,
 MAE = Micro Alloying Elements, C Eq%= Carbon Equivalent = [C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15],
 HER = Hole Expansion Ratio,RoHS = Restriction of Hazardous Substances
 The material supplied conforms to the specified dimensions and tolerances
 We certify that material comply the certification as per EN 10204:2004 type 3.1.



Pankaj Khasne
 Deputy General Manager
 Quality and System
 For JSW Steel Ltd.



TEST CERTIFICATE FOR HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL

Test Certificate No.: 7105497806

Date : 16.04.2023
Product : Hot Rolled Coils
SO No. : 401826784
SO Date : 03.03.2023

Test Methods : Chemical Composition: IS 8811:1998, ASTM E415:2021
Tensile: IS 1608-1:2022
Bend : IS 1599:2019
Impact: IS 1757-1:2020

To,
Valmont Structures Private Ltd
PLOT NO A - 20 PLOT NO A - 20, PUNE

We certified that the material described below fully conforms to IS 2062:2011. Chemical composition and Mechanical properties of the product, as tested in accordance with the Scheme of Testing and Inspection contained in the BIS Certification Marks Licence No. CM/L-7189081, are as indicated below against each order No.
(PLEASE REFER TO IS 2062:2011 FOR DETAILS OF SPECIFICATION REQUIREMENTS)

Specification : IS 2062:2011 E350A					Chemical Composition																	
					C %	Mn %	S %	P %	Si %	Al %	N ppm	B ppm	Nb %	V %	Ti %	Cr %	Mo %	Ni %	Cu %	MAE %	C Eq%	Killing
Specification Requirements				Min					0.020									0				
				Max	0.200	1.500	0.045	0.045	0.450		120									0		
Cast / Heat No.	Coil No. / Packet No.	Nominal Size (mm) T X W X L	Pcs	Qty. MT	Test Results																	
A014363	0223038352/1	2.50 x 726 x C		7.430	0.1520	1.185	0.0040	0.019	0.016	0.036	52.0		0.012	0.002	0.002			0.018	0.016	0.3507		
A014363	0223038352/3	2.50 x 726 x C		7.430	0.1520	1.185	0.0040	0.019	0.016	0.036	52.0		0.012	0.002	0.002			0.018	0.016	0.3507		
A014363	0223038351/3	2.50 x 726 x C		7.310	0.1520	1.185	0.0040	0.019	0.016	0.036	52.0		0.012	0.002	0.002			0.018	0.016	0.3507		
A014363	0223038351/1	2.50 x 726 x C		7.310	0.1520	1.185	0.0040	0.019	0.016	0.036	52.0		0.012	0.002	0.002			0.018	0.016	0.3507		
Total weight in Metric Tonnes				29.480	Grand total of coils / packets							4										

This is to certify that the above mentioned products produced and supplied by JSW Steel Ltd, Dolvi works do not contain any radioactive element higher than the natural level. The product or packing material does not contain any hazardous substances as per RoHS norms

Billing Doc No. : 7105497806
Invoice No. : 23DO2700013955
Mode of transport : Truck
Vehicle No. : MH46BF7419

Process Route : BOF-ARS-LHF-CCM-HSM
Fully killed steel
Legends : BOF = Basic Oxygen Furnace, ARS = Argon Rinsing station LHF = Ladle Heating Furnace
CCM = Continuous Casting Machine, RH = RH Degasser, HSM = Hot Strip Mill T x W x L = Thickness x Width x Length
Chemical analysis = Ladle sample analysis, 1 MPa = 1N/mm²
GL = Gauge Length, YS = Yield Strength, UTS = Ultimate Tensile Strength, El = Total elongation on standard GL,
CVN = Charpy V-notch, L = Longitudinal, T = Transverse. °C = Degree Centigrade, GS = ASTM Grain Size,
IR = Inclusion Rating, ECV = Erichsen Cupping Value, SET = Strainage Embrittlement Test,
MAE = Micro Alloying Elements, C Eq% = Carbon Equivalent = [C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15],
HER = Hole Expansion Ratio, RoHS = Restriction of Hazardous Substances
The material supplied conforms to the specified dimensions and tolerances
We certify that material comply the certification as per EN 10204:2004 type 3.1.



Pankaj Khasne
Deputy General Manager
Quality and System
For JSW Steel Ltd.



TEST CERTIFICATE FOR HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL

Test Certificate No.: 7105497806

Date : 16.04.2023
Product : Hot Rolled Coils
SO No. : 401826784
SO Date : 03.03.2023

Test Methods : Chemical Composition: IS 8811:1998,ASTM E415:2021
Tensile: IS 1608-1:2022
Bend : IS 1599:2019
Impact: IS 1757-1:2020

To,
Valmont Structures Private Ltd
PLOT NO A - 20 PLOT NO A - 20,PUNE

Specification : IS 2062:2011 E350A					Mechanical Properties																		
					Tensile	YS	UTS	GL	EI	YS/UTS	Bend	Bend	Bend	CVN Impact	CVN Impact	CVN Impact	Hardness	Hardness	GS	IR	HER	ECV	SET
					direction	MPa	MPa	mm	%	ratio	direction	dia., mm	result	direction	temp., °C	avg.energy .J	HV ₁₀	HRb	No.		%	mm	
Specification Requirements				Min	T	350.0	490.0		22.0		T												
				Max																			
Cast / Heat No.	Coil No. / Packet No.	Nominal Size (mm) T X W X L	Pcs	Qty. MT	Test Results																		
A014363	0223038352/1	2.50 x 726 x C		7.430	T	499.00	583.00	5.65SR	26.00	0.856	T	2.0t	Ok										
A014363	0223038352/3	2.50 x 726 x C		7.430	T	499.00	583.00	5.65SR	26.00	0.856	T	2.0t	Ok										
A014363	0223038351/3	2.50 x 726 x C		7.310	T	499.00	583.00	5.65SR	26.00	0.856	T	2.0t	Ok										
A014363	0223038351/1	2.50 x 726 x C		7.310	T	499.00	583.00	5.65SR	26.00	0.856	T	2.0t	Ok										

This is to certify that the above mentioned products produced and supplied by JSW Steel Ltd, Dolvi works do not contain any radioactive element higher than the natural level. The product or packing material does not contain any hazardous substances as per RoHS norms

Billing Doc No. :7105497806 Invoice No. :23DO2700013955 Mode of transport :Truck Vehicle No. :MH46BF7419		Process Route : BOF-ARS-LHF-CCM-HSM Fully killed steel Legends : BOF = Basic Oxygen Furnace, ARS = Argon Rinsing station LHF =Ladle Heating Furance CCM = Continuous Casting Machine,RH = RH Degasser,HSM = Hot Strip Mill T x W x L = Thickness x Width x Length Chemical analysis = Ladle sample analysis, 1 MPa = 1N/mm2 GL = Gauge Length,YS = Yield Strength,UTS = Ultimate Tensile Strength ,EI= Total elongation on standard GL, CVN = Charpy V-notch, L = Longitudinal, T = Transverse. °C = Degree Centigrade, GS = ASTM Grain Size, IR = Inclusion Rating, ECV = Erichsen Cupping Value, SET = Strainage Embrittlement Test, MAE = Micro Alloying Elements, C Eq%= Carbon Equivalent = [C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15], HER = Hole Expansion Ratio,RoHS = Restriction of Hazardous Substances The material supplied conforms to the specified dimensions and tolerances We certify that material comply the certification as per EN 10204:2004 type 3.1.		 Pankaj Khasne Deputy General Manager Quality and System For JSW Steel Ltd.
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