

Vijayanagar Works, PO- Vidyanagar, Village-Toranagallu, Dist: Bellary, Karnataka-583275, INDIA Regd. Office: JSW Centre , Bandra Kurla Complex , Bandra (East) , Mumbai - 400 051

#### HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL AS PER IS: 2062 2011



Test Certificate: HR/23-24/0003085085

To M/S. Zetwerk Manufacturing Business

ZETWERK MANUFACTURING BUSINESSES PV

BANGALORE - 560102 Region: 10

Date

: 31.08.2023

SO No./ Item: 402018435 / 11

Product

: HR STEEL COILS

PO No.

: ZET-KA-JSW1-127

It is 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 & Inspection contained in the BIS certification marks Licence No. CM/L - 6161963 are as indicated below against each order No. Etc.

(PLEASE REFER TO IS 2062 2011 FOR DETAILS OF SPECIFICATION REQUIREMENTS)

TEST RESULTS

pecification	n: IS2062_20	011 E2	50BF	2			QTY (MT)	C %	Mn %	S %	Р%	Si %	Al %	N %	Nb+V+Ti	CE Long T	TEN DIR	YS (Mpa)		GL (mm)	EL%	Bend Dir		Bend Result	TEMP	SAMP D	JOULE	
Heat No.	Coil No.	N	lomir	nal Siz	ze (M	M)	Min											250	410	5.65	23.00		2Т					
other Coil		Т	X	w x	L	UD	Max	0.2000	1.50	0.040	0.040	0.400	0.070	0.0100	0.200	0.410												
F943057	23116564	5.0	000 X	1250.0	X Coil	Р	22.590	0.1560	0.52	0.005	0.013	0.126	0.036	0.0045	0.025	0.248	Tr	371	478	5.65	32.64	Tr	2t	Pass	25.0	Ln	135	
Fotal Weigh	nt in Metric	l Tonnes	3		Ħ		22,590	Grand	Total	of Coils	s/Pkt/B	undles	/Slab	1	1		-			-				-			_	

This is to certify that the above mentioned product produced & supplied by us, do not contain any radio active element higher than the natural level and it confirms to Standard Rolling, Dimensional & Weight tolerences. The product or packing material does not contain any hazardous substances as per RoHS norms.

Delivery ID

Invoice No.

: 714189052

: 7105957816

GST Invoice No : 23VJ2900262312

Mode of Transport: Rail

Vehicle No.

LC No.

: 854010233568-N

Process Route:

BOF-ARS-LHF-CASTER

Legends:

BOF = Basic Oxygen Furnace, LHF = Laddle Heating Furnace, CCM = Continuous Casting Machine, RH = RH Degasser, HSM = Hot Strip Mill, HRS = HR Slitter, CTL = Cut To Length, T x W x L = Thickness X Width X Length, Chemistry = Laddle sample analysis, 1Mpa = 1N/mm2, YS = Yield Strength, UTS = Ultimate Tensile Strength, EI % - Percent elongation on standard gauge length, UD - Usage

Decision, P - Prime, C - Commercial, A- Arising, Pcs - No of Pieces, CE =

[C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15], Ln = Longitudinal, Tr = Transverse, Fully Killed Steel

Remarks:



Specification: IS2062\_2011 E250BR

Coil No.

Heat No.

Test Certificate: HR/23-24/0003086493

To M/S. Zetwerk Manufacturing Business

BANGALORE - 560102 Region: 10

ZETWERK MANUFACTURING BUSINESSES PV

QTY

(MT)

C %

Mn % S %

P %

# JSW STEEL LIMITED

Vijayanagar Works, PO- Vidyanagar, Village-Toranagallu, Dist: Bellary, Karnataka-583275.INDIA Regd. Office: JSW Centre, Bandra Kurla Complex, Bandra (East), Mumbai - 400 051

## HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL AS PER IS: 2062 2011



CM/L - 6161963

Date

: 31.08.2023

SO No./ Item: 402018435 / 11 Product

: HR STEEL COILS

PO No.

: ZET-KA-JSW1-127

It is 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 & Inspection contained in the BIS certification marks Licence No. CM/L - 6161963 are as indicated below against each order No. Etc.

TEST DESI II TO

(PLEASE REFER TO IS 2062 2011 FOR DETAILS OF SPECIFICATION REQUIREMENTS)

Al %	N %	Nb+V+Ti CE Long TEN DIR	YS	UTS	GL (mm)	EL%	Bend Dir	Bend	Bend	IMP	IMP	IMP	
			(Mpa)	(MPa)				Radius	Result	TEMP	SAMP D	JOULE	
			250	410	5.65	23.00		2T					

Nominal Size (MM) Min **Mother Coi** T X W X L UD Max 0.2000 1.50 0.040 0.040 0.400 0.070 0.0100 0.200 0.410 E943097 23116729 5.000 X 1250.0 X Coil P 22.890 0.1510 0.006 0.013 0.134 0.034 0.0045 0.021 0.242 124 **Total Weight in Metric Tonnes** 22.890 Grand Total of Coils/Pkt/Bundles/Slab

This is to certify that the above mentioned product produced & supplied by us, do not contain any radio active element higher than the natural level and it confirms to Standard Rolling, Dimensional & Weight tolerences. The product or packing material does not contain any hazardous substances as per RoHS norms.

Delivery ID

Invoice No.

: 714198880

: 7105957878

GST Invoice No : 23VJ2900262327

Mode of Transport: Rail

Vehicle No.

LC No.

: 854010233568-N

Process Route:

**BOF-ARS-LHF-CASTER** 

Legends:

BOF = Basic Oxygen Furnace, LHF = Laddle Heating Furnace, CCM = Continuous Casting Machine, RH = RH Degasser, HSM = Hot Strip Mill, HRS = HR Slitter, CTL = Cut To Length, T x W x L

= Thickness X Width X Length, Chemistry = Laddle sample analysis, 1Mpa = 1N/mm2, YS = Yield Strength, UTS = Ultimate Tensile Strength, EI % - Percent elongation on standard gauge length, UD - Usage

Decision, P - Prime, C - Commercial, A- Arising, Pcs - No of Pieces, CE =

[C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15], Ln = Longitudinal, Tr = Transverse, Fully Killed Steel

Remarks:



Vijayanagar Works, PO- Vidyanagar, Village-Toranagallu,Dist: Bellary,Karnataka-583275,INDIA Regd. Office: JSW Centre , Bandra Kurla Complex , Bandra (East) , Mumbai - 400 051

### HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL AS PER IS: 2062 2011



CM/L - 616196

Test Certificate: HR/23-24/0003086494

To M/S. Zetwerk Manufacturing Business

ZETWERK MANUFACTURING BUSINESSES PV

BANGALORE - 560102 Region: 10

Date : 31.08.2023

SO No./ Item: 402018435 / 11

Product

: HR STEEL COILS

PO No.

: ZET-KA-JSW1-127

It is 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 & Inspection contained in the BIS certification marks Licence No. CM/L - 6161963 are as indicated below against each order No. Etc.

(PLEASE REFER TO IS 2062\_2011 FOR DETAILS OF SPECIFICATION REQUIREMENTS)

TEST RESULTS

ecincation	: IS2062_20	T LZ	3001					QTY (MT)	C %	Mn %	S %	Р%	Si %	Al %	N %	ND+V+II	CE Long T	EN DIK	YS (Mpa)		GL (mm)	EL%	Bend Dir		Bend Result	TEMP	IMP SAMP D	JOULE	
Heat No.	Coil No.		lomi	nal S	Size (N	MM)		Min											250	410	5.65	23.00		2Т					
Nother Coil		T	Х	w	X L	. t	DD	Max	0.2000	1.50	0.040	0.040	0.400	0.070	0.0100	0.200	0.410												
D943104	23116728	5.	000 X	1250.	.0 X Coi	il P		22.970	0.1700	0.55	0.004	0.016	0.117	0.035	0.0042	0.026	0.267	Tr	379	487	5.65	30.80	Tr	2t	Pass	25.0	Ln	125	
Γotal Weigh	t in Metric 1	onne:	<u> </u>					22.970	Grand	Total	of Coils	s/Pkt/B	undles	/Slab		1										_			

This is to certify that the above mentioned product produced & supplied by us, do not contain any radio active element higher than the natural level and it confirms to Standard Rolling, Dimensional & Weight tolerences. The product or packing material does not contain any hazardous substances as per RoHS norms.

Delivery ID
Invoice No.

Vehicle No.

: 714198881 Process Route :

Legends:

: BOF-ARS-LHF-CASTER

BOF = Basic Oxygen Furnace, LHF = Laddle Heating Furnace, CCM = Continuous Casting Machine,

RH = RH Degasser, HSM = Hot Strip Mill, HRS = HR Slitter, CTL = Cut To Length, T x W x L

= Thickness X Width X Length, Chemistry = Laddle sample analysis, 1Mpa = 1N/mm2, YS = Yield Strength, UTS = Ultimate Tensile Strength, El % - Percent elongation on standard gauge length, UD - Usage

Decision, P - Prime, C - Commercial, A- Arising, Pcs - No of Pieces, CE =

[C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15], Ln = Longitudinal, Tr = Transverse, Fully Killed Steel

LC No. : 854010233568-N

GST Invoice No : 20VJ2900262326

Mode of Transport: Rail

: 7105957810

Remarks:

Cyadywadham R. Authorised Signatory



Vijayanagar Works, PO- Vidyanagar, Village-Toranagallu, Dist: Bellary, Karnataka-583275, INDIA Regd. Office: JSW Centre, Bandra Kurla Complex, Bandra (East), Mumbai - 400 051

## HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL AS PER IS: 2062 2011



CM/L - 6161963

Test Certificate: HR/23-24/0003086489

To M/S. Zetwerk Manufacturing Business

ZETWERK MANUFACTURING BUSINESSES PV

BANGALORE - 560102 Region: 10

Date

: 31.08.2023

SO No./ Item: 402018435 / 11

Product

: HR STEEL COILS

PO No.

: ZET-KA-JSW1-127

It is 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 & Inspection contained in the BIS certification marks Licence No. CM/L - 6161963 are as indicated below against each order No. Etc.

(PLEASE REFER TO IS 2062 2011 FOR DETAILS OF SPECIFICATION REQUIREMENTS)

TEST RESULTS

Specification	n: IS2062_20	11 E25	0BR				QTY (MT)	С%	Mn %	S %	P %	Si %	Ai %	N %	Nb+V+Ti	CE Long T	TEN DIR	YS (Mpa)		GL (mm)	EL%	Bend Dir	Bend Radius	Bend Result	IMP TEMP	IMP SAMP D	JOULE
Heat No.	Coil No.	No	omina	al Size	e (MI	VI)	Min											250	410	5.65	23.00		2T				
Nother Coil		Т 2	x v	/ X	L	UD	Max	0.2000	1.50	0.040	0.040	0.400	0.070	0.0100	0.200	0.410											
F943057	23116721	5.00	00 X 1:	250.0 X	Coil	Р	22.110	0.1560	0.52	0.005	0.013	0.126	0.036	0.0045	0.025	0.248	Tr	366	475	5.65	33.05	Tr	2t	Pass	25.0	Ln	128
otal Weigh	t in Metric	Tonnes					22.110	Grand	Total	of Coils	s/Pkt/B	undles	/Slab		1												

This is to certify that the above mentioned product produced & supplied by us, do not contain any radio active element higher than the natural level and it confirms to Standard Rolling, Dimensional & Weight tolerences. The product or packing material does not contain any hazardous substances as per RoHS norms.

Delivery ID

: 714198871

Process Route:

BOF-ARS-LHF-CASTER

Invoice No.

Legends: : 7105957876

BOF = Basic Oxygen Furnace, LHF = Laddle Heating Furnace, CCM = Continuous Casting Machine,

RH = RH Degasser, HSM = Hot Strip Mill, HRS = HR Slitter, CTL = Cut To Length, T x W x L

GST Invoice No : 23VJ2900262319

= Thickness X Width X Length, Chemistry = Laddle sample analysis, 1Mpa = 1N/mm2, YS = Yield Strength, UTS = Ultimate Tensile Strength, El % - Percent elongation on standard gauge length, UD - Usage

Decision, P - Prime, C - Commercial, A- Arising, Pcs - No of Pieces, CE =

[C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15], Ln = Longitudinal, Tr = Transverse, Fully Killed Steel

Vehicle No.

Mode of Transport: Rail

LC No.

: 854010233568-N

Remarks:



Vijayanagar Works, PO- Vidyanagar, Village-Toranagallu, Dist: Bellary, Karnataka-583275, INDIA Regd. Office: JSW Centre, Bandra Kurla Complex, Bandra (East), Mumbai - 400 051

## HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL AS PER IS: 2062 2011



CM/L - 6161963

Date

: 31.08.2023

SO No./ Item : 402018435 / 11 Product

: HR STEEL COILS

PO No.

: ZET-KA-JSW1-127

ZETWERK MANUFACTURING BUSINESSES PV BANGALORE - 560102 Region: 10

Test Certificate: HR/23-24/0003085088

To M/S. Zetwerk Manufacturing Business

It is 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 & Inspection contained in the BIS certification marks Licence No. CM/L - 6161963 are as indicated below against each order No. Etc.

(PLEASE REFER TO IS 2062\_2011 FOR DETAILS OF SPECIFICATION REQUIREMENTS)

TEST DECLIETS

Decinication	n: IS2062_20	)11 E2	308	K			QT (M	1	Mn %	S %	Р%	Si %	Al %	N %	Nb+V+Ti	CE Long T	EN DIR	YS (Mpa)		GL (mm)	EL%	Bend Dir		Bend Result	IMP TEMP	IMP SAMP D	IMP JOULE	
Heat No.	Coil No.	1	lom	inal S	Size (N	(M)	Mi	1										250	410	5.65	23.00		2T					
Mother Coil		Т	х	W	X L	UD	Ma	x 0.2000	1.50	0.040	0.040	0.400	0.070	0.0100	0.200	0.410												
G943062	23116565	5.	000 >	K 1250	.0 X Coi	I P	22.8	0.1660	0.55	0.003	0.018	0.147	0.030	0.0043	0.023	0.263	Tr	375	490	5.65	31.41	Tr	2t	Pass	25.0	Ln	135	
Total Weight	t in Metric 1	onne	s				22.8	30 Grand	l Total	of Coil	s/Pkt/B	undles	/Slab		1									-				

This is to certify that the above mentioned product produced & supplied by us, do not contain any radio active element higher than the natural level and it confirms to Standard Rolling, Dimensional & Weight tolerences. The product or packing material does not contain any hazardous substances as per RoHS norms.

Delivery ID Invoice No. : 714189055

: 7105957273

GST Invoice No : 23VJ2900262316

Mode of Transport: Rail

Vehicle No.

LC No.

: 854010233568-N

Process Route:

Remarks:

BOF-ARS-LHF-CASTER

Legends:

BOF = Basic Oxygen Furnace, LHF = Laddle Heating Furnace, CCM = Continuous Casting Machine, RH = RH Degasser, HSM = Hot Strip Mill, HRS = HR Slitter, CTL = Cut To Length, T x W x L = Thickness X Width X Length, Chemistry = Laddle sample analysis, 1Mpa = 1N/mm2, YS = Yield Strength, UTS = Ultimate Tensile Strength, El % - Percent elongation on standard gauge length, UD - Usage

Decision, P - Prime, C - Commercial, A- Arising, Pcs - No of Pieces, CE =

[C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15], Ln = Longitudinal, Tr = Transverse, Fully Killed Steel



Test Certificate: HR/23-24/0003086119

To M/S. Zetwerk Manufacturing Business

BANGALORE - 560102 Region; 10

ZETWERK MANUFACTURING BUSINESSES PV

# JSW STEEL LIMITED

Vijayanagar Works, PO- Vidyanagar, Village-Toranagallu, Dist: Bellary, Karnataka-583275, INDIA Regd. Office: JSW Centre , Bandra Kurla Complex , Bandra (East) , Mumbaj - 400 051

## HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL AS PER IS: 2062 2011



Date

: 31.08.2023

SO No./ Item: 402018435 / 11 Product

: HR STEEL COILS

PO No.

: ZET-KA-JSW1-127

It is 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 & Inspection contained in the BIS certification marks Licence No. CM/L - 6161963 are as indicated below against each order No. Etc.

(PLEASE REFER TO IS 2062 2011 FOR DETAILS OF SPECIFICATION REQUIREMENTS)

TEST DESILITE

pecification	1: 152062_20	)     E2	DUBI				QTY (MT)	С%	Mn %	S %	Р%	Si %	Al %	N %	Nb+V+Ti	ICE Long TE		YS (Mpa)		GL (mm)	EL%	Bend Dir	Bend Radius	Bend Result	IMP TEMP	IMP SAMP D	IMP JOULE	
Heat No.	Coil No.	1	lomi	nal Si	ze (M	M)	Min											250	410	5.65	23.00		2T					
Mother Coil		Т	Х	w >	( L	UD	Max	0.2000	1.50	0.040	0.040	0.400	0.070	0.0100	0.200	0.410												
E943097	23117031	5.	000 X	1250.0	X Coil	Р	22.945	0.1510	0.52	0.006	0.013	0.134	0.034	0.0045	0.021	0.242	Tr	364	471	5.65	33.00	Tr	2t	Pass	25.0	Ln	135	
Total Weigh	t in Metric	Tonne	S				22.945	Grand	Total	of Coils	s/Pkt/B	undles	/Slab		1 1		T		-			-			-			

This is to certify that the above mentioned product produced & supplied by us, do not contain any radio active element higher than the natural level and it confirms to Standard Rolling, Dimensional & Weight tolerences. The product or packing material does not contain any hazardous substances as per RoHS norms.

Delivery ID

Process Route: : 714197023

Remarks:

BOF-ARS-LHF-CASTER

Invoice No.

: 7105957875

Legends:

BOF = Basic Oxygen Furnace, LHF = Laddle Heating Furnace, CCM = Continuous Casting Machine, RH = RH Degasser, HSM = Hot Strip Mill, HRS = HR Slitter, CTL = Cut To Length, T x W x L

= Thickness X Width X Length, Chemistry = Laddle sample analysis, 1Mpa = 1N/mm2, YS = Yield Strength, UTS = Ultimate Tensile Strength, EI % - Percent elongation on standard gauge length, UD - Usage

Decision, P - Prime, C - Commercial, A- Arising, Pcs - No of Pieces, CE =

[C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15], Ln = Longitudinal, Tr = Transverse, Fully Killed Steel

Mode of Transport: Rail

GST Invoice No : 23VJ2900262318

Vehicle No.

LC No.

: 854010233568-N



Vijayanagar Works, PO- Vidyanagar, Village-Toranagallu,Dist: Bellary,Karnataka-583275,INDIA Regd. Office: JSW Centre, Bandra Kurla Complex, Bandra (East), Mumbai - 400 051

#### HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL AS PER IS: 2062 2011



CM/L - 61619

Date

: 31.08.2023

SO No./ Item: 402018435 / 11

: HR STEEL COILS

Product PO No.

: ZET-KA-JSW1-127

ZETWERK MANUFACTURING BUSINESSES PV BANGALORE - 560102 Region: 10

Test Certificate: HR/23-24/0003086405

To M/S. Zetwerk Manufacturing Business

It is 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 & Inspection contained in the BIS certification marks Licence No. CM/L - 6161963 are as indicated below against each order No. Etc.

(PLEASE REFER TO IS 2062\_2011 FOR DETAILS OF SPECIFICATION REQUIREMENTS)

Specification	n: IS2062_20	)11 E250E	BR				QTY (MT)	С%	Mn %	S %	Р%	Si %	Al %	N %	Nb+V+T	i CE Long T	EN DIR		UTS (MPa)		EL%	Bend Dir		Bend Result	IMP TEMP	IMP SAMP D	IMP JOULE	
Heat No.	Coil No.	Nom	inal S	ize	(MN	n)	Min											250	410	5.65	23.00		2T					
Wother Coil		тх	W	х	L	UD	Max	0.2000	1.50	0.040	0.040	0.400	0.070	0.0100	0.200	0.410												
E943097	23116730	5.000	X 1250	0 X 0	Coil	P	22.750	0.1510	0.52	0.006	0.013	0.134	0.034	0.0045	0.021	0.242	Tr	387	503	5.65	36.00	Tr	2t	Pass	25.0	Ln	124	
Total Weigh	it in Metric 1	Tonnes					22,750	Grand	Total	of Coil	s/Pkt/B	undles	/Slab		1	. ]				,	•							

This is to certify that the above mentioned product produced & supplied by us, do not contain any radio active element higher than the natural level and it confirms to Standard Rolling, Dimensional & Weight tolerences. The product or packing material does not contain any hazardous substances as per RoHS norms.

Delivery ID

GST Invoice No

: 714198456 Process Route :

**BOF-ARS-LHF-CASTER** 

Invoice No.

: 7105957821

: 23VJ2900262331

Legends:

BOF = Basic Oxygen Furnace, LHF = Laddle Heating Furnace, CCM = Continuous Casting Machine,

RH = RH Degasser, HSM = Hot Strip Mill, HRS = HR Slitter, CTL = Cut To Length, T x W x L = Thickness X Width X Length, Chemistry = Laddle sample analysis, 1Mpa = 1N/mm2, YS = Yield

Strength, UTS = Ultimate Tensile Strength, El % - Percent elongation on standard gauge length, UD - Usage

Decision, P - Prime, C - Commercial, A- Arising, Pcs - No of Pieces, CE =

[C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15], Ln = Longitudinal, Tr = Transverse, Fully Killed Steel

Mode of Transport : Rail
Vehicle No. :

LC No. :

: 854010233568-N

Remarks:



Vijayanagar Works, PO- Vidyanagar, Village-Toranagallu,Dist: Bellary,Karnataka-583275,INDIA Regd. Office: JSW Centre , Bandra Kurla Complex , Bandra (East) , Mumbai - 400 051

## HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL AS PER IS: 2062 2011



CM/L - 6161963

Test Certificate: HR/23-24/0003085086

To M/S. Zetwerk Manufacturing Business

ZETWERK MANUFACTURING BUSINESSES PV

BANGALORE - 560102 Region: 10

Date : 31.08.2023

SO No./ Item: 402018435 / 11

Product : HR STEEL COILS

PO No. : ZET-KA-JSW1-127

It is 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 & Inspection contained in the BIS certification marks Licence No. CM/L - 6161963 are as indicated below against each order No. Etc.

(PLEASE REFER TO IS 2062\_2011 FOR DETAILS OF SPECIFICATION REQUIREMENTS)

**TEST RESULTS** 

pecification	: IS2062_20	11 E25	0BR			Ш	QTY (MT)	С%	Mn %	S %	P %	Si %	Al %	N %	Nb+V+Ti	CE Long T	EN DIR	(Mpa)		GL (mm)	EL%	Bend Dir	Bend Radius	Bend Result	TEMP	SAMP D	JOULE	
Heat No.	Coil No.	No	omina	l Siz	e (MI	M)	Min											250	410	5.65	23.00		2T					
other Coil		т	x w	X	L	UD	Max	0.2000	1.50	0.040	0.040	0.400	0.070	0.0100	0.200	0.410												
F943057	23116722	5.0	00 X 12	250.0	X Coll	Р	22.805	0.1560	0.52	0.005	0.013	0.126	0.036	0.0045	0.025	0.248	Tr	366	475	5.65	33.05	Tr	2t	Pass	25.0	Ln	128	
otal Weigh	t in Metric 1	onnes					22.805	Grand	Total	of Coils	s/Pkt/B	undles	/Slab		1						_				Т			

This is to certify that the above mentioned product produced & supplied by us, do not contain any radio active element higher than the natural level and it confirms to Standard Rolling, Dimensional & Weight tolerences. The product or packing material does not contain any hazardous substances as per RoHS norms.

Delivery ID

: 714189053

Invoice No. : 7105957817

GST Invoice No : 23VJ2900262313

Mode of Transport: Rail

Vehicle No.

LC No. : 854010233568-N

Process Route:

BOF-ARS-LHF-CASTER

Legends:

BOF = Basic Oxygen Furnace, LHF = Laddle Heating Furnace, CCM = Continuous Casting Machine,

 $RH = RH \ Degasser, \ HSM = Hot \ Strip \ Mill, \ HRS = HR \ Slitter, \ CTL = Cut \ To \ Length, \ T \ x \ W \ x \ L$ 

= Thickness X Width X Length, Chemistry = Laddle sample analysis, 1Mpa = 1N/mm2, YS = Yield Strength, UTS = Ultimate Tensile Strength, El % - Percent elongation on standard gauge length, UD - Usage

Decision, P - Prime, C - Commercial, A- Arising, Pcs - No of Pieces, CE =

[C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15], Ln = Longitudinal, Tr = Transverse, Fully Killed Steel

Remarks :



Cyadhwadhan R. Authorised Signatory



Vijayanagar Works, PO- Vidyanagar, Village-Toranagallu, Dist: Bellary, Karnataka-583275, INDIA Regd. Office: JSW Centre, Bandra Kurla Complex, Bandra (East), Mumbai - 400 051

#### HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL AS PER IS: 2062 2011



Date

: 29.08.2023

SO No./ Item: 402018435 / 11 Product

: HR STEEL COILS

PO No.

: ZET-KA-JSW1-127

ZETWERK MANUFACTURING BUSINESSES PV BANGALORE - 560102 Region: 10

Test Certificate: HR/23-24/0003080191

To M/S. Zetwerk Manufacturing Business

It is 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 & Inspection contained in the BIS certification marks Licence No. CM/L - 6161963 are as indicated below against each order No. Etc.

(PLEASE REFER TO IS 2062 2011 FOR DETAILS OF SPECIFICATION REQUIREMENTS)

TEST RESULTS

Specification	n: IS2062_20	)11 E25	0BR				QTY (MT)	C %	Mn %	S %	P %	Si %	Al %	N %	Nb+V+Ti	CE Long T	EN DIR	YS (Mpa)		GL (mm)	EL%	Bend Dir		Bend Result	IMP TEMP	IMP SAMP D	IMP JOULE	
Heat No.	Coil No.	No	omina	al Size	(MI	A)	Min											250	410	5.65	23.00		2T		= 0,5			
lother Coil		T	X V	/ X	L.	UD	Max	0.2000	1.50	0.040	0.040	0.400	0.070	0.0100	0.200	0.410												
F940914	23626060	5.00	00 X 12	250.0 X	Coil	Р	22.580	0.1640	0.54	0.003	0.016	0.126	0.035	0.0044	0.022	0.260	Tr	355	486	5.65	35.00	Tr	2t	Pass	25.0	Ln	164	
otal Weigh	t in Metric	Tonnes				П	22.580	Grand	Total	of Coil	s/Pkt/B	undles	/Slab		1													

This is to certify that the above mentioned product produced & supplied by us, do not contain any radio active element higher than the natural level and it confirms to Standard Rolling, Dimensional & Weight tolerences. The product or packing material does not contain any hazardous substances as per RoHS norms.

Delivery ID

: 714167717

Process Route: Legends:

BOF-ARS-LHF-CASTER

Invoice No.

Mode of Transport: Rail

: 7105947571

. 23VJ2900257046

BOF = Basic Oxygen Furnace, LHF = Laddle Heating Furnace, CCM = Continuous Casting Machine.

RH = RH Degasser, HSM = Hot Strip Mill, HRS = HR Slitter, CTL = Cut To Length, T x W x L

= Thickness X Width X Length, Chemistry = Laddle sample analysis, 1Mpa = 1N/mm2, YS = Yield Strength, UTS = Ultimate Tensile Strength, El % - Percent elongation on standard gauge length, UD - Usag

Decision, P - Prime, C - Commercial, A- Arising, Pcs - No of Pieces, CE =

[C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15], Ln = Longitudinal, Tr = Transverse, Fully Killed Steel

Vehicle No.

GST Invoice No

LC No.

: 854010233568-N

Remarks: