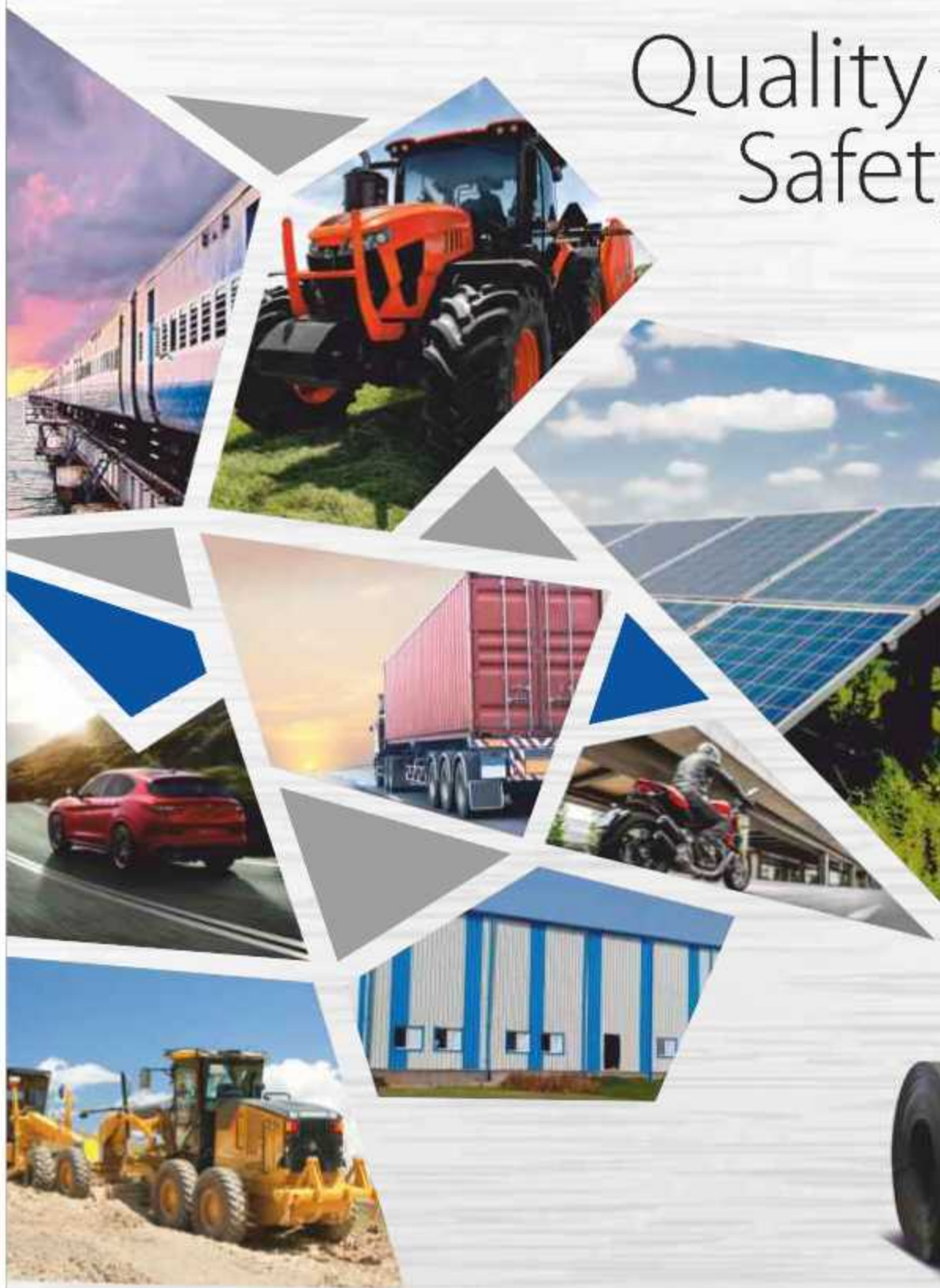


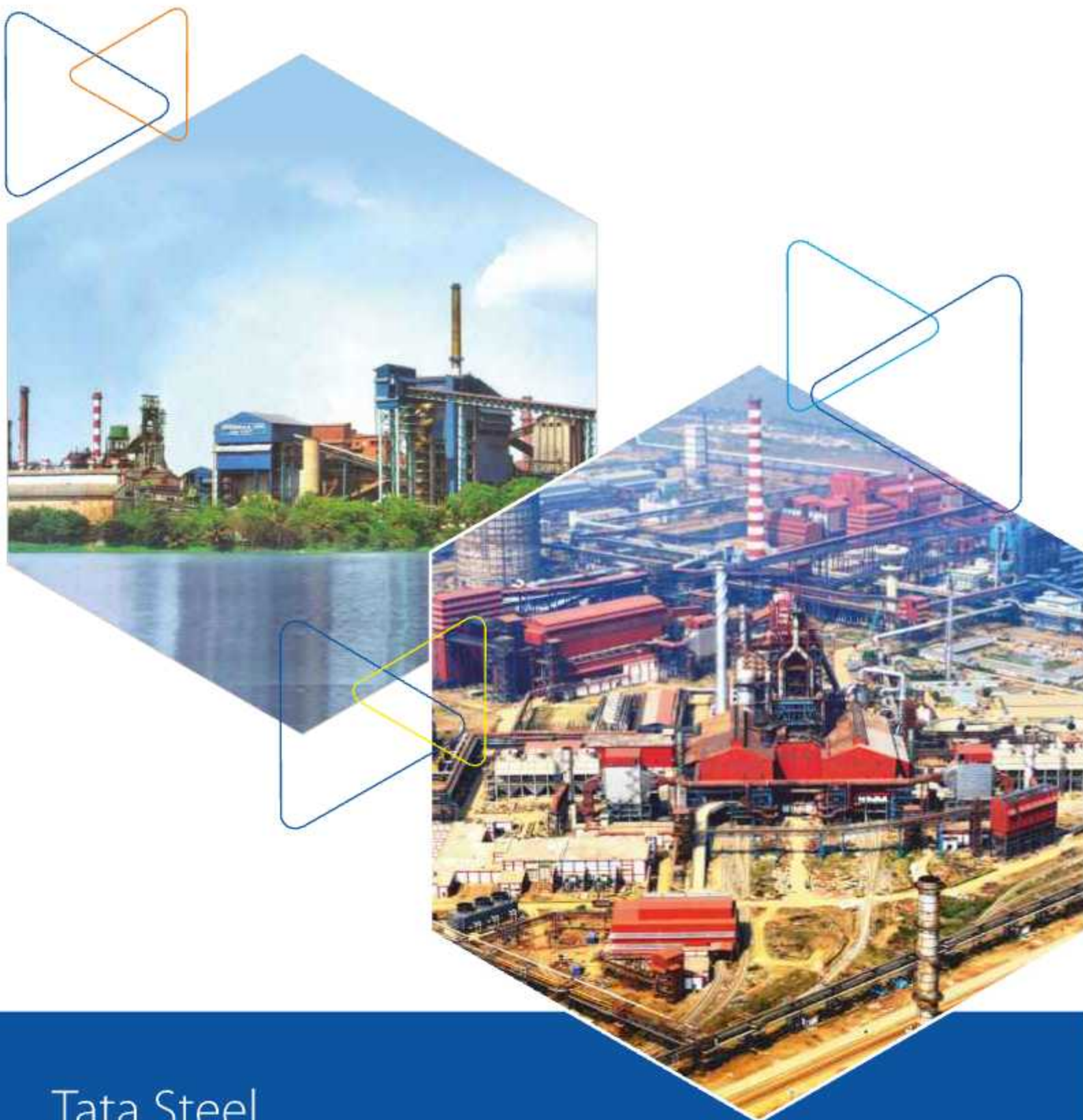
Quality for growth
Safety for life





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Tata Steel

Pioneering innovation since 1907

Tata Steel is amongst the top-ten global steel companies with a crude steel production capacity of 26.5 million tonnes per annum (MTPA). A Fortune 500 Company, the Tata Steel Group is the world's second most geographically diversified steel producer, employing over 80,000 people in nearly 50 countries.

Pioneering innovation in products and services is ingrained in the culture of Tata Steel. Backed by continuous

collaboration with its customers and keeping evolving needs in focus, the company has been able to roll out a series of initiatives to create unprecedented value.

Tata Astrum – first hot rolled steel brand of the country – comes as an offering from Tata Steel to ensure its customers remain competitive in global markets.

Tata Astrum Partner in Progress

With a vision to cater to the aspirational needs of its customers, Tata Astrum was launched in 2012. It provides a basket of products and services, rooted in understanding and excellence, to ensure customers get a competitive edge.

These products meet the needs of a plethora of segments viz. Automotive, Yellow Goods, Project Fabrication, PEB, Solar, Railways, Transmission & Distribution etc. The vast product range is coupled with an array of unmatched services to ensure a hassle-free process for customers.



Advantages



Regular availability of grades – High Tensile, HRPO, HRSPO

Processed material customised to your needs - CTL/CTS

Product Application Engineer support

Value creation through focussed engagement programmes

Packaging and source authenticity

Joint collaboration for product development

Spectrum of applications

Serving an array of segments





Adding new dimensions to serve you better

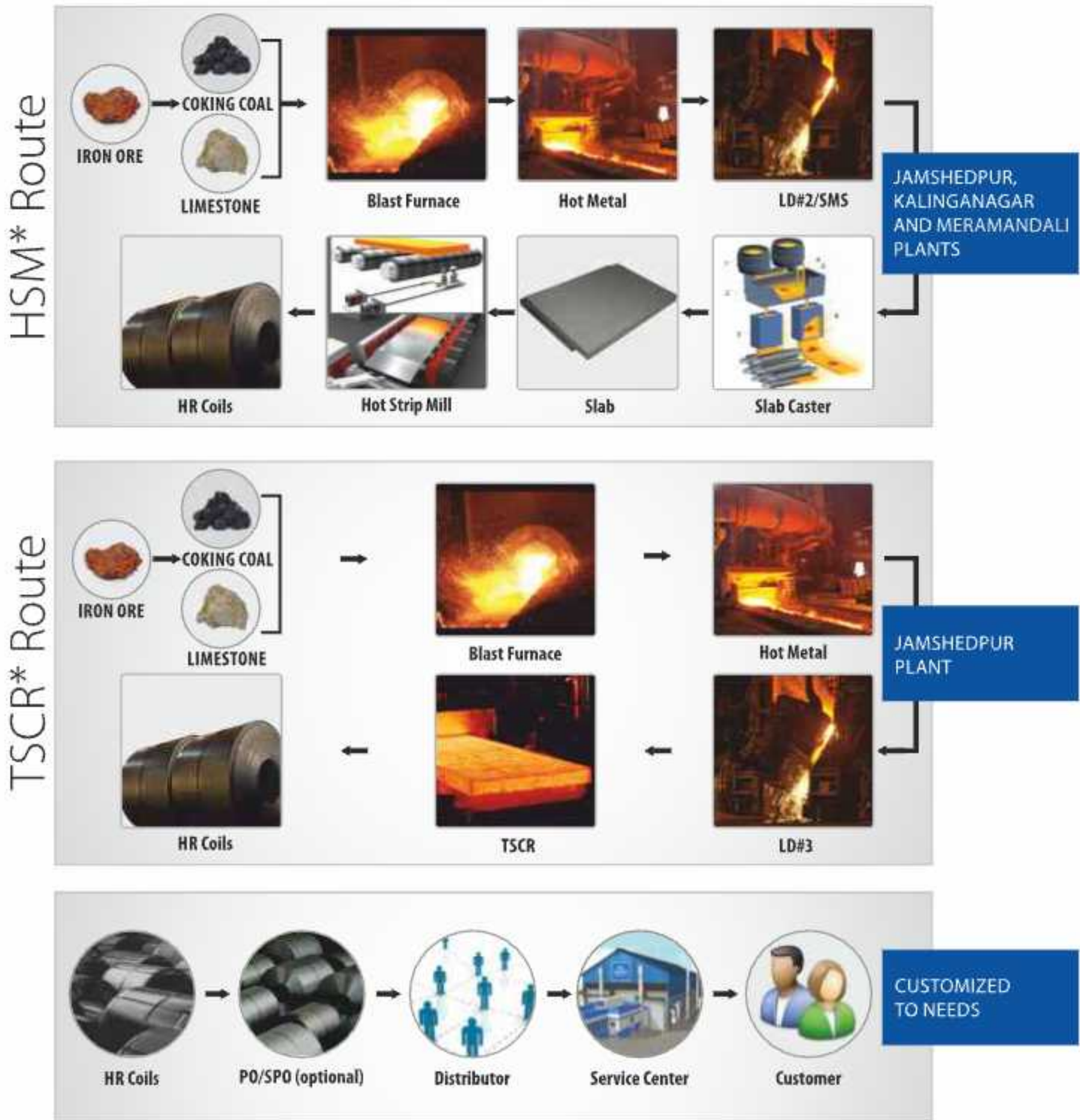
Products and grades required to serve various market applications are manufactured using state-of-the-art technologies at Tata Steel plants at Jamshedpur, Kalinganagar and Meramandali.

Tata Steel-Kalinganagar plant has added new dimensions to further cater to the needs of these segments and their applications.



Manufacturing Process

From steel making to final finishing, the entire production line incorporates state-of-the-art technologies and processes that make Tata Astrum a best-in-class product.



* HSM - Hot Strip Mill

* TSCR - Thin Slab Caster & Rolling

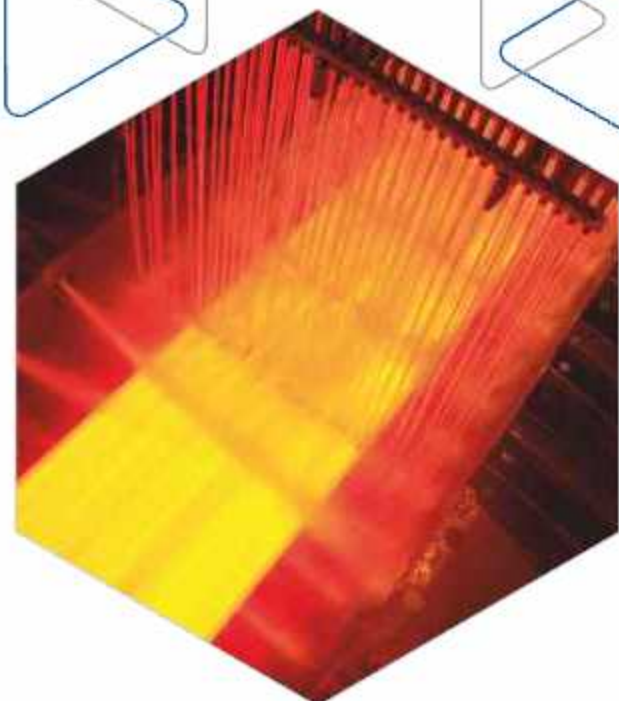
Steel Making

The first level of differentiation takes place in the steel-making shop to meet the variety of customer requirements through appropriate grade chemistry of steel.



Hot Strip Mill

After the steel is cast into slabs, it is transferred to the Hot Strip Mill (HSM) where it is rolled to the desired thickness and width. The rolling and subsequent cooling is done in a manner so as to ensure that the final product (HR coil) attains its requisite mechanical properties (as per design parameters).



LD#3 & TSCR Mill

Thin Slab Caster & Rolling Mill

LD3 and TSCR is an integrated shop where steel is made in the steel making shop (LD#3), then cast and rolled continuously. Unlike the HSM, there is no slab stage in this mill and thus it reduces the time lag. The mill is equipped with all the latest technologies to cater to different requirements of the customers.

Pickling, Oiling & Skin Passing

PICKLING & OILING (HRPO)

Hot Rolled coils have an oxide film or scales on their surface. Pickling cleans these scales to give the hot rolled coil surface a better look and finish. Pickled and oiled steel sheets and coils are ideal for applications that require an even finish.

HRPO is available from our CRM Bara, CRC-W and BMW Gamharia mills.



PICKLING, OILING & SKIN PASSING (HRPO)

Skin-passing of the coils is done post the pickling & oiling process. It produces a smooth surface, makes the thickness of the coil uniform and does minor corrections in mechanical properties.

HRPO is available from our CRM Bara and CRC-W mills.

*CRM Bara & BMW Gamharia – Jamshedpur, CRC-W – Tarapur

Finishing Processes

Shearing Line

The Shearing Line at the Hot Strip Mill enables Tata Steel to serve customers who require Hot Rolled Sheets and Plates of various grades.



Quality & Process Control

All the production lines are equipped with the latest technologies and have robust quality control mechanisms to check any abnormality in the process which might hamper the product quality.



Inspection

Since the surface of the hot rolled steel is critical to any application, we have dedicated surface inspection systems to ensure top quality.



Testing Parameters

Some of the parameters used for testing are chemical composition, elongation, tensile testing, impact testing, bend test etc.

Product Offering

Tata Astrum comes in different forms to suit a variety of requirements. It conforms to Tata Steel's impeccable product quality standards.

The product range includes

Hot Rolled Coils (HRC)

Cut to length (CTL) Sheets

Slit Coils

Pickled & Oiled (PO)

Skin Pass , Pickled & Oiled (SPO)

TDC or Technical Delivery Condition consists of a set of specifications which is guaranteed in the product.

Tata Astrum TDCs

			Thickness and Width				Mechanical Properties				Chemical Properties										Other Mechanical Properties				
TDC	Grade	Application	Thickness Range (mm)		Width Range (mm)		YS (MPa)		UTS (MPa)			C	Mn	P	S	N	Si	Al	Carbon Equivalent	Micro Alloys	Other elements	% Elongation	CIM	CIMT	
			Min	Max	Min	Max	Min	Max	Min	Max		Max, (min-max where range)	Max, (min-max where range)	Max	Max	Max (PPM)	Max, (min-max where range)	Min, (min-max where range)	Max			Min	J	Celsius	
HR01*	IS 10748 Gr 1	Tubes	1.60	4.99	900	2050	170	-	290	-		0.10	0.50	0.04	0.04	120		0.02				30			
HR02*	IS 1079 DD	Sheet Metal components	1.60	12.00	900	2050	-	-	-	400		0.08	0.40	0.035	0.03	120		0.02				29			
HR03	SAPH 440	Auto Structural	2.00	4.99	900	2000	305	-	440	520		0.12	1.30	0.04	0.04			0.02	0.42			29			
HR04	BSK 46	Auto Structural	5.00	7.99	900	2000	460	540	500	640		0.12	1.00	0.035	0.035	120		0.40	0.02	0.47	Nb: 0.08 max V: 0.095 max	22			
HR05*	IS 2062 E 250 A (LC-MA)	Fabrication	2.00	4.99	800	2050	250	-	410	-		0.23	1.50	0.045	0.045	100		0.40	0.02	0.42		23			
HR06	IRS M41	Railway Coach/Panel/Roof	5.00	12.00	1100	1500	340	-	480	-															
HR07*	IS 2062 E 250 A (Peritectic)	Fabrication/Auto Structural	2.51	4.99	800	2050	255	370	410	-		0.23	1.50	0.045	0.045	100		0.40		Nb: 0.02 max		23			
HR08*	IS 2062 E 250 A (LC-MA)	Fabrication/Auto Structural	5.00	12.00	900	1680	250	-	410	600		0.23	1.50	0.045	0.045	120		0.40	0.02	0.42		23			
HR09	IS 10748 Gr-1	Farm Equipment	0.00	0.00	0	0	-	-	-	-									0.02						
HR10	IS 10748 Gr-2	Bottom Bracket & frames for cycles	0.00	0.00	0	0	-	-	-	-															
HR11	Tata PT(H)	Precision Tubes	1.60	8.00	800	2050	195	-	320	480		0.12	0.30-0.60	0.03	0.02	90		0.35				25			
HR12	ASTM 622M	Compressor Shell	0.00	0.00	0	0	-	-	-	-								0.021-0.06							
HR13	IS 11513 DD	Cold Rolling	2.00	12.00	900	1540	-	-	-	-		0.05	0.25	0.025	0.02	90		0.05	0.02						
HR14	IS 5986 Fe 410	Auto Structural/Axle Support	2.00	4.99	800	2050	265	400	430	520		0.20	1.30	0.04	0.04	100			0.02	0.42		17			
HR15	IS 5986 Fe 360	Structural/Fabrication	1.60	4.99	800	2050	235	-	370	-		0.17	1.00	0.04	0.04	90						26			
HR16	IS 10748 Gr-1	Tubes	5.00	12.00	800	2050	170	-	290	-		0.10	0.50	0.04	0.04	120						30			
HR17	IS 1079 EDD	Sheet Metal Components (requiring extra deep draw)	2.00	6.50	900	1540	-	-	-	380		0.08	0.35	0.03	0.025	90		0.06	0.02			32			
HR18	IS 2062 Gr E250 BR	Fabrication/Structurals	2.00	4.99	800	2050	250	-	410	-		0.22	1.50	0.045	0.045	120		0.20	0.02	0.41		23			
HR19	IS 2062 Gr E250 BR	Fabrication/Structurals	5.00	12.00	800	2050	250	-	410	-		0.22	1.50	0.045	0.045	120		0.20	0.02	0.41	Micro Alloys: 0.25 max	23			
HR20*	IS 2062 E 250 A (Peritectic)	Fabrication/Auto Structural	5.00	12.00	800	2050	255	370	410	600		0.23	1.50	0.045	0.045	120		0.40		0.42		23			
HR21	DIN 17100 ST 52.3	Tipper Body, Buckets for Earth Moving Equipment, PEB	5.00	8.00	900	1680	355	-	490	-		0.10	1.55	0.03	0.02	120		0.45	0.02-0.07	0.47		Cu: 0.55 max	22	30	-20
HR22	DIN 17100 ST 52.3	Tipper Body, Buckets for Earth Moving Equipment, PEB	2.00	4.99	900	1680	355	-	490	-		0.10	1.55	0.03	0.02	120		0.45	0.02-0.07			Cu: 0.55 max	22		
HR23	IS 2062 E 250 A (Low si)	Structurals requiring Hot Dip Galvanizing	5.00	12.00	900	1540	255	370	410	600		0.23	1.50	0.045	0.045	120		0.04				23			
HR24	Gr-A CFS	Web (Brake Shoe Component)	2.00	5.00	860	2050	255	-	410	-		0.16-0.23	0.60-1.50	0.045	0.045	120			0.02			23			
HR25	IS 2062 E 250 Gr-B0	Fabrication/Structurals	5.00	12.00	900	1540	250	-	410	-		0.22	1.50	0.045	0.045		0.20	0.02				23	27		
HR26	IS 2062 E 250 A	Fabrication/Auto Structural	12.01	16.00	900	1680	250	-	410	600		0.23	1.50	0.045	0.045	120		0.40				23			
HR27	IS 2062 E 450 A	Hi strength structurals	2.00	5.00	900	1680	450	-	570	-		0.22	1.65	0.045	0.045		0.45			0.52		20			
HR28*	IS 2062 E 350 Gr C (Tata astrum Solar)	Structurals for Solar	2.00	4.99	800	2050	350	-	490	-		0.20	1.55	0.04	0.04		0.45		0.45			22	27	-20	
HR29*	IS 2062 E 350 Gr C	Structurals for Solar/ Transmission towers	5.00	8.00	800	2050	350	-	490	-		0.20	1.55	0.04	0.04		0.45		0.45			22	27	-20	
HR30	IS 2062 E 250 Gr B0	Fabrication/ Structurals	12.01	16.00	900	1680	250	-	410	600		0.23	1.50	0.045	0.045	120		0.40		0.42		23	27		
HR31	IS 1079 Gr D	Sheet Metal Components requiring draw	1.60	6.00	900	1680	-	-	240	420		0.10	0.45	0.04	0.035	90		0.15				26			
HR32	SAPH 440	Auto Structural	1.60	4.99	900	1500	305	-	440	520		0.12	1.30	0.04	0.04			0.02	0.42			29			
HR33	ST 52.3 (Low Si) / EN 10025 S355 J2	Tipper Body	5.00	8.00	900	1680	355	-	470	630		0.12	1.40	0.025	0.025		0.03		0.44			22	27	-20	
HR34	ASTM A 572 Gr 50 Type 1	PEB	2.50	4.99	900	1500	345	-	450	-		0.20	1.35	0.04	0.05				0.44	Nb: 0.005-0.05		22			
HR35	ASTM A 572 Gr 50 Type 1	PEB	5.00	10.00	900	1680	345	-	450	-		0.20	1.34	0.04	0.05				0.44	Nb: 0.005-0.05		21			
HR36	BSK46 (Thin)	Auto Structural	2.50	4.99	900	2000	460	540	500	640		0.12	1.00	0.025	0.025		0.40	0.02	0.47	Nb: 0.06 max Ti: 0.045 max V: 0.095 max		26		22	
HR37	IS 5986 235	Structural/Fabrication	2.00	4.99	900	1500		235	-	370		0.17	1.00	0.04	0.04	90		0.02							
HR38	IS 2062 E 350 Gr A (Si >0.14)	Structurals	5.00	7.99	900	1540	360	-	500	620		0.15-0.20	1.10-1.40	0.04	0.04	120		0.15-0.25	0.02	0.45	Micro Alloys: 0.025-0.25 Mo: 0.07 max Cr: 0.07 max Cu: 0.10 max Ni: 0.07 max SIE: 0.325 max	23		0	

*Now available from Meramandali Mill

TDC	Grade	Application	Thickness and Width				Mechanical Properties				Chemical Properties										Other Mechanical Properties		
			Thickness Range (mm)		Width Range (mm)		YS (MPa)		UTS (MPa)		C	Mn	P	S	N	Si	Al	Carbon Equivalent	Micro Alloys	Other elements	% Elongation	CIM	CMT
			Min	Max	Min	Max	Min	Max	Min	Max	Max, (min-max where range)	Max, (min-max where range)	Max	Max	Max (PPM)	Max, (min-max where range)	Min, (min-max where range)	Max			Min	J	Celsius
HR39	IS 2062 E 350 Gr A (Si > 0.14)	Structurals	8.00	12.00	900	1540	360	-	500	620	0.15-0.20	1.10-1.40	0.04	0.04	120	0.15-0.25	0.02	0.45	Micro Alloys: 0.025-0.25	Mo: 0.07 max Cr: 0.07 max Cu: 0.10 max Ni: 0.07 max SiE: 0.325 max	23	27	0
HR40	IS 5986 235 (THICK)	Fabrication & Structural	5.00	12.00	1200	1680	235	-	360	470	0.17	1.00	0.04	0.04	120		0.02				26		
HR41	IS 5986 255 (THICK)	Fabricated Components	5.01	12.00	900	1680	255	-	410	520	0.20	1.30	0.04	0.04	100		0.02	0.42			24		
HR42	IS 5986 205	Fabricated Components	6.01	9.00	900	1680	205	-	330	440	0.15	0.80	0.04	0.04	120		0.02				28		
HR43	IS:11513 CR2	HR for CR	1.60	12.00	800	2050	-	-	-	-	0.08	0.50	0.035	0.035	90	0.06	0.02-0.07						
HR44*	IS 1079 HR 2	Direct HR Components	1.60	6.00	800	2050	-	-	-	420	0.10	0.45	0.04	0.035	90	0.15					26		
HR45	IS 2062 E 250 GR. A (Peritectic)	Fabrication/ Auto Structural	5.00	7.99	800	2050	250	-	410	-	0.23	1.50	0.045	0.045	120	0.40	0.02	0.42			23		
HR46	E 34 SS4012A Thin	Auto Structural	1.60	2.50	900	1680	333	412	392	470	0.10	0.70	0.03	0.03	120	0.20	0.02		Nb: 0.055 max Ti: 0.045 max V: 0.095 max		27		
HR47*	IS 2062 E 250 GR A (Peritectic)	Fabrication/ Auto Structural	1.20	2.50	800	1700	250	-	410	-	0.23	1.50	0.045	0.045	100	0.40	0.02		Nb: 0.02		23		
HR48	IS 1079 HR1	Drawing Components	1.60	4.99	800	2050	-	-	-	440	0.15	0.60	0.04	0.035	120	0.06	0.02				24		
HR49	E-38 Thin	Auto Structural	1.60	4.99	900	2000	373	461	441	558	0.10	1.00	0.03	0.03	120	0.40	0.02	0.45	Nb: 0.055 max Ti: 0.045 max V: 0.095 max		25		
HR50	JIS G 3113 SAPH 370	Auto Structural	2.00	5.00	900	1680	225	-	370	-	0.10	0.80	0.03	0.03	90		0.02-0.07				26		
HR51	E-38 SS 4012	Auto Structural	5.00	7.99	900	1680	372	461	441	560	0.10	1.00	0.03	0.03	120	0.40	0.02-0.06	0.42	Nb: 0.055 max Ti: 0.045 max V: 0.095 max		25		
HR53	IS 5986 235	Rim Application for wheels	8.00	12.00	900	1680	240	-	350	410	0.09	0.60	0.025	0.02	90	0.08	0.02-0.07		Ti: 0.007-0.025		35		
HR54	SAPH440	Auto structural	5.00	8.00	900	2000	305	-	440	-	0.12	1.60	0.04	0.04			0.02				29		
HR55	E-34 SHEET	Auto Structural	2.50	4.99	900	2000	333	412	392	470	0.10	0.70	0.03	0.03	120	0.20	0.02		Nb: 0.055 max Ti: 0.045 max V: 0.095 max		27		
HR56	E 34 SS4012A	Auto Structural	5.00	7.99	900	2000	333	412	392	470	0.10	0.70	0.03	0.03	120	0.20	0.02-0.06		Nb: 0.055 max Ti: 0.045 max V: 0.095 max		27		
HR57	E 34 SS4012A	Auto Structural	8.00	12.00	900	2000	333	412	392	470	0.10	0.70	0.03	0.03	120	0.20	0.02-0.06		Nb: 0.055 max		27		
HR58	BSK-46/E-46	Auto Structural	8.00	12.00	900	2000	460	-	500	640	0.12	1.00	0.035	0.035	120	0.40	0.02	0.47	Nb: 0.08 max V: 0.095 max		22		
HR59	E-36 SHEET	Auto Structural	2.50	4.99	900	1540	355	450	430	550	0.12	1.50	0.025	0.02		0.50	0.015	0.45	Nb: 0.09 max Ti: 0.15 max V: 0.20 max		19		
HR60	HRSPD IS1079 HR3	Sheet metal requiring draw (HRSPD)	0.00	0.00	0	0	-	-	-	400							0.05				29		
HR61	SAPH440	Auto Structural	0.00	0.00	0	0	305	-	440	520	0.12		0.04	0.04			0.02	0.42			29		
HR63	IS 1079 HR2	Drawing Components	5.00	7.99	800	2050	170	-	-	420	0.10	0.45	0.04	0.04	120	0.15	0.02				31		
HR64	IS5986 FE360	Panels	0.00	0.00	0	0	235	-	370	-	0.17	1.00	0.045	0.045	90		0.02				26		
HR65	E-34	Auto Internals	0.00	0.00	0	0	333	412	392	470	0.10	0.45-0.70	0.03	0.03	120	0.20	0.02		Nb: 0.055 max Ti: 0.045 max V: 0.095 max		27		
HR66*	IS 2062 E 350 C	Fabrication/ Structural	8.00	12.00	800	2050	350	-	490	-	0.20	1.55	0.04	0.04		0.45	0.02	0.45	2		22	27	-20
HR67	DIN 17100 ST 52.3	Tipper Body, Buckets for Earth Moving Equipment, PEB	8.00	12.00	900	1680	355	-	490	-	0.10	1.55	0.03	0.02	120	0.45	0.02-0.07	0.47		Cu: 0.55 max	22	30	-20
HR68	IS 2062 E250 GR A (Low si)	Fabrication/ Structural (Requiring galvanizing)	2.00	4.99	900	1680	255	370	410	600	0.23	1.50	0.045	0.045	120	0.04	0.02				23		
HR69	IS 2062 E450 GRADE A	High Strength Structural/Fabrication	5.00	12.00	900	1540	450	-	570	-	0.22	1.65	0.04	0.04	120	0.45		0.46			20		
HR70	IS 2062 E 250 B0	Fabrication/ Structural	8.00	12.00	900	2050	250	-	410	-	0.22	1.50	0.045	0.045	120	0.20	0.02				23	27	
HR71	JIS G 3134 SPFH590	Auto	2.50	6.00	900	2000	420	-	590	690	0.18	1.60	0.035	0.005	120	0.55	0.02				21		
HR73	IS 2062 E250 A (Low Si)	Fabrication/ Structural	5.00	7.99	900	1680	250	-	410	-	0.23	1.50	0.045	0.045	120	0.03	0.02				23		
HR74	IS 5986 235	Structural/Fabrication	5.00	7.99	900	1500	235	-	370	-	0.17	1.00	0.04	0.04	90		0.02				26		
HR76	IS 2062 E 250 BR	Fabrication/ Structural	16.01	20.00	800	2050	250	-	410	-	0.22	1.50	0.04	0.045	120	0.40	0.02	0.41			23	27	27
HR78*	IS 2062 E 250 GR A	Fabrication/ Structural	12.01	16.00	800	2050	250	-	410	-	0.23	1.50	0.045	0.045	120	0.40	0.02				23		

* Now available from Meramandali Mill

			Thickness and Width				Mechanical Properties				Chemical Properties										Other Mechanical Properties			
TDC	Grade	Application	Thickness Range (mm)		Width Range (mm)		YS (MPa)		UTS (MPa)			C	Mn	P	S	N	Si	Al	Carbon Equivalent	Micro Alloys	Other elements	% Elongation	CIM	CIMT
			Min	Max	Min	Max	Min	Max	Min	Max		Max, (min-max where range)	Max, (min-max where range)	Max	Max	Max (PPM)	Max, (min-max where range)	Min, (min-max where range)	Max		Min	J	Celsius	
HR80	ASTM A622(MOD)	Precision Tubes	1.60	6.00	900	1680	250	-	350	-		0.02-0.06	0.10-0.25	0.025	0.015	60	0.03	0.021-0.06		B: 0.002-0.0045	32			
HR81	IS 5986 235 (PANEL)	Direct Forming Applications	1.60	2.50	900	1680	235	-	370	-		0.17	1.00	0.04	0.04	90	0.10	0.02			33			
HR87	EN 10025 S355 J2	Direct HR Components	8.00	12.00	900	1680	355	-	470	630		0.12	1.40	0.025	0.025		0.03	0.02	0.44	Micro Alloys: 0.25 max	22	27	-20	
HR95	EN10149 S460MC	Fabrication/ Structural	5.00	8.00	900	2000	460	-	520	670		0.12	1.60	0.025	0.015		0.50	0.02		Nb: 0.09 max, Ti:0.15 max, V: 0.20 max	17	27	27	
HR97	IS2062 E350 B0 (Low Si)		2.00	4.99	900	2050	350	-	490	-		0.20	1.55	0.04	0.04	120	0.02-0.05	0.02	0.45		22	27	0	
HR99	IS 1079 HR2	Drawing	1.60	6.00	900	2000	-	-	-	420		0.10	0.20-0.45	0.04	0.035	75	0.20	0.02		Ti: 0.025 max	32			
HT03	IS 2062 E 250 A	Fabrication & Structural	16.01	20.00	800	2050	250	-	410	-		0.22	1.50	0.04	0.045	120	0.40	0.02	0.41		23			
HT05	IS 2062 E250 A	Fabrication & Structural	2.00	4.99	900	2050	250	-	410	-		0.23	1.50	0.045	0.045	120	0.40	0.02	0.42		23			
HT06	IS 2062 E250 A	Fabrication & Structural	5.00	7.99	900	2050	250	-	410	-		0.23	1.50	0.045	0.045	120	0.40		0.42		23			
HT07	IS 2062 E250 A	Fabrication & Structural	8.00	12.00	900	2050	250	-	410	-		0.23	1.50	0.045	0.045	120	0.40		0.42		23			
HT08	E-34 Thin	Reinforcement & Chassis Application	1.60	4.99	900	2000	333	412	392	470		0.10	0.70	0.03	0.03	120	0.20	0.02		Nb: 0.055 max, Ti:0.045 max, V: 0.095 max	27			
HT09	JIS G3113 SAPH440	HR for Cold Forming	2.00	4.99	900	2000	325	430	460	-		0.10	1.30	0.04	0.04	120	0.05	0.02	0.42		29			
HT10	EN 10149 S355 MC	Fabrication/ Auto	2.00	4.99	900	2000	355	-	430	550		0.12	1.30	0.025	0.015	120	0.03	0.015		Nb: 0.09 max, Ti:0.15 max, V: 0.20 max	22			
HT11	IS 2062 E250 Gr A	Fabrication/ Structural	2.50	5.00	900	1540	250	-	410	-		0.23	1.50	0.045	0.045	100	0.40	0.02	0.42		23			
HT14	EN 10025 S355 J0 (Low Si)		2.00	4.99	900	2000	355	-	470	680		0.20	1.60	0.03	0.03	120	0.02-0.05	0.02	0.45		22	27	0	
HT15	E-38 Thick	Rim & Disc Application	8.00	12.00	900	1680	372	461	441	560		0.10	1.00	0.03	0.03	120	0.4	0.02-0.06	0.42	Nb: 0.055 max, Ti:0.045 max, V: 0.095 max	25			
HT17	EN 10025 S355 J0 (Low Si 0.02-0.05)	Fabrication/ Structural	8.00	12.00	900	2000	355	-	470	630		0.20	1.60	0.03	0.03	120	0.02-0.05	0.02	0.45		22	27	0	
HT18	EN 10025 S355 J0 (Low Si 0.02-0.05)	Fabrication/ Structural	5.00	7.99	900	2000	355	-	470	680		0.20	1.60	0.03	0.03	120	0.02-0.05	0.02	0.45		22	27	0	
HT29	ST52.3	Structurals/ Comercial Tubes	2.00	7.00	900	2000	355	-	490	680		0.18-0.23	1.30-1.50	0.025	0.02	75	0.10-0.30	0.02-0.06		Nb: 0.05 max, Micro Alloys : 0.05 max	23			
HT32	IS2062 E350 GR C	Fabrication/ Structural	12.01	16.00	900	1680	350	-	490	-		0.20	1.55	0.04	0.04		0.45	0.02	0.45		27	27	-20	
HT33*	IS2062 E350 GR C	Fabrication/ Structural	12.01	16.00	900	2000	350	-	490	-		0.20	1.50	0.04	0.04	120	0.10	0.021	0.45	Nb: 0.05 max, Ti:0.05 max, V: 0.13 max	22	27	-20	
HT34	IS 2062 E250 GR C	Structurals	2.00	4.99	900	1680	250	-	410	600		0.20	1.50	0.04	0.04	120	0.40	0.02	0.39		23	27	-20	
HT35	IS 2062 E250 GR C	Structurals	5.00	7.99	900	1680	250	-	410	600		0.20	1.50	0.04	0.04	120	0.40	0.02	0.39		23	27	-20	
HT36	IS 2062 E250 GR C	Structurals	8.00	12.00	900	1680	250	-	410	600		0.20	1.50	0.04	0.04	120	0.40	0.02	0.39		23	27	-20	
HT37	IS 2062 E250 GR C	Structurals	12.01	16.00	900	1680	250	-	410	600		0.20	1.50	0.04	0.04	120	0.40	0.02	0.39		23	27	-20	
HT81	ASTM A572 GR 65 Type 2 (Low Si)	Fabrication & Structural (High Mast Poles)	5.00	7.99	900	2000	450	-	550	-		0.26	1.35	0.04	0.04	120	0.04	0.02		V: 0.01-0.15	17			
HT82	ASTM A572 GR 65 Type 2 (Low Si)	Fabrication & Structural (High Mast Poles)	8.00	12.00	900	2000	450	-	550	-		0.26	1.35	0.04	0.04	120	0.04	0.02		V: 0.01-0.15	17			
HT85	IS2062 E450 Gr A	Fabrication & Structural	5.00	7.99	900	2000	450	-	570	-		0.22	1.65	0.045	0.045	120	0.45	0.02	0.52		20			
HT90	EN 10149 S500 MC	Railways/ Fabrication	5.00	7.99	800	2050	500	-	550	650		0.12	1.50	0.025	0.01	120	0.40	0.021	0.36	Nb: 0.09 max, Ti:0.15 max, V: 0.20 maxMicro alloys: 0.22 max	14			
Ht91	EN 10149 S500 MC	Railways/ Fabrication	8.00	12.00	800	2050	500	-	550	650		0.12	1.50	0.025	0.01	120	0.40	0.021	0.36	Nb: 0.09 max, Ti:0.15 max, V: 0.20 max Micro alloys: 0.22 max	14			
HT92	EN 10149 S550MC	Fabricated Components	5.00	7.99	800	2050	550	-	600	760		0.12	1.80	0.025	0.015		0.50	0.015		Nb: 0.09 max, Ti:0.15 max, V: 0.20 maxMicro alloys: 0.22 max	14	27	0	

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			Thickness and Width				Mechanical Properties				Chemical Properties										Other Mechanical Properties			
TDC	Grade	Application	Thickness Range (mm)		Width Range (mm)		YS (MPa)		UTS (MPa)			C	Mn	P	S	N	Si	Al	Carbon Equivalent	Micro Alloys	Other elements	% Elongation	CIM	CIMT
			Min	Max	Min	Max	Min	Max	Min	Max												Max, (min-max where range)	Max, (min-max where range)	Max
HT93	EN 10149 S550 MC	Fabricated Components	8.00	12.00	800	2050	550	-	600	760		0.12	1.80	0.025	0.015		0.50	0.015		Nb: 0.09 max, Ti: 0.15 max, V: 0.20 maxMicro alloys: 0.22 max		14	27	0
HT95	HS650 (ATM grade)		10.00	13.00	900	2000	650	-	700	790		0.12	2.00	0.025	0.015		0.60	0.02		Nb: 0.09 max Ti: 0.22 max V: 0.20 max	Mo: 0.50 max, B: 0.005 max	15		
HT96	EN10025-2 S355 J0	Structurals	1.60	4.99	900	1680	355	-	470	-		0.20	1.60	0.03	0.03	120	0.04	0.02		Nb: 0.05 max Ti: 0.05 max V: 0.13 max		22		
HT97	EN10149-2 S700MC	High Strength HR for CF, ATM Safe	4.00	13.00	900	2000	700	-	750	950		0.12	2.10	0.025	0.015	100	0.30	0.02		Nb: 0.09 max, Ti: 0.22 max, V: 0.20 max, Micro Alloys: 0.22 max	Mo: 0.50 max B: 0.005 max	12		
HT98	EN10149-2 S700MC	High Strength HR for CF, ATM Safe	4.00	13.00	900	2000						0.12	2.10	0.025	0.015	100	0.30	0.02		Nb: 0.09 max Ti: 0.22 max, V: 0.20 max, Micro Alloys: 0.22 max	Mo: 0.50 max B: 0.005 max	12		
HT99	EN 100025 S235 JR	Structurals	2.00	4.99	900	1540	235	-	360	-		0.17	1.40	0.035	0.035	120	0.03	0.02	0.35			21		
HU03	EN 10025 S 275 JR	Fabrication & Structural	2.50	4.99	900	2000	275	-	410	560		0.21	1.50	0.035	0.03	90	0.03	0.02	0.40			23	27	20
HU09	IS 2062 E 250 A (CU)	Railway Coach Panel/Roof	5.00	7.99	800	2050	250	-	410	-		0.23	1.50	0.045	0.045	120	0.40	0.02	0.42		Cu: 0.20-0.35	23		
HU10	IS 2062 E 250 A (CU)		2.00	4.99	900	2000	250	-	410	-		0.23	1.50	0.045	0.045	120	0.40	0.02	0.42		Cu: 0.20-0.35	23		
HU12*	IS 2062 E 250 BR	Fabrication & Structural	1.60	4.99	900	2000	250	-	410	-		0.22	1.50	0.04	0.045	120	0.40	0.02	0.41			23		
HU13*	IS2062 E 250 BR	Fabrication & Structural	5.00	7.99	900	2000	250	-	410	-		0.22	1.50	0.04	0.045	120	0.40	0.02	0.41			23		27
HU14*	IS2062 E 250 BR	Fabrication & Structural	8.00	12.00	900	2000	250	-	410	-		0.22	1.50	0.045	0.045	120	0.40	0.02	0.41			23	27	27
HU24	IS 2062 E 350 GR C (Low Si - Si<0.04)	Fabrication & Structural	2.00	4.99	900	1680	350	-	490	-		0.20	1.55	0.04	0.04		0.03	0.02	0.45			22	27	-20
HU28	IS 2062 E 250 Gr A (Si>0.14)	Transmission & Distribution	5.00	7.99	900	1540	280	-	420	-		0.15-0.21	0.65-1.00	0.04	0.04	120	0.15-0.25	0.02	0.42	Micro Alloys: 0.025 max	Cr: 0.07 max Cu: 0.10 max Ni: 0.07 max SiE: 0.32 max	24		0
HU29	IS 2062 E250 Gr A (Si>0.14)	Transmission & Distribution	8.00	12.00	900	1540	280	-	420	-		0.22	0.65-1.00	0.04	0.04	120	0.15-0.25	0.02	0.02	Micro Alloys: 0.25 max	Cr: 0.07 max Cu: 0.10 max Ni: 0.07 max SiE: 0.32 max Mo: 0.07 max	24	27	0
HU30	EN 10025 S275 J2 (Si>0.14)	Structurals	2.00	4.99	900	2050	275	-	410	580		0.18	1.50	0.025	0.025	120	0.14-0.25	0.02	0.40		Cu: 0.40 max	17	27	-20
HU31	EN 10025 S275 J2 (Si>0.14)	Structurals	5.00	7.99	900	2000	275	-	410	580		0.18	1.50	0.025	0.025	120	0.14-0.25	0.02	0.40		Cu: 0.40 max	17	27	-20
HU32	EN 10025 S275 J2 (Si>0.14)	Structurals	8.00	12.00	900	2000	275	-	410	580		0.18	1.50	0.025	0.025	120	0.14-0.25	0.02	0.40		Cu: 0.40 max	17	27	-20
Hu33	EN10025 S355J2 (Si>0.14)	Structurals	2.00	4.99	900	2000	355	-	470	680		0.20	1.60	0.025	0.025		0.14-0.25	0.02	0.45		Cu: 0.55 max	16	27	-20
HU34	EN10025 S355J2 (Si>0.14)	Structurals	5.00	7.99	900	2000	355	-	470	680		0.20	1.60	0.025	0.025		0.14-0.25	0.02	0.45		Cu: 0.55 max	16	27	-20
HU35	EN10025 S355J2 (Si>0.14)	Structurals	8.00	12.00	900	2000	355	-	470	680		0.20	1.60	0.025	0.025		0.14-0.25	0.02	0.45		Cu: 0.55 max	16	27	-20
HU37	IRS M41 (Corten)	Railway Coach/Panel/Roof	5.00	8.00	900	2000	340	-	480	-		0.10	0.25-0.45	0.075-0.14	0.03		0.28-0.72	0.08 max		Nb: 0.04 max, V: 0.20-0.47	Cu: 0.30-0.60 Cr: 0.35-0.60 Ni: 0.20-0.47 Mo: 0.05 max	22		
HU38	IRS M41 (Corten)	Railway Coach/Panel/Roof	2.00	4.99	900	2000	340	-	480	-		0.10	0.25-0.45	0.075-0.14	0.03		0.28-0.72	0.08 max		Nb: 0.04 max, V: 0.20-0.47	Cu: 0.30-0.60 Cr: 0.35-0.60 Ni: 0.20-0.47 Mo: 0.05 max	22		
HU39	IRS M41 (Corten)	Railway Coach/Panel/Roof	8.00	12.00	900	2000	340	-	480	-		0.10	0.25-0.45	0.075-0.14	0.03		0.28-0.72	0.08 max		Nb: 0.04 max, V: 0.20-0.47	Cu: 0.30-0.60 Cr: 0.35-0.60 Ni: 0.20-0.47 Mo: 0.05 max	22		
HU40	EN 10025 S 275 J2 (Si>0.14)	Structurals	12.01	16.00	900	2000	275	-	410	580		0.18	1.50	0.025	0.025	120	0.14-0.25	0.02	0.40		Cu: 0.40 max	21	27	-20
HU42	JIS G 3134 SPFH590	Auto	2.00	4.99	900	2050	420	-	590	690		0.18	1.60	0.035	0.005	120	0.55	0.02				19		
HU44	HR ENAMELLING IS2062 E250 GR A	Structurals (HR Steel for Enamelling)	2.00	4.99	900	1680	250	-	410	-		0.10	0.90	0.03	0.03	120	0.15	0.02	0.42	Ti: 0.05-0.25, Mirco Alloys: 0.25 max		23		
HR85*	IS 10748 GR2	Tubes/Retail	2	6	1000	1650	210	-	330	-		0.12	0.6	0.04	0.04	120	-	-	-	-	-	28	-	-

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			Thickness and Width				Mechanical Properties				Chemical Properties										Other Mechanical Properties			
TDC	Grade	Application	Thickness Range (mm)		Width Range (mm)		YS (MPa)		UTS (MPa)			C	Mn	P	S	N	Si	Al	Carbon Equivalent	Micro Alloys	Other elements	% Elongation	CIM	CIMT
			Min	Max	Min	Max	Min	Max	Min	Max		Max, (min-max where range)	Max, (min-max where range)	Max	Max	Max (PPM)	Max, (min-max where range)	Min, (min-max where range)	Max			Min	J	Celsius
HU45	HR ENAMELLING IS2062 E250 GR A	Structurals (HR Steel for Enamelling)	8.00	12.00	900	1680	250	-	410	700		0.10	0.90	0.03	0.03	120	0.15	0.02	0.42	Ti: 0.05-0.25 Mirco Alloys: 0.25 max		23		
HU46	HR ENAMELLING IS2062 E250 GR A	Structurals (HR Steel for Enamelling)	5.00	7.99	900	1680	250	-	410	-		0.10	0.90	0.03	0.03	120	0.15	0.02	0.42	Ti: 0.05-0.25 Mirco Alloys: 0.25 max		23		
HU47	EN10025 S275J0	Fabrication & Structural	12.00	16.00	900	2050	275	-	410	-		0.18	1.50	0.025	0.005	120	0.10	0.02	0.40	Ca: min 1 ppm	23	27	0	
HU48	IS 2062 E350 GR C (Hi Si)	Fabrication & Structural	2.00	4.99	900	1680	350	-	490	-		0.20	1.55	0.04	0.04		0.45		0.45			22	27	-20
HU49	IS 2062 E350 GR C (Hi Si)	Fabrication & Structural	5.00	7.99	900	1680	350	-	490	-		0.20	1.55	0.04	0.04		0.45		0.45			22	27	-20
HU50	EN10025 S355J2 (Si>0.14)	Structurals	16.01	20.00	900	2000	355	-	470	630		0.20	1.55	0.025	0.025	120	0.14-0.25	0.02	0.45		Cu: 0.55 max	20	27	-20
HU51	IS 2062 E350 Gr A (Si >0.14)	Fabrication & Structural	2.00	4.99	900	2000	350	-	490	-		0.20	1.55	0.045	0.045	120	0.14-0.25	0.02	0.47	Mirco Alloys: 0.25 max		22		
HU52	IS 2062 E350 Gr A (Si >0.14)	Fabrication & Structural	5.00	7.99	900	2000	350	-	490	-		0.20	1.55	0.045	0.045	120	0.14-0.25	0.02	0.47	Mirco Alloys: 0.25 max		22		
HU53	IS 2062 E350 Gr A (Si >0.14)	Fabrication & Structural	8.00	12.00	900	2000	350	-	490	-		0.20	1.55	0.045	0.045	120	0.14-0.25	0.02	0.47	Mirco Alloys: 0.25 max		22		
HU54	IS 2062 E350 Gr A (Si >0.14)	Fabrication & Structural	12.00	16.00	900	2000	350	-	490	-		0.20	1.55	0.045	0.045	120	0.14-0.25	0.02	0.47	Mirco Alloys: 0.25 max		22		
HU55	IS 2062 E350 Gr A (Si >0.14)	Fabrication & Structural	16.01	20.00	900	2000	350	-	490	-		0.20	1.55	0.045	0.045	120	0.14-0.25	0.02	0.47	Mirco Alloys: 0.25 max		22		
HU56	EN 10025 S275 J2 (Si>0.14)	Structurals	16.01	20.00	900	2000	275	-	410	560		0.18	1.50	0.025	0.025	120	0.14-0.25	0.02	0.40		Cu: 0.40 max	21	27	-20
HU59	EN10025-2 S355J2	Fabrication & Structural	5.00	7.99	900	2000	355	-	470	630		0.20	1.60	0.025	0.005	120	0.10	0.02	0.45		Ca: min 1 ppm	22	27	-20
HU60	EN10025-2 S355J2	Fabrication & Structural	8.00	12.00	900	2000	355	-	470	630		0.20	1.60	0.025	0.005	120	0.10	0.02	0.45		Ca: min 1 ppm	22	27	-20
H075	ASTM A572 GR 65 Type 2	Fabrication & Structural (High Mast Poles)	5.00	7.99	900	2000	450	-	550	-		0.26	1.35	0.04	0.04	120	0.02-0.06	0.02		V: 0.01-0.15		17		
H076	ASTM A572 GR 65 Type 3	Fabrication & Structural (High Mast Poles)	8.00	12.00	900	2000	450	-	550	-		0.26	1.35	0.04	0.04	120	0.02-0.06	0.02		V: 0.01-0.15		17		
H077	ASTM A572 GR 65 Type 4	Fabrication & Structural (High Mast Poles)	12.00	16.00	900	2000	450	-	550	-		0.26	1.35	0.04	0.04	120	0.02-0.06	0.02		V: 0.01-0.15		17		
H078	ASTM A572 GR 65 Type 5	Fabrication & Structural (High Mast Poles)	16.01	20.00	900	2000	450	-	550	-		0.26	1.35	0.04	0.04	120	0.02-0.06	0.02		V: 0.01-0.15		17		
SC73/ HG34	IS 10748 Gr. 2	Tubes	1.20	9.00	800	2050	210	-	330	-			0.12	0.60	0.04	0.04	120		0.02				28	
Tata Astrum Super - Retail TDCs																								
HT04	IS 2062 E250 A (Retail)	Fabrication/Retail	2.00	4.99	900	1680	250	-	410	-			0.23	1.50	0.045	0.045	100	0.40	0.02	0.42			23	
HT12	IS 2062 E250 A (Retail)	Fabrication/Retail	5.00	12.00	900	1680	250	-	410	600			0.23	1.50	0.045	0.045	120	0.40	0.02	0.42			23	
HT13	IS 5986 235 (Fe360)	Fabrication/Retail	1.60	4.99	900	1680	235	-	370	470			0.17	1.00	0.04	0.04	90	0.50	0.02				26	
HT42	IS 2062 E250 A (Retail)	Fabrication/Retail	0.00	0.00	0	0	255	370	410	-			0.23	1.50	0.045	0.045	120	0.40	0.02		Nb: 0.02 max		23	
Ht43	IS 2062 E250 A (Retail)	Fabrication/Retail	5.00	12.00	900	1540	255	370	410	-			0.23	1.50	0.045	0.045	120	0.40		0.42			23	
PGCIL TDCs (from TSK)																								
HP01	IS 2062 E250 Gr BR (Hi Si)	Fabrication & Structural/ Transmission Line Towers	2.00	4.99	900	2000	250	-	410	-		0.12-0.18	0.60-0.95	0.03	0.02	120	0.14-0.25	0.02	0.42	Nb: 0.15 max Ti: 0.10 max Micro Alloys: 0.25 max	Cr: 0.10 max Cu: 0.10 max Mo: 0.10 max Ni: 0.10 max B: 0.005 max	23	27	27
HP02	IS 2062 E250 Gr BR (Hi Si)	Fabrication & Structural/ Transmission Line Towers	5.00	7.99	900	2000	250	-	410	-		0.12-0.18	0.60-0.95	0.03	0.02	120	0.14-0.25	0.02	0.42	Nb: 0.15 max Ti: 0.10 max Micro Alloys: 0.25 max	Cr: 0.10 max Cu: 0.10 max Mo: 0.10 max Ni: 0.10 max B: 0.005 max	23	27	27
HP03	IS 2062 E250 Gr BR (Hi Si)	Fabrication & Structural/ Transmission Line Towers	8.00	12.00	900	2000	250	-	410	-		0.12-0.18	0.60-0.95	0.03	0.02	120	0.14-0.25	0.02	0.42	Nb: 0.15 max, Ti:0.10 max, Micro Alloys: 0.25 max	Cr: 0.10 max Cu: 0.10 max Mo: 0.10 max Ni: 0.10 max B: 0.005 max	23	27	27

			Thickness and Width				Mechanical Properties				Chemical Properties										Other Mechanical Properties			
TDC	Grade	Application	Thickness Range (mm)		Width Range (mm)		YS (MPa)		UTS (MPa)			C	Mn	P	S	N	Si	Al	Carbon Equivalent	Micro Alloys	Other elements	% Elongation	CIM	CIMT
			Min	Max	Min	Max	Min	Max	Min	Max		Max, (min-max where range)	Max, (min-max where range)	Max	Max	Max (PPM)	Max, (min-max where range)	Min, (min-max where range)	Max			Min	J	Celsius
HP04	IS 2062 E250 Gr BR (Hi Si)	Fabrication & Structural/ Transmission Line Towers	12.00	16.00	900	2000	250	-	410	-		0.12-0.18	0.60-0.95	0.03	0.02	120	0.14-0.25	0.02	0.42	Nb: 0.15 max Ti: 0.10 max Micro Alloys: 0.25 max	Cr: 0.10 max Cu: 0.10 max Mo: 0.10 max Ni: 0.10 max B: 0.005 max	23	27	27
HP05	IS 2062 E250 Gr BR (Hi Si)	Fabrication & Structural/ Transmission Line Towers	16.01	20.00	900	2000	250	-	410	-		0.12-0.18	0.60-0.95	0.03	0.02	120	0.14-0.25	0.02	0.42	Nb: 0.15 max Ti: 0.10 max Micro Alloys: 0.25 max	Cr: 0.10 max Cu: 0.10 max Mo: 0.10 max Ni: 0.10 max B: 0.005 max	23	27	27
HP06	IS 2062 E350 Gr C (Hi Si)	Fabrication & Structural/ Transmission Line Towers	2.00	4.99	900	2000	350	-	490	-		0.12-0.18	1.05-1.45	0.03	0.02	120	0.14-0.25	0.02	0.45	Nb: 0.15 max Ti: 0.10 max Micro Alloys: 0.025-0.25	Cr: 0.10 max Cu: 0.10 max Mo: 0.10 max Ni: 0.10 max B: 0.005max	22	27	-20
HP07	IS 2062 E350 Gr C (Hi Si)	Fabrication & Structural/ Transmission Line Towers	5.00	7.99	900	2000	350	-	490	-		0.12-0.19	1.05-1.46	0.03	0.02	120	0.14-0.26	0.02	0.45	Nb: 0.15 max Ti: 0.10 max Micro Alloys: 0.025-0.26	Cr: 0.10 max Cu: 0.10 max Mo: 0.10 max Ni: 0.10 max B: 0.005 max	22	27	-20
HP08	IS 2062 E350 Gr C (Hi Si)	Fabrication & Structural/ Transmission Line Towers	8.00	12.00	900	2000	350	-	490	-		0.12-0.20	1.05-1.47	0.03	0.02	120	0.14-0.27	0.02	0.45	Nb: 0.15 max Ti: 0.10 max Micro Alloys: 0.025-0.27	Cr: 0.10 max Cu: 0.10 max Mo: 0.10 max Ni: 0.10 max B: 0.005 max	22	27	-20
HP09	IS 2062 E350 Gr C (Hi Si)	Fabrication & Structural/ Transmission Line Towers	12.00	16.00	900	2000	350	-	490	-		0.12-0.21	1.05-1.48	0.03	0.02	120	0.14-0.28	0.02	0.45	Nb: 0.15 max Ti: 0.10 max Micro Alloys: 0.025-0.28	Cr: 0.10 max u: 0.10 max Mo: 0.10 max CNi: 0.10 max B: 0.005 max	22	27	-20
HP10	IS 2062 E350 Gr C (Hi Si)	Fabrication & Structural/ Transmission Line Towers	16.01	20.00	900	2000	350	-	490	-		0.12-0.22	1.05-1.49	0.03	0.02	120	0.14-0.29	0.02	0.45	Nb: 0.15 max Ti: 0.10 max Micro Alloys: 0.025-0.29	Cr: 0.10 max Cu: 0.10 max Mo: 0.10 max Ni: 0.10 max B: 0.005 max	22	27	-20
Shipbuilding TDCs (from TSK)																								
HQ01	LRS GR A	Shipbuilding/ Boat building	5.00	7.99	900	2000	235	-	400	520			0.21	0.53 min	0.035	0.035	120	0.50	0.02				22	
HQ02	LRS GR A	Shipbuilding/ Boat building	8.00	12.00	900	2000	235	-	400	520			0.21	0.53 min	0.035	0.035	120	0.50	0.02				22	
HQ03	LRS GR A	Shipbuilding/ Boat building	12.01	16.00	900	2000	235	-	400	520			0.21	0.53 min	0.035	0.035	120	0.50	0.02				22	
HQ04	LRS GR A	Shipbuilding/ Boat building	16.01	20.00	900	2000	235	-	400	520			0.21	0.53 min	0.035	0.035	120	0.50	0.02				22	
MCHC TDCs (from TSK)																								
HM93	TISSTRIP C-40	Cycle Chain Links	2.00	7.99	800	2050	-	-	-	-			0.37-0.45	0.60-0.90	0.035	0.025		0.35	0.01					
HN04	CSS SPL	Auto Chain Links	2.00	7.99	900	1500	-	-	750	900			0.50-0.56	0.60-0.90	0.03	0.015	90	0.35					10	
HN08	C62	Sprockets	2.00	8.00	800	2050	-	-	750	1050			0.60-0.67	0.60-0.90	0.035	0.025		0.35					9	
HN10	C75	Hacksaw blades/ Cutting tools	2.00	8.00	900	2000	-	-	850	1150			0.73-0.79	0.60-0.80	0.035	0.025		0.35	0.01-0.04				8	
HN12	C80	Hacksaw blades/ Cutting tools	2.00	8.00	900	2000	-	-	850	1150			0.75-0.85	0.60-0.80	0.035	0.025		0.35	0.01-0.04				8	

Dimension Tolerance		
Thickness Tol (mm)	Thickness 1.60 to 2.80	-0.14/+0.06
	Thickness 2.81 to 3.10	-0.16/+0.08
	Thickness 3.11 to 4.99	-0.17/+0.08
	Thickness 5.00 to 5.99	-0.19/+0.08
	Thickness 6.00 to 8.99	-0.21/+0.10
	Thickness 9.00 to 12.00	-0.23/+0.10
	Thickness 12.01 to 16.00	-0.25/+0.10
	Thickness 16.01 to 20.00	-0.27/+0.12
	Thickness 20.01 to 25.00	-0.29/+0.12
Width Tol - Coils (mm)	All widths	+20/-0 (untrimmed)
Width Tol - Plates (mm)	All widths	+20/-0 (untrimmed)
	Width < 1250 mm	+4/-0 (trimmed)
	Width > 1250 mm	+5/-0 (trimmed)
Length Tol - Plate (mm)	+10/-0 mm	
Out of Squareness	0.7 mm per 100 mm width for sheets/plates	

Flatness Tolerance		
Refer Table 1		
Camber	As per TPR	
Bow	As per TPR	
Telescopicity, mm	100 max	
Fish/ Tongue, m	0.75 max	

* Subject to Tata Steel capability, T: Thickness, TPR: Technical Processing Requirement provided by Application Engineer

Special Remarks	
Tata Steel shall stand guarantee for 96% of the coil length for quality. Acceptance norms for surface quality to be decided based on mutually agreed limit samples.	

Note

- For guaranteed supply of special tolerance please contact nearest Tata Steel representative.
- 96% length of coil will be guaranteed within dimensional tolerance and flatness.
- All the processing dimensional tolerances are from Tata Steel certified service centres. Please contact nearest Tata Steel representative for details.
- Thickness tolerance is valid upto C40 (C40 means 40 mm away from any of the edges of coil)
- Steel will be fully killed
- HR - Hot rolled, HRPO - Hot rolled pickled and oiled, HRSP0 - Hot rolled pickled and oiled with skin pass, Slitted and cut to length materials are available. Please contact nearest Tata Steel representative for material selection advice.
- Defined supply will be as 'As-rolled' Optional- HRPO and HRSP0 (conditions may be subject to dimensional restrictions)
- Weight of as rolled coil - HSM: 28 MT max and TSCR - 32.70 MT max.
- Any claim will be settled as per Tata Steel claim policy. Please contact nearest Tata Steel representative for details.

Table 1 *Standard flatness tolerances for cut lengths (including descaled material)

Specified Thickness, mm	Specified Width, mm	Flatness Tolerance, mm		
		Specified strength level of Re		
		<220 N/mm ²	220 to 320 N/mm ²	>320 N/mm ²
≤ 2.0	≤ 1200	21	26	32
	>1200 ≤ 1500	25	31	38
	>1500	30	38	45
> 2.0	≤ 1200 8	22	27	
	>1200 ≤ 1500	23	29	34
	>1500	28	35	42

* Flatness tolerance is as per IS/ISO 16160:2005. It is applicable for hot rolled coils also.

Note: Maximum deviation from flat horizontal surface: with the sheet lying under its own weight on a flat surface, the maximum distance between lower surface of the sheet and the flat horizontal surface is the maximum deviation from flatness (Refer figure 3 of IS/ISO 16160:2005). Above table also applies to sheet cut to length from coil by the customer when agreed-upon flattening procedures are performed.

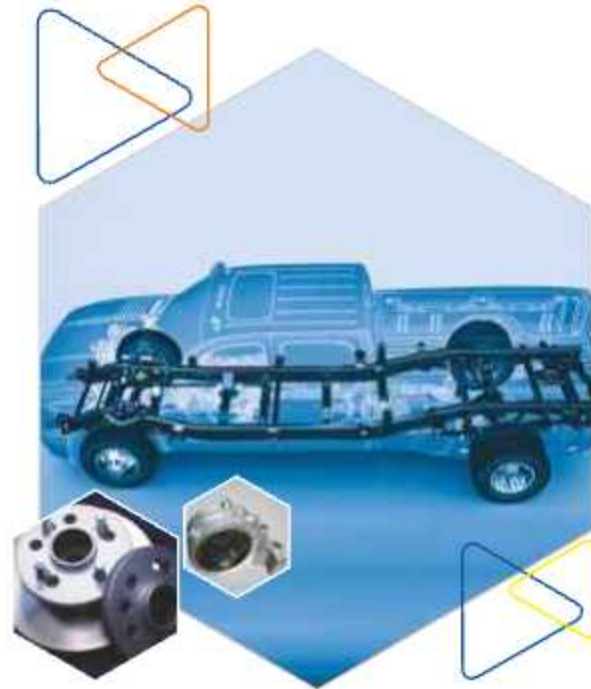


Customised offerings across applications



Automotive Industry

Tata Astrum is geared to meet the needs of the automotive component segment. Its production lines are equipped with the latest technologies and have robust quality control mechanisms to check any abnormality in the process which might hamper the final product quality.



“Tata Astrum's wide product range have helped us to increase our productivity and growth. The enthusiasm in development of new product by Tata Steel is commendable specially in E34 of higher thicknesses. We are satisfied with development of customised thickness like 6.35 and 7.6 mm. We wish to have a substantial relationship for many more future endeavours.”

TDCs for Automotive Industry

Reliable Autotech Pvt Ltd

TDC	Grade	Remarks	Equivalent Standard	Width and Thickness				Mechanical Properties			
				Thickness Range (mm)		Width Range (mm)		YS (MPa)		UTS (MPa)	
				Min	Max	Min	Max	Min	Max	Min	Max
HR02	IS 1079 DD	Dry/PO	Sheet Metal components	1.60	12.00	900	2050	-	-	-	400
HR03	SAPH 440	Dry/PO	Auto Structural	2.21	4.99	900	1500	305	-	440	520
HR04	BSK 46	Dry/PO	Auto Structural	5.00	7.99	900	1680	460	540	500	640
HR05	IS 2062 E 250 A (LC-MA)	Dry/PO	Fabrication	2.00	4.99	800	2050	250	-	410	-
HR08	IS 2062 E 250 A (LC-MA)	Dry/PO	Fabrication/ Auto Structural	5.00	12.00	900	1680	250	-	410	600
HR14	IS 5986 Fe 410	Dry/PO	Auto Structural/Axle Support	2.00	4.99	800	2050	265	400	430	520
HR17	IS 1079 EDD	Dry/PO	Sheet Metal components (requiring extra deep draw)	2.00	6.50	900	1540	-	-	-	380
HR20	IS 2062 E 250 A (Peritectic)	Dry	Fabrication/ Auto Structural	5.00	12.00	800	2050	255	370	410	600
HR36	BSK46 (Thin)	Dry/PO	Auto Structural	3.00	4.99	900	1680	460	540	500	640
HR45	IS 2062 E 250 GR. A	Dry	Fabrication/ Auto Structural	5.00	7.99	800	2050	250	-	410	-
HR49	E-38 SHEET	Dry/PO	Auto Structural	1.60	4.99	900	1680	373	461	441	558
HR50	JIS G 3113 SAPH 370	Dry/PO	Auto Structural	2.00	5.00	900	1680	225	-	370	-
HR51	E-38 SS 4012 A	Dry	Auto Structural	5.00	7.99	900	1680	372	461	441	560
HR53	FE 360	Dry	Rim Application (for wheels)	8.00	12.00	900	1680	240	-	350	410
HR54	SAPH440	Dry	Auto Structural	5.00	8.00	900	1540	305	-	440	-
HR55	E-34 SHEET	Dry/PO	Auto Structural	2.50	4.99	900	1680	333	412	392	470
HR56	E 34 SS4012A	Dry	Auto Structural	5.00	7.99	900	1680	333	412	392	470
HR57	E 34 SS4012A	Dry	Auto Structural	8.00	12.00	900	1680	333	412	392	470
HR58	BSK-46/E-46	Dry	Auto Structural	8.00	12.00	900	1540	460	-	500	640
HR59	E-36 SHEET	Dry/PO	Auto Structural	2.50	4.99	900	1540	355	450	430	550
HR61	SAPH440	HRSPD	Auto Structural	2.00	4.50	900	1540	305	-	440	520
HR65	E-34	HRSPD	Auto Internals	2.51	4.50	900	1620	333	412	392	470
HR95	EN10149 S460MC	Dry	Fabrication & Structural	5.00	8.00	900	2000	460	-	520	670
HT10	EN 10149 S355 MC	Dry	Fabrication/ Auto	2.00	4.99	900	2000	355	-	430	550

Lifting & Excavation

There is no doubt that Hot Rolled Products form the building blocks of lifting and excavation equipment. Be it the cabin of a tipper or the bucket of the excavator, each has to be made from the right grade of steel to ensure functionality and durability.

Our range of hi-tensile steel suits the requirements of load bearing components and our formable grades of steel can be used to manufacture smaller engine/cabin components.



“Our workability of Tata Astrum product is of optimum level as compared to other HR products because of Tata Steel's quality finish and chemistry. We appreciate the prompt response that we received from the team and we are very thankful to Tata Steel & Naresh Steel.”

Surin Automotive Pvt Ltd

TDCs for Lifting & Excavation

TDC	Grade	Remarks	Equivalent Standard	Width and Thickness				Mechanical Properties			
				Thickness Range (mm)		Width Range (mm)		YS (MPa)		UTS (MPa)	
				Min	Max	Min	Max	Min	Max	Min	Max
HR21	DIN 17100 ST 52.3	Dry	Tipper Body, Buckets for Earth Moving Equipment, PEB	5.00	8.00	900	1680	355	-	490	-
HR22	DIN 17100 ST 52.3	Dry/PO	Tipper Body, Buckets for Earth Moving Equipment, PEB	2.00	4.99	900	1680	355	-	490	-
HR67	DIN 17100 ST 52.3	Dry	Tipper Body, Buckets for Earth Moving Equipment, PEB	8.00	12.00	900	1680	355	-	490	-
HR33	ST 52.3 (Low S ₀) / EN 10025 S355 J2	Dry	Tipper Body	5.00	8.00	900	1680	355	-	470	630
HR87	EN 10025 S355 J2	Dry	Structurals	8.00	12.00	900	1680	355	-	470	-
HR28	IS 2062 E 350 Gr C	Dry/PO	Structurals for Solar/Transmission towers	2.00	4.99	800	2050	350	-	490	-
HR29	IS 2062 E 350 Gr C	Dry	Structurals for Solar/Transmission towers	5.00	8.00	800	2050	350	-	490	-
HR66	IS 2062 E 350 Gr C	Dry	Fabrication/ Structurals	8.00	12.00	800	2050	350	-	470	-
Ht33	IS 2062 E 350 Gr C	Dry	Fabrication/ Structurals	12.01	16.00	900	2000	350	-	490	-
HT85	IS 2062 E 450 Gr A	Dry	Fabrication & Structurals	5.00	7.99	900	2000	450	-	570	-
HR95	EN10149 S460MC	Dry	Fabrication/ Structurals	5.00	8.00	900	2000	460	-	520	670

Tubes & Pipes Manufacturing

Tubes are used for a wide array of applications, which include water/liquid conveyance, gas conveyance, structural framework, automotive/bicycle components, etc.

Tata Astrum caters to these needs of tube manufacturers with appropriate products. It is offered in different thickness & width combinations and slit to the requisite sizes. Owing to its better tolerances and optimal widths, it also helps to reduce wastage.



TDCs for Tubes & Pipes Manufacturing

TDC	Grade	Remarks	Equivalent Standard	Width and Thickness				Mechanical Properties			
				Thickness		Width		YS		UTS	
				Range (mm)	Range (mm)	Range (mm)	Range (mm)	Min	Max	Min	Max
HR01	IS 10748 Gr. I	Dry/PO	Tubes	1.60	4.99	900	2050	170	-	290	-
HR11	Tata PT(H)	Dry/PO	Precision Tubes	1.60	8.00	800	2050	195	-	320	480
HR16	IS 10748 Gr-1	Dry	Tubes	5.00	12.00	800	2050	170	-	290	-
HR80	ASTM A622(MOD)	Dry/PO	Precision Tubes	1.60	6.00	900	1680	250	-	350	-
SC73/HG34	IS 10748 Gr. 2	Dry/PO	Tubes	1.20	9.00	800	2050	210	-	330	-

Railways

The Railways is a segment where Tata Steel's products have found ample use for over a decade now. Tata Astrum complies to BIS and IRS standards which are mandatory requirements of Directorate of Railways. Tata Astrum finds its uses in a host of applications like engine coach components, spring planks, axles etc.



TDCs for Railways

				Width and Thickness				Mechanical Properties			
TDC	Grade	Remarks	Equivalent Standard	Thickness Range (mm)		Width Range (mm)		YS (MPa)		UTS (MPa)	
				Min	Max	Min	Max	Min	Max	Min	Max
HR06	IRS M41	Dry	Railway Coach/Panel/Roof	5.00	12.00	1100	1500	340	-	480	-
HU37	IRS M41 (Corten)	Dry	Railway Coach/Panel/Roof	5.00	8.00	900	2000	340	-	480	-
HU38	IRS M41 (Corten)	Dry	Railway Coach/Panel/Roof	2.00	4.99	900	2000	340	-	480	-
HU39	IRS M41 (Corten)	Dry	Railway Coach/Panel/Roof	8.00	12.00	900	2000	340	-	480	-
HU09	IS 2062 E 250 A (CU)	Dry	Railway Coach/Panel/Roof	5.00	7.99	800	2050	250	-	410	-
HU10	IS 2062 E 250 A (CU)	Dry	Railway Coach/Panel/Roof	2.00	4.99	900	2000	250	-	410	-



Projects & Fabrication

As India moves ahead on a growth trajectory, infrastructure is an area which is expanding at breakneck speed. Industrial projects and fabrication jobwork will aid this growth.

Tata Astrum's structural and hi-tensile grade steels are available in a wide range of thicknesses and widths to meet the needs of this segment.

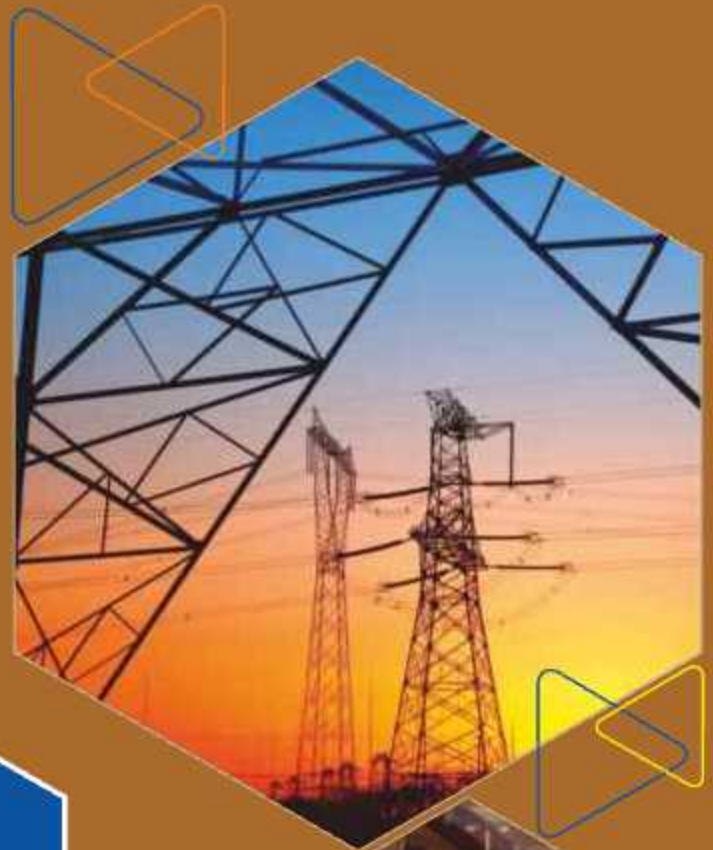


TDCs for Projects & Fabrication

TDC	Grade	Remarks	Equivalent Standard	Width and Thickness				Mechanical Properties			
				Thickness Range (mm)		Width Range (mm)		YS (MPa)		UTS (MPa)	
				Min	Max	Min	Max	Min	Max	Min	Max
HR05	IS 2062 E 250 A (LC-MA)	Dry/PO	Fabrication	2.00	4.99	800	2050	250	-	410	-
HR07	IS 2062 E 250 A (Peritectic)	Dry	Fabrication/ Auto Structural	2.51	4.99	800	2050	255	370	410	-
HR08	IS 2062 E 250 A (LC-MA)	Dry/PO	Fabrication/ Auto Structural	5.00	12.00	900	1680	250	-	410	600
HR12	ASTM 622M	HRSPD	Compressor Shell	1.60	4.50	1000	1540	-	-	-	-
HR15	IS 5986 Fe 360	Dry/PO	Structural/Fabrication	1.60	4.99	800	2050	235	-	370	-
HR18	IS 2062 Gr E250 BR	Dry/PO	Fabrication/ Structural	2.00	4.99	800	2050	250	-	410	-
HR19	IS 2062 Gr E250 BR	Dry	Fabrication/ Structural	5.00	12.00	800	2050	250	-	410	-
HR20	IS 2062 E 250 A (Peritectic)	Dry	Fabrication/ Auto Structural	5.00	12.00	800	2050	255	370	410	600
HR23	IS 2062 E 250 A	Dry	Structurals requiring Hot Dip Galvanizing	5.00	12.00	900	1540	255	370	410	600
HR25	IS 2062 E 250 Gr-B0	Dry	Fabrication/ Structural	5.00	12.00	900	1540	250	-	410	-
HT03	IS 2062 E 250 A	Dry	Fabrication & Structural	16.01	20.00	800	2050	250	-	410	-
HR27	IS 2062 E 450 A	Dry	Hi strength structural	2.00	5.00	900	1680	450	-	570	-
HR30	IS 2062 E 250 Gr B0	Dry	Fabrication/ Structural	12.01	16.00	900	1680	250	-	410	600
HR31	IS 1079 Gr D	Dry/PO	Sheet Metal Components requiring draw	1.60	6.00	900	1680	-	-	240	420
HR40	IS 5986 235 (THICK)	Dry	Fabrication & Structural	5.00	12.00	1200	1680	235	-	360	470
HR41	IS 5986 255 (THICK)	Dry	Fabricated Components	5.01	12.00	900	1680	255	-	410	520
HR42	IS 5986 205	Dry	Fabricated Components	6.01	9.00	900	1680	205	-	330	440
HR43	IS 11513 CR2	Dry	HR for CR	1.60	12.00	800	2050	-	-	-	-
HR44	IS 1079 HR 2	Dry	Direct HR Components	1.60	6.00	800	2050	-	-	-	420
HR45	IS 2062 E 250 GR A	Dry	Fabrication/ Auto Structural	5.00	7.99	800	2050	250	-	410	-
HR47	IS 2062 E 250 GR A	Dry	Fabrication/ Auto Structural	1.60	2.50	800	1700	250	-	410	-
HR63	IS 1079 HR 2	Dry	Drawing Components	5.00	7.99	800	2050	170	-	-	420
HR64	IS 5986 FE 360	HRSPD	Panels	1.60	4.50	900	1620	235	-	370	-
HR66	IS 2062 E 350 C	Dry	Fabrication/ Structural	8.00	12.00	800	2050	350	-	490	-
HR68	IS 2062 E250 GR A (GAL)	Dry	Fabrication/ Structural (Requiring galvanizing)	2.00	4.99	900	1680	255	370	410	600
HR69	IS 2062 E450 A	Dry	Fabrication & Structural	5.00	12.00	900	1540	450	-	570	-
HR70	IS 2062 E 250 B0	Dry	Structurals	8.00	12.00	900	2050	250	-	410	-
HR76	IS 2062 E 250 BR	Dry	Fabrication/ Structural	16.01	20.00	800	2050	250	-	410	-
HR78	IS 2062 E 250 GR A	Dry	Fabrication/ Structural	12.01	16.00	800	2050	250	-	410	-
HR81	IS 5986 235 (PANEL)	Dry/PO	Direct Forming Applications	1.60	2.50	900	1680	235	-	370	-
HU12	IS 2062 E 250 BR	Dry	Fabrication & Structural	1.60	4.99	900	2000	250	-	410	-
HU13	IS 2062 E 250 BR	Dry	Fabrication & Structural	5.00	7.99	900	2000	250	-	410	-
HU14	IS 2062 E 250 BR	Dry	Fabrication & Structural	8.00	12.00	900	2000	250	-	410	-
HU30	EN 10025 S275 J2 (Si>0.14)	Dry	Structurals	2.00	4.99	900	2050	275	-	410	580
HU31	EN 10025 S275 J2 (Si>0.14)	Dry	Structurals	5.00	7.99	900	2000	275	-	410	580
HU32	EN 10025 S275 J2 (Si>0.14)	Dry	Structurals	8.00	12.00	900	2000	275	-	410	580
HU33	EN 10025 S355 J2 (Si>0.14)	Dry	Structurals	2.00	4.99	900	2000	355	-	470	680
HU34	EN 10025 S355 J2 (Si>0.14)	Dry	Structurals	5.00	7.99	900	2000	355	-	470	630
HU34	EN 10025 S355 J2 (Si>0.14)	Dry	Structurals	5.00	7.99	900	2000	355	-	470	630
SRP1	IS 1079 Gr D	HRSPD	Panels	1.60	4.50	900	1540	-	-	-	420
HT90	EN 10149 S500 MC	Dry	Railways/ Fabrication	5.00	7.99	800	2050	500	-	550	650
HT91	EN 10149 S500 MC	Dry	Railways/ Fabrication	8.00	12.00	800	2050	500	-	550	650
HT92	EN 10149 S550 MC	Dry	Fabricated Components	5.00	7.99	800	2050	550	-	600	760
HT93	EN 10149 S550 MC	Dry	Fabricated Components	8.00	12.00	800	2050	550	-	600	760
HT95	HS650 (ATM grade)	Dry	ATM Safe	10.00	13.00	900	2000	650	-	700	790
HT97	EN10149-2 S700MC	Dry	High Strength HR for CE, ATM Safe	4.00	13.00	900	2000	700	-	750	950
HU44	HR ENAMELLING IS 2062 E250 GR A	Dry/PO	Structurals (HR Steel for Enamelling)	2.00	4.99	900	1680	250	-	410	-
HU46	HR ENAMELLING IS 2062 E250 GR A	Dry/PO	Structurals (HR Steel for Enamelling)	5.00	7.99	900	1680	250	-	410	-
HU45	HR ENAMELLING IS 2062 E250 GR A	Dry/PO	Structurals (HR Steel for Enamelling)	8.00	12.00	900	1680	250	-	410	700
HT34	IS 2062 E250 GR C	Dry	Structurals	2.00	4.99	900	1680	250	-	410	600
HT35	IS 2062 E250 GR C	Dry	Structurals	5.00	7.99	900	1680	250	-	410	600
HT36	IS 2062 E250 GR C	Dry	Structurals	8.00	12.00	900	1680	250	-	410	600
HT37	IS 2062 E250 GR C	Dry	Structurals	12.01	16.00	900	1680	250	-	410	600

Transmission & Distribution

The India power industry is undergoing a major transformation phase owing to the efforts taken by the government to improve electricity access in the country. In the T&D industry, improving the efficiency of the grid is the key to an efficient and reliable delivery of electricity. Tata Astrum has been offering segment specific products to ensure application suitability as well as value addition for strength and improved corrosion resistance.



TDCs for Transmission & Distribution

TDC	Grade	Remarks	Application	Width and Thickness				Mechanical Properties			
				Thickness Range (mm)		Width Range (mm)		YS (MPa)		UTS (MPa)	
				Min	Max	Min	Max	Min	Max	Min	Max
HP01	IS 2062 E250 Gr BR (Hi Si)	Dry	Transmission Line Towers	2.00	4.99	900	2000	250	-	410	-
HP02	IS 2062 E250 Gr BR (Hi Si)	Dry	Transmission Line Towers	5.00	7.99	900	2000	250	-	410	-
HP03	IS 2062 E250 Gr BR (Hi Si)	Dry	Transmission Line Towers	8.00	12.00	900	2000	250	-	410	-
HP04	IS 2062 E250 Gr BR (Hi Si)	Dry	Transmission Line Towers	12.00	16.00	900	2000	250	-	410	-
HP05	IS 2062 E250 Gr BR (Hi Si)	Dry	Transmission Line Towers	16.01	20.00	900	2000	250	-	410	-
HP06	IS 2062 E350 Gr C (Hi Si)	Dry	Transmission Line Towers	2.00	4.99	900	2000	350	-	490	-
HP07	IS 2062 E350 Gr C (Hi Si)	Dry	Transmission Line Towers	5.00	7.99	900	2000	350	-	490	-
HP08	IS 2062 E350 Gr C (Hi Si)	Dry	Transmission Line Towers	8.00	12.00	900	2000	350	-	490	-
HP09	IS 2062 E350 Gr C (Hi Si)	Dry	Transmission Line Towers	12.00	16.00	900	2000	350	-	490	-
HP10	IS 2062 E350 Gr C (Hi Si)	Dry	Transmission Line Towers	16.01	20.00	900	2000	350	-	490	-
HU28	IS 2062 E250 Gr A (Si>0.14)	Dry	Transmission & Distribution	5.00	7.99	900	1540	280	-	420	-
HU29	IS 2062 E250 Gr A (Si>0.14)	Dry	Transmission & Distribution	8.00	12.00	900	1540	280	-	420	-
Other TDCs											
HU30	EN 10025 S275 J2 (Si>0.14)	Dry	Structurals	2.00	4.99	900	2050	275	-	410	580
HU31	EN 10025 S275 J2 (Si>0.14)	Dry	Structurals	5.00	7.99	900	2000	275	-	410	580
HU32	EN 10025 S275 J2 (Si>0.14)	Dry	Structurals	8.00	12.00	900	2000	275	-	410	580
HU33	EN 10025 S355 J2 (Si>0.14)	Dry	Structurals	2.00	4.99	900	2000	355	-	470	680
HU34	EN 10025 S355 J2 (Si>0.14)	Dry	Structurals	5.00	7.99	900	2000	355	-	470	680
HU35	EN 10025 S355 J2 (Si>0.14)	Dry	Structurals	8.00	12.00	900	2000	355	-	470	680
HU40	EN 10025 S275 J2 (Si>0.14)	Dry	Structurals	12.01	16.00	900	2000	275	-	410	580
HU50	EN 10025 S355 J2 (Si>0.14)	Dry	Structurals	16.01	20.00	900	2000	355	-	470	630
HU56	EN 10025 S275 J2 (Si>0.14)	Dry	Structurals	16.01	20.00	900	2000	275	-	410	560
HT81	ASTM A572 GR 65 Type 2 (Low Si)	Dry	Fabrication & Structural (High Mast Poles)	5.00	7.99	900	2000	450	-	550	-
HT82	ASTM A572 GR 65 Type 2 (Low Si)	Dry	Fabrication & Structural (High Mast Poles)	8.00	12.00	900	2000	450	-	550	-
HO75	ASTM A572 GR 65 Type 2	Dry	Fabrication & Structural (High Mast Poles)	5.00	7.99	900	2000	450	-	550	-
HO76	ASTM A572 GR 65 Type 2	Dry	Fabrication & Structural (High Mast Poles)	8.00	12.00	900	2000	450	-	550	-
HO77	ASTM A572 GR 65 Type 2	Dry	Fabrication & Structural (High Mast Poles)	12.00	16.00	900	2000	450	-	550	-
HO78	ASTM A572 GR 65 Type 2	Dry	Fabrication & Structural (High Mast Poles)	16.01	20.00	900	2000	450	-	550	-
HT14	EN 10025 S355 J0 (Low Si 0.02-0.05)	Dry	Fabrication/ Structural	2.00	4.99	900	2000	355	-	470	680
HT17	EN 10025 S355 J0 (Low Si 0.02-0.05)	Dry	Fabrication/ Structural	8.00	12.00	900	2000	355	-	470	680
HT18	EN 10025 S355 J0 (Low Si 0.02-0.05)	Dry	Fabrication/ Structural	5.00	7.99	900	2000	355	-	470	680

Solar Panel Modular Mounting Structure

India's future prosperity rests on a steady supply of affordable, clean and reliable energy. Solar power in India is a fast developing industry. India's policy ambitions, notably the target to reach 450 GW of renewable capacity by 2030 portends explosive growth for this sector. Tata Astrum Solar was launched to further the country's mission of tapping India's solar energy potential to ensure clean power in every corner of the country, and reduce the carbon footprint. The offering is a specialised high tensile steel grade with enhanced strength, durability and weather resistance for Module Mounting Structures of Solar Panels, supported by a spectrum of services that ensure value creation for the customer.



“Tata Astrum Solar is an offering to meet the evolving needs of India's solar industry and spearhead development by helping to electrify every corner of the country.”

KEC International Limited, Jaipur

TDCs for Solar

TDC	Grade	Remarks	Equivalent Standard	Width and Thickness				Mechanical Properties			
				Thickness Range (mm)		Width Range (mm)		YS (MPa)		UTS (MPa)	
				Min	Max	Min	Max	Min	Max	Min	Max
HR28	IS 2062 E 350 Gr C	Dry/PO	Structurals for Solar/ Transmission Towers	2.00	4.99	800	2050	350	-	490	-
HR29	IS 2062 E 350 Gr C	Dry	Structurals for Solar/ Transmission Towers	5.00	8.00	800	2050	350	-	490	-
HR05	IS 2062 E 250 A (LC-MA)	Dry/PO	Fabrication	2.00	4.99	800	2050	250	-	410	-
HR08	IS 2062 E 250 A (LC-MA)	Dry/PO	Fabrication/ Auto Structural	5.00	12.00	900	1680	250	-	410	600

Pre-Engineered Buildings

With the thrust on Smart Cities and growth of infrastructure, the PEB segment is witnessing phenomenal growth. PEBs are delivered as a complete finished product to the site with a basic structural steel framework with attached factory-finish roofing and cladding. Tata Astrum is geared to meet the structural requirements of PEB projects with its product and service advantages. The scope of using PEBs ranges from showrooms, low-height commercial complexes, industrial buildings and workshops, stadiums, schools, bridges, fuel stations to aircraft hangers, exhibition centres, railway stations and metro applications.



“We are proudly associated with Tata Steel for all our hot rolled sheets and plates requirements since last 5 years. The product quality in terms of dimensional tolerance and weldability are most important to our process and we are fully satisfied with Tata Steel for these parameters. Product marking is an added benefit which helps establish confidence with our customers on the raw material being used.”

Paramount Building Solutions Pvt Ltd

TDCs for Pre-Engineered Buildings

TDC	Grade	Remarks	Equivalent Standard	Width and Thickness				Mechanical Properties			
				Thickness Range (mm)		Width Range (mm)		YS (MPa)		UTS (MPa)	
				Min	Max	Min	Max	Min	Max	Min	Max
HR21	DIN 17100 ST 52.3	Dry	PEB	5.00	8.00	900	1680	355	-	490	-
HR22	DIN 17100 ST 52.3	Dry	PEB	2.00	4.99	900	1680	355	-	490	-
HR34	ASTM A 572 Gr 50 Type 1	Dry/PO	PEB	2.50	4.99	900	1500	345	-	450	-
HR35	ASTM A 572 Gr 50 Type 1	Dry	PEB	5.00	10.00	900	1680	345	-	450	-
HR28	IS 2062 E 350 Gr C	Dry/PO	Structurals for Solar/ Transmission towers	2.00	4.99	800	2050	350	-	490	-
HR29	IS 2062 E 350 Gr C	Dry	Structurals for Solar/ Transmission Towers	5.00	8.00	800	2050	350	-	490	-
HR66	IS 2062 E 350 C	Dry	Fabrication/ Structural	8.00	12.00	800	2050	350	-	490	-
HT33	IS2062 E350 GR.C	Dry	Fabrication/ Structural	12.01	16.00	900	2000	350	-	490	-
HT85	IS2062 E450 Gr A	Dry	Fabrication & Structural	5.00	7.99	900	2000	450	-	570	-

Ensuring authenticity, Ensuring your trust

Processed Material

Tata Astrum is processed at service centres, owned and operated by our channel partners and certified to the highest quality standards for service and quality. These service standards are evaluated every year and upgraded to raise the benchmark for service.



SOURCE AUTHENTICITY

Test Certificate

A Test Certificate is provided with every to ensure source authenticity.



Marking

The logo, Tata Astrum, is printed on the sheets as a guarantee of source authenticity.



Packaging & Material Identification

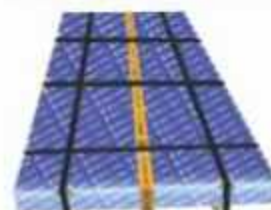
Tata Steel's stringent packaging standards have been developed to ensure failsafe packing. Each coil/ bundle has a label carrying the consignment and material details. It ensures proper identification and traceability.



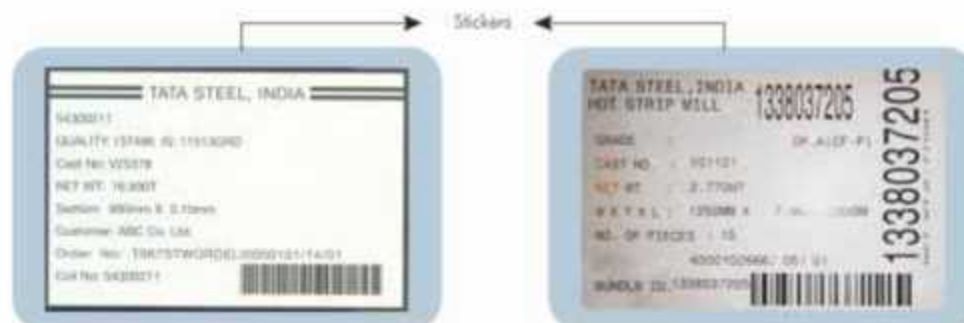
Dry HR Packaging



Coil Packaging



PO & SPO Packaging



Services to enhance competitiveness



Product Application Engineer support

Tata Astrum's team of Application Engineers work with customers to help them choose the right grade for their application and offer every kind of technical support.



Value Creation through focused engagement programs

Programmes such as Ecaféz Qualithon create a forum for offline and online knowledge sharing on topics that impact quality. The objective is to create a mindset of quality thinking at every level of the organisation and ensure customers' competitiveness in rapidly evolving markets.



The Ecaféz Qualithon session was excellent. I would like to attend other such sessions. Detailed programme on lean manufacturing and ZED initiative would be appreciated.

Vijay Kathote

Plant Head, P S Camshafts Pvt. Ltd.



Safety First programme was very useful and such training should be conducted in future. Accident prevention, fire safety and housekeeping sessions were very good. Machine Maintenance Plan and Tool Maintenance Plan should be included in future seminars.

Naresh Tyagi

Quality Head, Neumann Components Pvt. Ltd.



Technical support and knowledge sharing have had admirable effects in our customer services. Product range of Tata Astrum is useful to cater new customers as well as new developments. We expect continuation & long term association in business opportunities.

Vijay Kathote

Plant Head, P S Camshafts Pvt. Ltd.



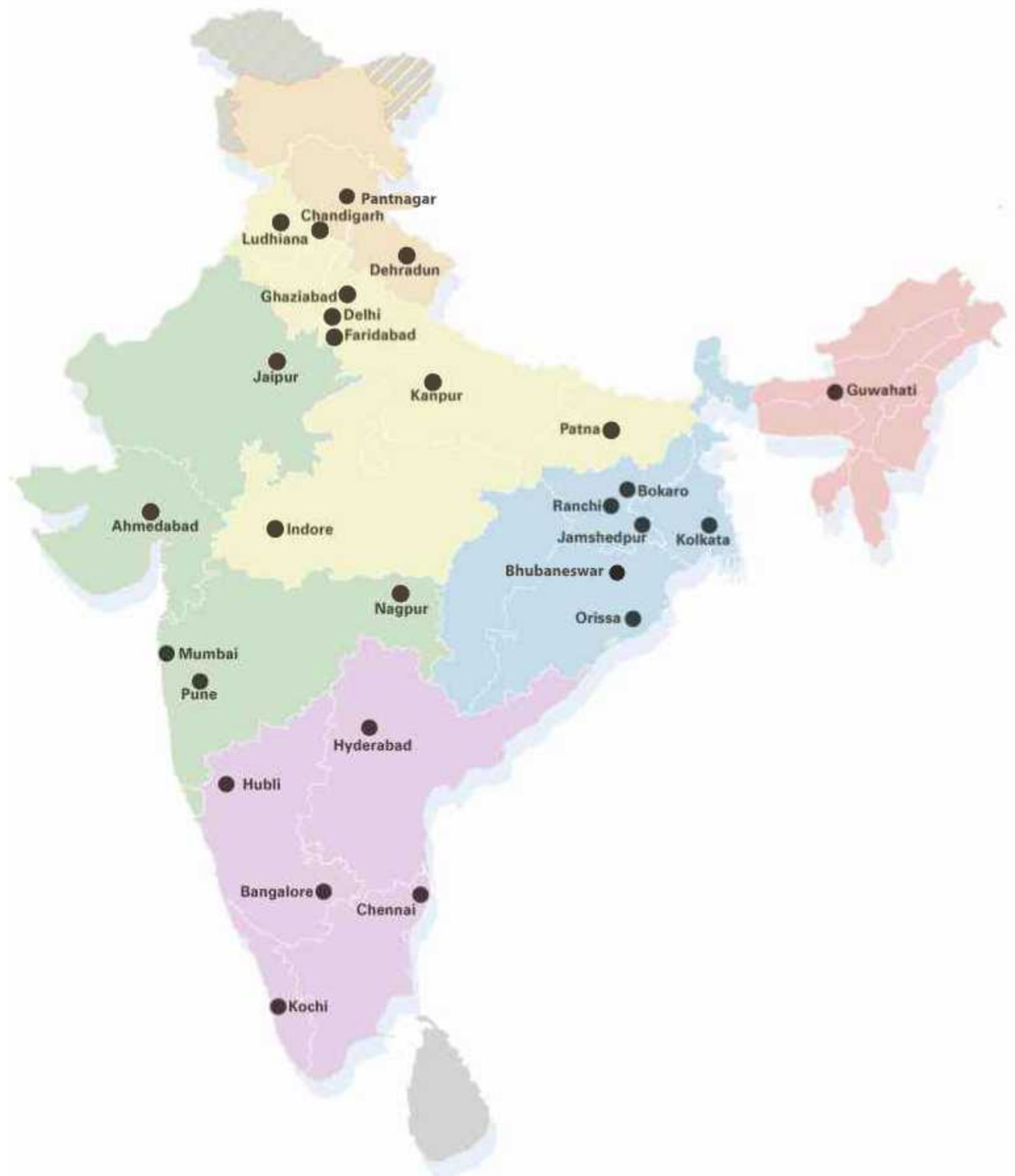
Collaborating to Excel

Our marketing and technical teams collaborate with customers to jointly develop offerings which are customised to their needs, thus reducing cost and improving process efficiency.



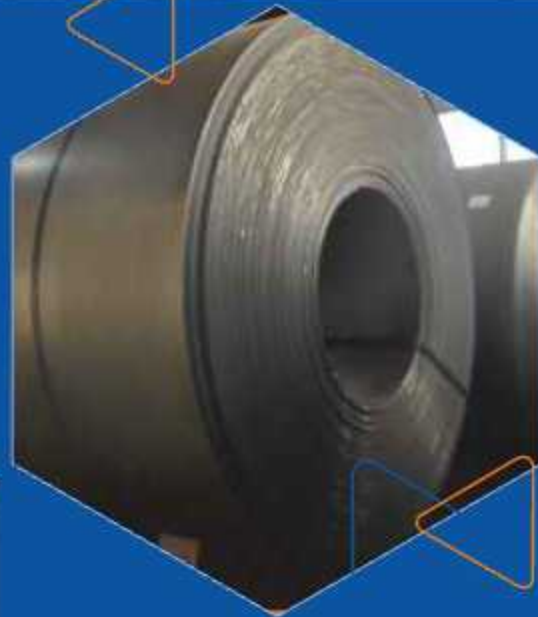
Digital Knowledge Sharing Platform
www.ecafez.com

Pan-India Distribution Network





Tata Astrum's pan-India distribution network ensures faster delivery and consistent availability of the material in the required sizes.



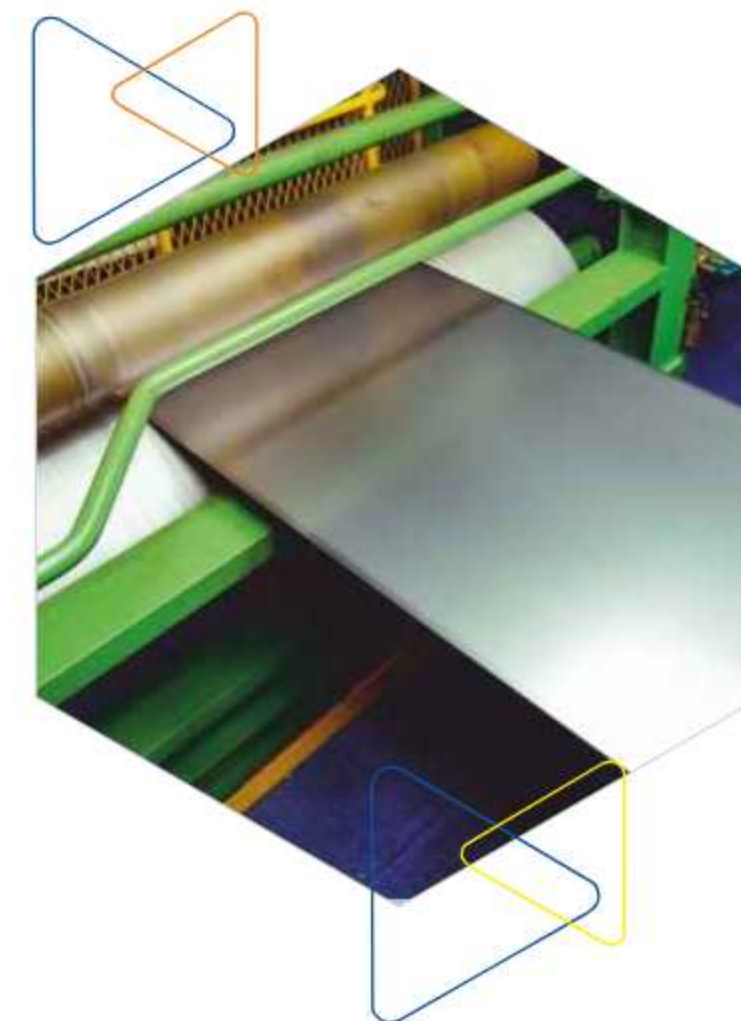
NORTH ZONE

Distributor Name	Territory	Contact Person	Mobile No.	E-Mail ID	Address
Bansal Brothers	Delhi	Mr Ravi Bansal	25706922 / 9810019257	bansalbrothers@yahoo.com	X-26, Loha Mandi, Naraina, New Delhi- 110028
Bhagwati Steel Sales	Chandigarh	Mr Pawan Mangla	9872201862	info@bssales.com	379, Industrial Area Phase-II, Chandigarh- 160 002
Dharamvir & Brothers	Ludhiana	Mr Varinder Agarwal	9876561764 / 9814061764	dvb_juc@yahoo.co.in	DVB Bros, 462, Back Side Ramji Halwai, Industrial Area- B, Miller Ganj, Ludhiana- 141003
Fairdeal Enterprises	Ludhiana	Mr Mahavir Garg	--	fairdealsteels@gmail.com	Fairdeal Steels Pvt. Ltd., N. D. 209, Tanda Road, Jalandhar City- 144 004, Punjab
Fairdeal Steel Pvt Ltd	Ludhiana	Mr Mahavir Garg	9814225811	fairdealsteels@gmail.com	Fairdeal Steels Pvt. Ltd., N.D. 209, Tanda Road, Jalandhar City- 144 004, Punjab
Ferro Steel Solutions	Faridabad	Mr Rajeev Aggarwal	9810002106 / 09810216975	info@ferrosteelsolutions.com	B1-B2-B3, Nehru Ground, NIT, Faridabad- 121001
G R Gupta & Brothers	Faridabad	Mr Sanjay Gupta	9810057050 / 9311569002	sanjay@grgupta.com	Y-8, Naraina Warehousing Area, New Delhi- 110 028
GRG Steels Pvt Ltd	Ghaziabad	Mr Rajiv Gupta	9810057050 / 9311569002	rajiv.gupta@thegrpgroup.com	Y-8, Naraina Warehousing Area, New Delhi- 110 028
Hansraj Steels	Faridabad	Mr Bhuvan Bansal	9810019257	hansrajsteels@yahoo.co.in	C-30/C, Nehru Ground, NIT, New Industrial Town, Faridabad- 121001, Haryana
India Steel	Kanpur	Mr Apoorva Agarwal		indiateeldistributors@gmail.com	
Iron House	Jaipur	Mr Hitesh Khandelwal		ironhouse21@rediffmail.com	E/350, V.K.I. Area, Jaipur- 302013, Rajasthan
M/s Shori Lal Kewal Kumar	Faridabad	Mr Mohit Gupta	9811163445	slkk.steel@gmail.com	Neelam Gupta, Z-121, Loha Mandi, Naraina, New Delhi-110028
OVS Ispat Udyog	Kanpur	Mr Sandeep Bansal	9839039929	ovsispadyog@ymail.com	B118/1585, Kaushal Puri, Sarojini Nagar, Kanpur- 208012
P S Enterprises	Ghaziabad	Mr Deepak Garg	98100 24721 / 93111 93777	deepakpsenterprises@gmail.com	C-183, B.S. Road Industrial Area, Ghaziabad - 201 009, Uttar Pradesh
Pelikan Dossier Pvt Ltd	Jaipur	Mr Sanjeev Sharda	9829010590	pelikan@pelikandossier.com	Office No- 605, Sun and Moon Chambers, Near Ajmer Pulia, Ajmer Road, Jaipur- 302013
Punjab Agro Implements Works	Ludhiana	Mr Vinod Kumar Singal	9814049000	vkisngal@yahoo.com	467, Industrial Area- B, Ludhiana- 141 003
R R Steel Industries	Ludhiana	Mr Rishi Bansal		rrsteel.rishi@gmail.com	440, Overlock Road, Ludhiana, Punjab- 141003
Rakesh Steels	Faridabad	Mr Ved Bansal	9811036819	steelium@rakeshsteels.in	B168, Nehru Ground, NIT, Faridabad- 121001
Sangeeta Steel Corporation	Ludhiana	Mr Sanjay Bhatia	9914365665	ritu@sangeetasteel.co.in	509, Overlock Road, Agarwal Market, 1st floor, Ludhiana- 141 003
Sangeeta Steel Corporation	Chandigarh	Mr Sanjay Bhatia	9914365665	ritu@sangeetasteel.co.in	Near M.k. Dharam Kanda, Budhewal Road, Vill- Jandiali, Chandigarh Road- 141112, Ludhiana
Sanjeev Industrial Corporation	Faridabad	Mr Sanjeev Aggarwal	9810009369	info@sanjeevindustrial.com	B147, Nehru Ground, NIT, Faridabad- 121001
TSPDL Faridabad	Faridabad		8979981919	sunilvats@tspdl.com	33B, Industrial Area, NIT Faridabad- 121001
TSPDL Ghaziabad	Ghaziabad		8979981919	sunilvats@tspdl.com	C 87/1 & 88 B S Road, Industrial Area, Ghaziabad- 201009
TSPDL Ludhiana	Ludhiana		9216608443	neerajsharma@tspdl.com	1st Floor, SCF No.132, Phase-1, Urban Estate, Jamalpur, Ludhiana-141010
TSPDL Uttarakhand	Pantnagar		8979000254	pushpendra@tspdl.com	Plot No 57, Sector 11, IIE-Pantnagar, Uttarakhand- 263154
Vatika Tracom Pvt Ltd	Jaipur	Mr Keshav Bihani	9829015661	bihanientp@sify.com	S-1, Usha Plaza, 3rd Floor, Opp. All India Radio, M.I. Road, Jaipur- 302 001, Rajasthan
Vikrant Iron Pvt Ltd	Ghaziabad	Mr Rajat Bansal	9212287902	rajat.bansal@vikrantgroup.in	113/8 Navyug Market, 1st Floor, Ghaziabad- 201 001, Uttar Pradesh



EAST ZONE

Distributor Name	Territory	Contact Person	Mobile No.	E-Mail ID	Address
B K Steel Enterprises	Kolkata	Mr Sunil Kumar Khemka	9038822334	bksteel224@gmail.com	20, Maharshi Devendra Road, 1st Floor Room 15, Kolkata- 700007
Bhartia Distributors Pvt Ltd	Bhubaneswar	Mr Kishenlal Agarwal	9437027797	bdpl@bhartiagroup.com	Gaurishanker Bihan, 2 N. C. Dutta Sarani, 4th Floor, Sagar Estate, Kolkata- 700001
Birma Industrial & Business Enterprise Pvt Ltd	Ranchi	Mr Sunil Kejriwal	9934010266	birmaind@gmail.com	M/s Sagar Steels, Sati Jaymati Road, Near Athgaon Masjid, Guwahati- 781001, Assam
BMW Ventures Ltd	Patna	Mr Nitin Kishorepuria	9234667222	nitin@bmwventures.com	Tata Centre (4th floor), 43, Jawaharlal Nehru Road, Kolkata- 700071
Bright Steel	Bhubaneswar	Mr Virendra Kheria		brightsteel_bbsr@rediffmail.com	1st Floor, Mona Cinema Complex, East Gandhi Maidan, Patna- 800004, Bihar
Integral Vyapar Pvt Ltd	Rourkela	Mr Deepak Jhaharia	9431127628	bkodeepakj@gmail.com	11/A, 2nd Floor, Suite- 12, Maharshi Devendra Road, Kolkata- 700007, West Bengal
Pawan Kr. Kanoi	Kolkata	Mr Sumit Kanoi	9831171777	pawankumarkanoi@gmail.com	20, Maharshi Debendra Road, 2nd Floor, Room No: 40/1, Kolkata- 700007
PSPL Steel Processors Private Limited	Jamshedpur	Mr Bimal Jain	9831068150	psplsteel@gmail.com	Sagar Estate, 2 N. C. Dutta Sarani, Room No- 17, 2nd Floor, Kolkata -700001
PSPL Steel Processors Pvt Ltd	Kolkata	Mr Nirmal Jain	9836744444	abhinandan48@gmail.com	56, Ancillary Industrial Area, Tupudana, Hatia, Ranchi, Jharkhand- 834003
R. S. Bokaro Metal Pvt Ltd	Bokaro	Mr Deepak Jhaharia	9431127628	bkodeepakj@gmail.com	C-6, Phase- VI, Adityapur Industrial Area, Jamshedpur- 832108, Jharkhand
Ramesh Company	Kolkata	Mr Rajesh Bihani	9831037701	rcosales@bihanisteel.com	Purulia Road, Bokar Chas- 827013, Jharkhand
Sagar Steels	Guwahati	Mr Hemant Kr. Agarwal	9864028704	hemant@sagarsteels.co.in	Pillgrim Road, College Square, Cuttack- 753003, Orissa
Tikmani Steel Trading Co.	Kolkata	Mr Sushil Tikmani	9831078886	tikmanisteel@yahoo.co.in	Plot No- 1357, Vedvyas, Brahmani Tarang, Rourkela- 769041, Dist- Sundergarh, Odisha
TSPDL Bhubaneswar	Bhubaneswar		9903965999	tusharnag@tspd.com	Tata Centre (4th floor), 43, Jawaharlal Nehru Road, Kolkata- 700071
TSPDL Kolkata	Kolkata		9830405414	arjun.saha@tspd.com	06, Cuttack Road, Bhubaneswar- 751006



WEST ZONE

Distributor Name	Territory	Contact Person	Mobile No.	E-Mail ID	Address
ANM Ispat Pvt Ltd, Ahmedabad	Ahmedabad	Mr Samir Navinchandra Mehta	9987366555	snm@abhayispat.com	31, Shyam 2 Ind. Hub, B/H: Devang Steel, Near HOF, Sarkhej-Bavla Highway, Changodar, Ahmedabad
ANM Ispat, Mumbai	Mumbai	Mr Samir Navinchandra Mehta	9987366555	snm@abhayispat.com	308 Platinum, Jawahar Road, Ghatkopar (East), Mumbai- 400077, Maharashtra
Naresh Steel Industries Pvt Ltd	Mumbai	Mr Saurabh Shah	9820121494	info@nareshsteel.com	C-501, Neelkanth Business Park, Opposite Vidyavihar Rly Stn., Vidyavihar (West), Mumbai – 400 086
Pasa Associates Pvt Ltd	Raipur	Mr Yogesh Beriwal	9893626700	pasaraipur@pasahouse.com	260, Guru Ghasidas Plaza, Amapara, G.E. Road, Raipur-492001, Chhattisgarh
Prestige Metallics Pvt Ltd	Raipur	Mr Sanjesh Gupta	9755821000	prestigeexpressmart@gmail.com	Near Loha Bazar, Ring Road No. 2, Hirapur, Raipur- 492001
Prince Steel Industries (P) Ltd	Nagpur	Mr Amit Gupta	98650362469		155-156, Small Factory Area, Bagadganj, Nagpur- 440008
Rohit & Company, Ahmedabad	Ahmedabad	Mr Raghav Bihani	9823033791	kishormundhra@rohitandco.com	B-605, Nirman, Behind Navarangpura Bus Stand, Navarangpura, Ahmedabad- 380 009
Rohit & Company, Mumbai	Mumbai	Mr Raghav Bihani	9867576003	raghav.bihani@rohitandco.com	B2/1003, Marathon Innova, Opp. Peninsula Corporate Park, Off Ganpatrao Kadam Marg, Lower Parel (w), Mumbai- 400013
SKM Steels, Indore	Indore	Mr AMITABH MANDLOI	9826051517	amitabh@skmsteels.com	311 & 312, Princess Business Sky Park, PU-3, Scheme No. 54, Opposite Orbit Mall, A. B. Road, Indore
SKM Steels, Mumbai	Mumbai	Mr Kirti M Shah	9821191011	info.crca@skmsteels.com	12, SKM House, Khetwadi 6th Lane, Near Alankar Cinema, S.V.P. Road, MUMBAI- 400 004
Tejram Ramniwas Agrawal	Nagpur	Mr Sumit Agrawal	9823249659	trasteel@yahoo.com	629, Ghat Road, Nagpur- 440018
TSPDL Pune	Pune		9552135200	arnab@tspd.com	206, 2nd Floor, Business Guild, Law College Road, Erandwane, Pune- 411004



SOUTH ZONE

Distributor Name	Territory	Contact Person	Mobile No.	E-Mail ID	Address
Bansal Steel, Hyderabad	Telangana	Mr. Umesh Agarwal		bansal_ispat@yahoo.com	5-2-199 & 200/3, Distillery Road, Secunderabad- 500003, Telangana
CMG Steels Pvt. Ltd.	Chennai	Mr. Pawan Kumar Goyal	9840928882	info@cmgsteels.com	No. 8, Elanthanur, Ponneri High Road, Manali, Chennai - 600103
Durga Steel Industries	Bangalore	Mr. Hari Om Agarwal	9243109185	hariom@durgasteel.in	No. 266 A, Jigani Link Road, Bommasandra, Industrial Area, Survey No. 127, Jigani Hobli, Anekal Taluk, Bengaluru- 562106
G K Ispat Pvt Ltd, Bangalore	Bangalore	Mr. Gopal Kr Agarwal		fp@gksteels.com	M/s G. K. Steels, Prestige Nishat, 2nd Floor, 6 Lady Curzon Road, Bangalore 560001.
G K Ispat Pvt Ltd, Hyderabad	Hyderabad	Mr. Rohan Kr Agarwal	9886484347	rohan@gkispat.com	Unit No: A3, Bansal Chambers, Plot No.32/2 & 7, SVCIE, Phase-I, Balanagar, Hyderabad-500037
Govindaraja Mudaliar Sons Pvt. Ltd.	Chennai	Mr. Karthik	9840781771	karthik@gmspl.net	Old 202, New 264, Thambu Chetty Street, Chennai - 600001
HST Steels Pvt. Ltd.	Hyderabad	Mr. Arun Gaggar	9347341711	hststeels@mail.com	Plot No. 40/A, IDA, Balanagar, Hyderabad- 500 037, Andhra Pradesh
Karthik Steel	Chennai	Mr. Karthikeyan	9841298982	karthiksteel@yahoo.co.in	59/10, Manali Express Road, Kamarajar Nagar, Manali, Chennai- 600057
Kummenchery Steels	Cochin	Mr. K K Mahin	9847444474	mahin@kummencherysteels.com	111/315 A, Refinery Road, Irumpanam, Trippunithura, Ernakulam - 682309
Patsons Harvest Gold Pvt. Ltd.	Telangana	Mr. Manish Kumar Kishorpuria		manish@patsonsharvest.com	Door No. 14-9/1, SY. No. 158/A, Gandimaisamma- Dundigal Mandal, Doolapally Village, Medchal-Malkajgiri, Telangana- 500014
Ramsaroop & Sons	Bangalore	Mr. Rajan Aggarwal	9900126001	steelium@hotmail.com	Survey: 105/1, 105/2, 105/03, Medahalli, Bidara Halli, Hubli, 105/1, 2&3, Medahalli, 17th Km, Old Madras Road, Bangalore- 560049
Samrat Irons Pvt. Ltd.	Hyderabad	Mr. Raja Jain	9849911299	rajajain@samratgroup.com	Flat No: S7 to S10, Alladin Mansion H No: 1-11-252/1A to 1D, St No- 3, Begumpet, Hyderabad - 500016.
Sharoff Colours	Chennai	Mr. Sunil Kumar Sharoff		info@siasonline.co.in	1st Floor, Alsa Mall, No. 4, Montieth Road, Egmore, Chennai- 600008, Tamil Nadu
Shiva Ferric Pvt Ltd	Bangalore	Mr. SURYA PRAKASH PURVA	9448051505	surya@shivaferric.com	No. 193 Shiv-Sadan, 4th Floor, Outer Ring Rd, Opp. to NCC Apt., Near Royal Enfield Showroom, B Narayanpura, Bangalore - 560016
Sri Balaji Steel Traders	Chennai	Mr. P.S.S.SRIDHAR	9444034467	sbst@sbst.in	No. 35, Jones Street, Mannadi, Chennai - 600001
Thirupathy Steels	Chennai	Mr. Suresh Kumar Gupta	9380121581	tschennai@yahoo.in	No. 19, Sembudoss Street, Chennai - 600 001
TSPDL Bangalore	Bangalore		9448287850	divakarc@tspd.com	No. 16, SP Building, Apple Villa, 2nd Floor, Lal Bagh, Main Road- Bangalore - 560027
TSPDL Chennai	Chennai		9176608363	bvivek@tspd.com	No. 18/3 Chettinad Sigapi Achi Building 8th Floor, Rukmini Lakshmiapathy Road, Egmore, Chennai - 600008

Pan-India Service Centres



NORTH ZONE

- Bhiwadi
- Chandigarh
- Faridabad
- Ghaziabad
- Jaipur
- Kanpur
- Ludhiana
- Pantnagar

EAST ZONE

- Guwahati
- Jamshedpur
- Kolkata
- Patna
- Ranchi
- Kalinganagar
- Meramandali



SOUTH ZONE

- Bangalore
- Chennai
- Kochi
- Secunderabad



WEST ZONE

- Ahmedabad
- Indore
- Mumbai
- Pune
- Nagpur



Tata Steel Sales Offices

North Zone

- Delhi** : C/O. Tata Steel BSL Limited
Mira Corporate Suites-Ground Floor Plot
1&2. Ishwar Nagar Mathura Road
New Delhi – 110065
- Ghaziabad** : Plot No. 1227-1229, GT Road, Lalkuan
Ghaziabad – 201 001
- Faridabad** : 2nd Floor, Business Centre, 33-B NIT,
Faridabad
Haryana – 121001
- Chandigarh** : SCO-16 1st Floor, Sector 26, Madhya Marg
Chandigarh – 160 019
- Kanpur** : 16/97, Navroz Building, The Mall,
Kanpur – 208 001
- Ludhiana** : C44-47, Phase-II, Near Majestic Auto,
Focal Point, Ludhiana – 141010
- Jaipur** : G - Business Park, 6th Floor, D-34,
Near Agrasen Circle, Subhash Marg,
C-Scheme, Jaipur – 302 001

East Zone

- Kolkata** : 52 Jawaharlal Nehru Road,
Kolkata – 700 071
- Bhubaneswar** : 2 - B, Fortune Tower
Chandrasekharpur
Bhubaneswar - 751023, Odisha
- Jamshedpur** : B Road East, N Town, Bistupur,
Jamshedpur – 831001
- Guwahati** : Guwahati Sales Office
4th floor, Subham Velocity,
Honuram Boro Path,
Opp. Wallford, G.S. Road,
Guwahati – 781005
- Patna** : 401, Orchid Mall, Boring Road,
Patna – 800001

West Zone

- Mumbai** : 3rd Floor, One Forbes
1, Dr V B Gandhi Marg, Fort,
Mumbai – 400001
- Ahmedabad** : 2nd Floor, Premchand House,
Annexe, P.O. Box No. 4096,
Ashram Road, Old High Court Way,
Ahmedabad – 380 009
- Indore** : 3rd Floor, NRK Business Park,
Block B-1, PU-4, Scheme No 54,
Vijay Nagar Square, A B Road
Indore – 452010
- Nagpur** : Museum Road, Civil Lines
Nagpur – 440 001
- Pune** : Office No. 6 and 7, Second floor, Wing B,
Great Eastern Plaza (Bajaj Allianz
Building), Airport Road
Pune – 411001
- Raipur** : Office No. 539, 5th Floor, Magneto
Offizo, Raipur – 492001

South Zone

- Chennai** : 8th Floor, Chettinad Sigapi Achi
Building, 18/3- Rukmini
Lakshmipathy Road, Egmore,
Chennai – 600008
- Bangalore** : A Wing, 2nd Floor, Jubilee Building,
45 Museum Road,
Bangalore – 560 025
- Secunderabad** : 6th Floor, Surya Towers,
104 Sardar Patel Road,
Secunderabad – 500 003
- Kochi** : Santha Nivas, Door No. 41/3393,
Manakkapady Lane, PRA No. 52,
Padivattom Edappally (Post)
Kochi – 682 024



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