

# WeAlsoMakeTomorrow







An ideal world is one where sustainable brands fulfill their promise to deliver goods and services that satisfy changing societal and individual demands. With our world becoming more interconnected, we need ways for business to transform and harness the power of innovation to help create a more sustainable future.





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Tata Steel BSL Research Laboratory & Testing Facility

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Network of ACE<sup>++</sup> Service Centres

# **TATA STEEL BSL**

Tata Steel BSL Ltd (formerly known as Bhushan Steel Limited) is a leading player in the steel industry, manufacturing hot rolled, cold rolled, galvanized, Galume and colour coated products. The mill capabilities of Tata Steel BSL, has always been very advanced; producing quality products across plants and serving a plethora of segments.

Tata Steel BSL is known for being customer centric. Post acquisition of Bhushan Steel Ltd. by Tata Steel Limited, the synergy between both the companies has resulted in excellent quality, flexibility and reliability in all its products and services. Tata Steel BSL has its manufacturing units in three locations – Narendrapur (Odisha), Sahibabad (UP) and Khopoli (Maharashtra).





# **TATA STEEL COATED** PRODUCTS OFFERING





Zero spangled Galvanzied Plain Product (Galvano)





Galvanized Plain Regular Spangle (GPRS)





55% Al Zn alloy coated steel (Aluminium Zinc Coated Steel)





Color Coated Steel (Pre-painted Galvanized)

Tata Steel coated products\* add values such as strength, durability, versatility and elegant aesthetics to every spectrum of applications in which they are used.

\*GalvaRoS, Galvanova and Colornova produced from Tata Steel BSL Plant.

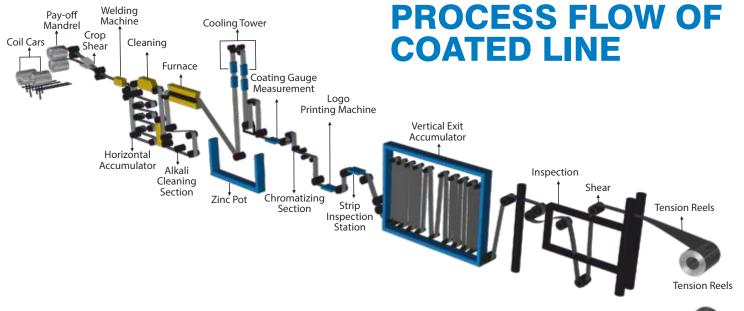


Plain Product







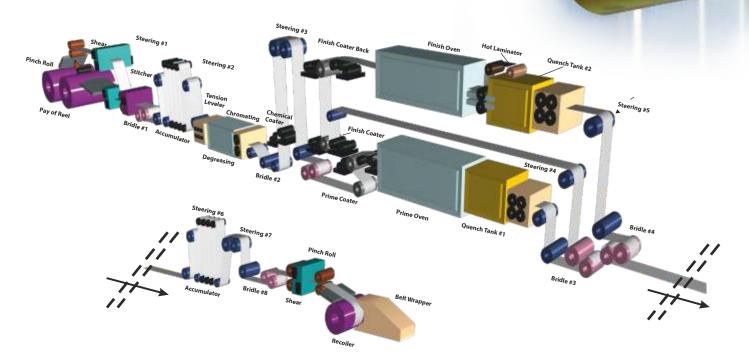




# OFFERING OF COLORNOVA PRODUCT FROM TATA STEEL

PPGI – Pre Painted Galvanized (Substrate is Galvanized)

**Colour Coated Processing Line** 

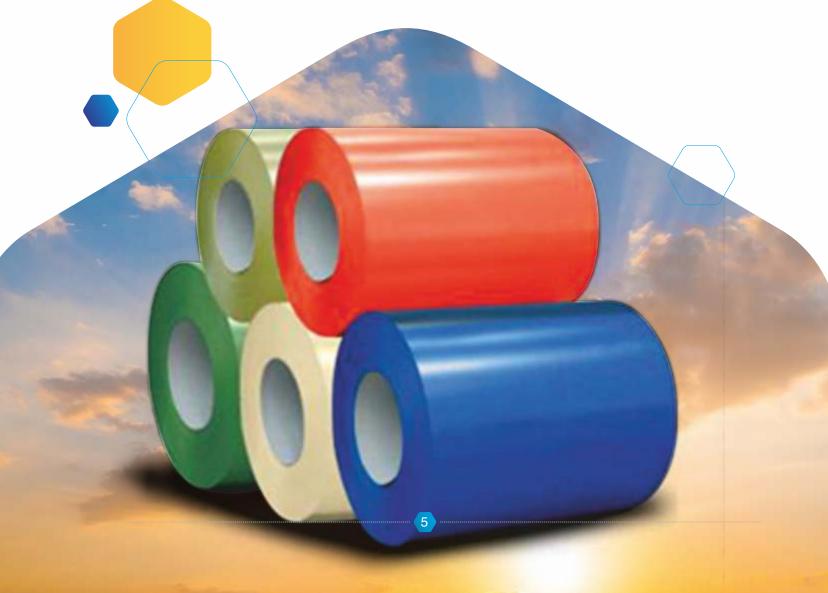


# **COLORNOVA PRODUCT GUIDE**

Reference Standards ASTM A 755, IS 14426 Conformance to other standards
JIS G3321 / AS 1397 /
EN 10346 / IS 15961

Coil Weight Maximum: 9 MT Coil Inner Diameter: 508 mm





# **COLOUR PALETTE**

#### **RoHS Paint RAL Color Chart**

RAL 5002	RAL 3007	RAL 5023	RAL 6025	RAL 7024	RAL 8004
RAL 5003	RAL 3011	RAL 5024	RAL 6026	RAL 7026	RAL 8007
RAL 5019	RAL 3012	RAL 6000	RAL 5027	RAL 7030	RAL 8011
RAL 5020	RAL 3013	RAL 6001	RAL 6029	RAL 7031	RAL 8012
RAL 5021	RAL 3014	RAL 6002	RAL 6032	RAL 7032	RAL 8014
RAL 8008	RAL 3015	RAL 6003	RAL 6034	RAL 7033	RAL 8015
RAL 1000	RAL 3016	RAL 6004	RAL 7000	RAL 7034	RAL 8024
RAL 1001	RAL 3022	RAL 6005	RAL 7001	RAL 7035	RAL 8025
RAL 1002	RAL 3033	RAL 6006	RAL 7002	RAL 7036	RAL 8028
RAL 1011	RAL 5000	RAL 6007	RAL 7003	RAL 7037	RAL 9001
RAL 1013	RAL 5001	RAL 6008	RAL 7004	RAL 7038	RAL 9002
RAL 1014	RAL 5004	RAL 6009	RAL 7005	RAL 7039	RAL 9003
RAL 1015	RAL 5005	RAL 6010	RAL 7006	RAL 7040	RAL 9004
RAL 1019	RAL 5007	RAL 6011	RAL 7008	RAL 7041	RAL 9005
RAL 1020	RAL 5008	RAL 6012	RAL 7009	RAL 7042	RAL 9010
RAL 2001	RAL 5009	RAL 6013	RAL 7010	RAL 7043	RAL 9011
RAL 2002	RAL 5010	RAL 6014	RAL 7011	RAL 7044	RAL 9016
RAL 2003	RAL 5011	RAL 6015	RAL 7012	RAL 7045	RAL 9017
RAL 3000	RAL 5012	RAL 6016	RAL 7013	RAL 7046	RAL 9028
RAL 3001	RAL 5013	RAL 6017	RAL 7015	RAL 7047	RAL 9022 M
RAL 3002	RAL 5014	RAL 6019	RAL 7016	RAL 8000	RAL 9023 M
RAL 3003	RAL 5015	RAL 6020	RAL 7021	RAL 8001	RAL 3004
RAL 5017	RAL 6021	RAL 7022	RAL 8002	RAL 3005	RAL 5022
RAL 6022	RAL 7023	RAL 8003			

# **MECHANICAL PROPERTIES**

# COLORNOVA (PPGI)

Guard Film Thickness		50 (+/-2) MICRON	50 (+/-2) MICRON	50 (+/-2) MICRON	50 (+/-2) MICRON	50 (+/-2) MICRON
	ssolio	35±5	35±5	35±5	35-80±5	35±5
	Special Paint	YES	YES	YES	NO	YES
	Ink Base	YES	YES	YES	NO	YES
Paint Type (YES/NO)	PVDF	YES	YES	YES	NO	YES
Pain (YE	SDP	YES	YES	YES	NO	YES
	SMP	YES	YES	YES	NO	YES
	RMP	YES	YES	YES	YES	YES
	Bottom Coat (5-7)	YES	YES	YES	YES	YES
Paint Coating Thickness	Primier (3-5)	YES	YES	YES	YES	YES
	Top Coat (18-22)	YES	YES	YES	YES	YES
Hardness	(HRB)	58-65	85-100	58-65	45-60	92-99
	Elongation (%)	18	I	18	18	12
UTS (Mpa)	Мах	I	ı	I	I	- 1
٦٤	Min	380	570	360	310	420
Yield Strength (MPa)	п Мах	1	1	1	1	1
Yiel Streng (MP)		) 275	) 550	) 250	) 230	350
Width Range (mm)		900-1250	900-1250	900-1250	900-1250	900-1250
Thickness Range BMT (mm)		0.20-1.2	0.20-1.2	0.20-1.2	0.30-1.2	0.20-1.2
Substrate Coating Weight		Z80-275 GSM 0.20-1.2 900-1250	Z80-275 GSM	Z80-275 GSM	Z80-120 GSM	Z80-275 GSM
Grade		CQ	ca	DØ	EDD	HSQ



## **Thickness Tolerance**

Thickness/Width	Width <1000 mm	Width >=1000, <1250mm
0.25 mm to 0.49 mm	±0.025	±0.03
0.50 mm to 0.59 mm	±0.025	±0.03
0.60 mm to 0.79 mm	±0.03	±0.04
0.80 mm to 0.99 mm	±0.03	±0.04
1.00 mm to 1.20 mm	±0.03	±0.04

## **Width Tolerance**

Width Tolerance	
Width Tolerance- Min	0 mm
Width Tolerance- Max	5 mm

# **Edge Condition Tolerance**

Edge Condition	Trimmed Edge	
Edge wavy coils	3 mm, 3 waves / metre	
Edge wavy sheets	2 mm, 3 waves / metre	
Edge Camber	2 mm max. In 2 metre leng	

# **Paint Coating Thickness Tolerance**

Painting Coating Thickness (micron)	Painting Coating Thickness Tolerance (micron)
Top Coat :18 - 22	
Primer Coat : 3-5	±2 micron
Bottom Coat : 5-7	



# **SPECTRUM OF APPLICATIONS**

TATA STEEL PREMIUM COLOUR COATED PRODUCT



1. Refrigerators, Washing Machines, Microwave ovens, ACs, Water Coolers



2. Commercial Refrigeration



3. HVAC - AHU Unit



4. Furniture



5. Cleanroom / Coldroom Panels



6. False Ceilings



7. Door and Window Frames



# **ADVANTAGES OF COLORNOVA**



Environment Friendly 100% RoHS compliant



Authenticity
Brand name printed
on the product



Superior Corrosior Resistance Salt Spray test



Scratch Protection and Superior paint technology



State of the art manufacturing facility



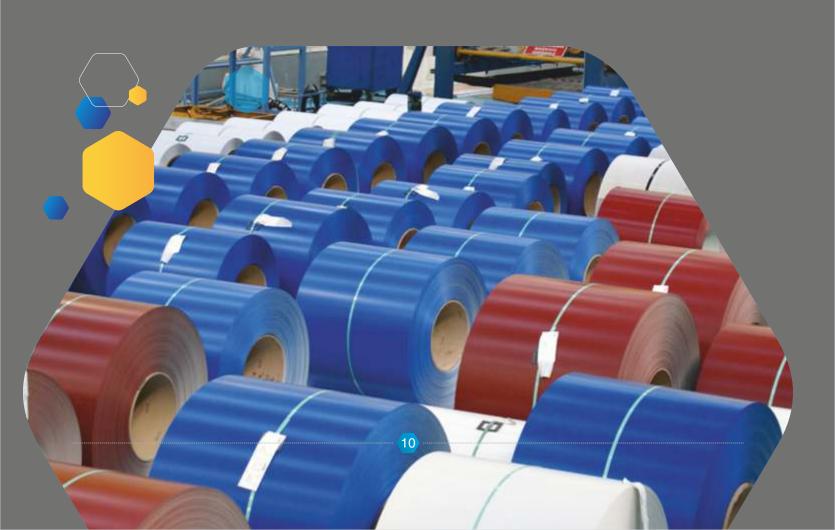
Customisable choice of colour ranges to choose from



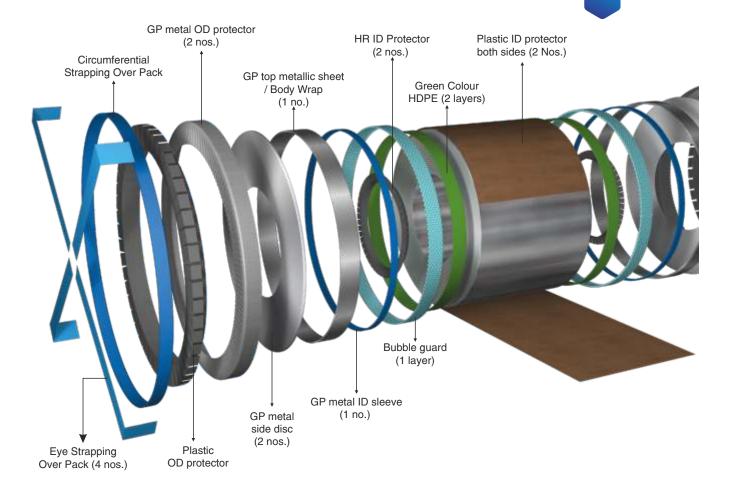
All weather protection



Superior Packaging



# **COLORNOVA PRODUCT PACKAGING**







Each coil/bundle has a label carrying the consignment & material details. it ensures proper identification and traceability.

200 Tata Steel Ltd 0.40== 1220mm 8005H 5050450210



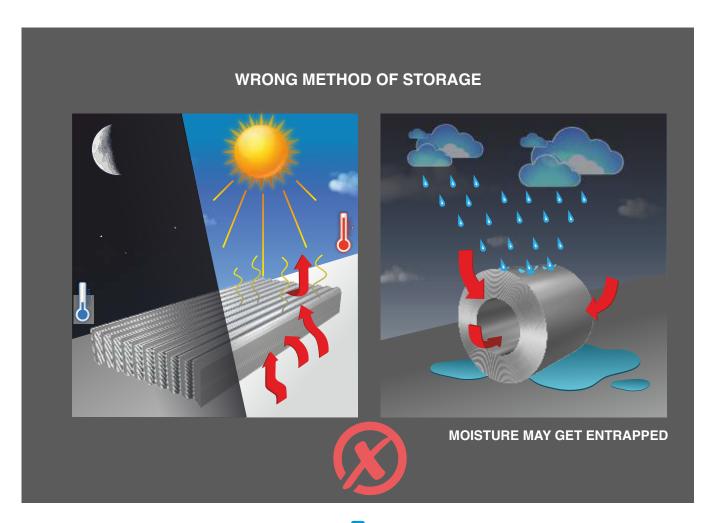


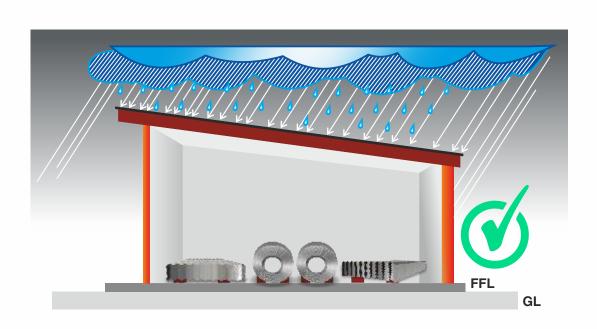
# STORAGE INSTRUCTIONS

#### **STORING INSTRUCTIONS**

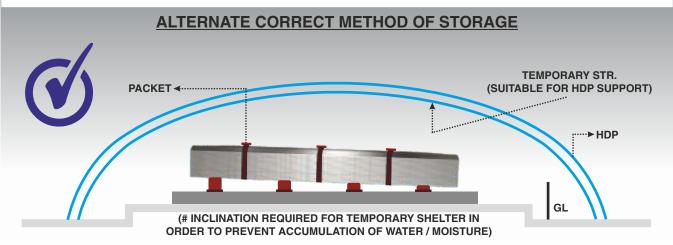
- 1. Keep the material in dry and well ventilated condition (indoors)
- 2. After receiving, ensure the coils and sheets are dry.
- If found wet, open the pack immediately, separate & wipe the sheets/coils with a clean dry cloth and stack them to allow air to circulate and help in keeping material in prime condition.
- 4. Avoid contact with wet concrete.
- 5. Store off the ground in a sloped manner to drain water.
- 6. Do not leave uncovered stacks of sheets/coils lying in the open.

- 7. Do not allow water / moisture to get entrapped bundles/coils
- 8. Use only dry untreated timber for block stacking
- For outside storage, erect simple scaffolding and cover bundles / coils with loose fitting tarpaulin or waterproof sheets while allowing are to circulate.
- 10. Inspect the storage site regularly to ensure that moisture has not penetrated into the stack.
- 11. Do not keep the coils near the protruded portions of objects to avoid damage.









ON RAISED PLATFORM COVERED WITH HIGH DENSITY POLYETHYLENE COVER SO THAT WATER / MOISTURE DOES NOT ENTER THE BUNDLE





#### PRODUCT SHELF LIFE AND CLAIM ACCEPTANCE NORMS

	PPGI			
Product Parameters Grade	G250 MPA (Soft)	SH340 MPA (Semi Hard) Class I, II	550 MPA (Full Hard)	
Mechanical Properties/Ageing	3 months	3 months	6 months	
Guarantee of Stretcher Strain	No	No	No	
White Rust	Min 480 hrs of SST	Min 480 Hrs of SST	Min 480 Hrs of SST	
Non-delamination (Peel off)	7 years, Refer Warranty Conditions	7 years, Refer Warranty Conditions	7 years, Refer Warranty Conditions	
Chalking Performance	ASTM D4214-98 Vertical and non vertical rating 4	ASTM D4214-98 Vertical and non vertical rating 4	ASTM D4214-98 Vertical and non vertical rating 4	
Fading (Delta E)	1. RMP, 7 years, for SMP/SDP and PVDF 10 years & 15 years respectively. 2. ASTM D 2244-93, Vertical - Light ΔE ≤14/Medium ΔE ≤17/Dark ΔE ≤24, Non vertical - Light ΔE ≤17 / Medium ΔE ≤20 / Dark ΔE≤27	1. RMP, 7 years, for SMP/SDP and PVDF 10 years & 15 years respectively. 2. ASTM D 2244-93, Vertical - Light ΔΕ ≤17/Dark ΔΕ ≤24, Non vertical - Light ΔΕ ≤17 / Medium ΔΕ ≤20 / Dark ΔΕ≤27	1. RMP, 7 years, for SMP/SDP and PVDF 10 years & 15 years respectively. 2. ASTM D 2244-93, Vertical -Light ΔΕ ≤14/Medium ΔΕ ≤17/Dark ΔΕ ≤24, Non vertical - Light ΔΕ ≤17 / Medium ΔΕ ≤20 / Dark ΔΕ≤27	
Gloss Retension (%)	RMP - > 25 % of supplied gloss level after 7 years, SMP/SDP/PVDF will vary according to category - refer to respective warranty conditions	RMP - > 25% of supplied gloss level after 7 years, SMP/SDP/PVDF will vary according to category; refer respective warranty conditons	RMP - > 25 % of supplied gloss level after 7 years, SMP/SDP/PVDF will vary according to category; refer respective warranty conditons	
Dry Film Thickness (DFT Micron)	5 micron Primer + 20 micron top coat (+/-3 micron) Exposed surface	5 micron Primer + 20 micron top coat (+/-3 micron) Exposed surface	5 micron Primer + 20 micron top coat ( +/-3 micron ) Exposed surface	
Guarantee of Surface defects on one surface	Yes	Yes	Yes	
Guarantee of Surface defects on both surfaces (Subjected to DFT on both surfaces)	Yes	Yes	Yes	
Guarantee of Zinc Peel Off	Yes	Yes	Yes	
Tension Levelling	Yes	Yes	Yes	
Salt Spray	For appliances 480 hrs. For others, 750 hrs minimum, as per mutually agreed TDC.	For appliances 480 hrs. For others, 750 hrs minimum, as per mutually agreed TDC.	For appliances 480 hrs. For others, 750 hrs minimum, as per mutually agreed TDC.	
Yield loss of coil ends (Conversion of Coil to blank)	1.5 % of the length of the coil	1.5 % of the length of the coil	1.5 % of the length of the coil	

<sup>\*\*</sup>All requirements needs the TDC to be specifiied in TDC prior to Order approval .

\*\* After shelf life is over, clearance for Despatch or downgradation to be taken from QA

\*\*\*Material age is counted from the date Despatch







- Inspect the coils/sheet packets on arrival at the site and note if there is damage corrosion or wet material
- 2 Store the bundles on racks at least one foot above the ground level. Do not use uncured lumber
- Coils/sheets need to be kept in closed sheds or away from exposure to dirt to prevent entrapment of dirt particles in between coil wraps or sheets
- While handling packets, ensure that no abrasion took place. This may result in scratches/damage of sheets
- **5** Clean gloves should be used for handling the sheets.



**Colour Coating Line** 



# TRANSPORTATION NORMS

- Packing of coils/sheets should be carried out in a dry area
- 2 Wet coils should be scheduled for production as soon as possible
- 3 Do not store in areas with fluctuating temperatures such as in open or in high humidity areas
- If the sheets/packets are not to be used the same day then keep them wrapped in proper packaging 4 material. This is necessary as the moisture enters the sheets through capillary reaction
- 5 Do not use plastic material. Non-breathing materials tend to trap the moisture
- 6 Store the bundles on racks at least one foot above the ground level. Do not use uncured lumber
- Elevate one end of the bundle to allow moisture to run off rather than puddle on the top of the bundle
- Avoid scratches/abrasion. Surfaces abraded by hard soled shoes or objects sliding over the surface 8 give a darkened coating. This should be avoided
- Oily hands can put impressions on the sheets. Clean gloves should be used while handling 9 the sheets
- If sheets are darkened, then they can be cleaned with mild detergent or Alkaline cleaners and then 10 thoroughly rinsed and dried
- During fastening the packets and coils on a truck, use the belts or rubber pieces in between the 11 material and the chains to avoid edge damage
- The coils should be dispatched in an Eye Vertical position. Else there will be fretting corrosion on the 12 surface and that will make the sheets unsightly
- 13 We should assess the facility of unloading at the users' places.

# TATA STEEL BSL RESEARCH LABORATORY & TESTING FACILITY

Tata Steel BSL in-house quality control laboratory is fully equipped with the latest testing equipment. Dedicated chemists ensure conformance to specifications on every coil and and documentation of all test records.

#### Salt Spray Corrosion Chamber

The salt spray test is a standardized and popular corrosion test method, used to check corrosion resistance of materials and surface coatings.

#### **Hardness Tester**

A Hardness Tester is a device that indicates the hardness of a material, usually by measuring the effect on its surface of a localized penetration by a standardized rounded or pointed indenter of diamond, carbide, or hard steel. Hardness tester. Materials testing.

#### Automatic film applicator

The Automatic film applicator provides a reliable basis to apply coating films to test charts (max. size 515 x 300 mm / 20.28 x 11.81 in), panels or foils in a uniform and reproducible way in order to eliminate variations caused by human factors.

#### **Hot Plate**

Incorporate a porous heated plate referred to as *heated chucks*. These plates are used to heat thin sheets evenly by drawing the sheets firmly on the plate with a vacuum. These plates are widely used in the process of manufacturing semiconductors.

#### **Pull Off Adhesion**

Pull-Off Adhesion: simple to use, quantitative range giving a definitive adhesion value, ideal for the laboratory or field on flat or curved substrate applications. Tensile Dollies (or stubs) are glued to the coating and, when the adhesive has cured, the force required to pull the coating off the surface is measured.

#### **Pencil Hardness Tester**

One of the most common methods of determining coating hardness is the pencil hardness test, also known as the Wolff-Wilborn method, where a pencil of a known hardness is pushed across the coating at a specified angle, under a constant force.



#### **Gloss Meter**

A glossmeter is an instrument which is used to measure specular reflection gloss of a surface. Gloss is determined by projecting a beam of light at a fixed intensity and angle onto a surface and measuring the amount of reflected light at an equal but opposite



#### **Dry Film Thickness Tester**

A coating thickness gauge (also referred to as a paint meter) is used to measure dry film thickness. Dry film thickness measurements can be used to evaluate a coating's expected life, the product's appearance and performance, and ensure compliance with a host of International Standards.



The spectro-guide simultaneously measures color and gloss. Thus, the cause of a visual mismatch can be clearly defined.

Color and 60 gloss are displayed at the same time.





Lock Forming Machine
Rolling heads of our Lock Forming Machines are manufactured using
precision machined components consisting of hardened and ground
shafts running in needle roller bearing, a hardened gear train,
hardened and blackened.



#### **Colour Matching Booth SCAN-O-LITE**

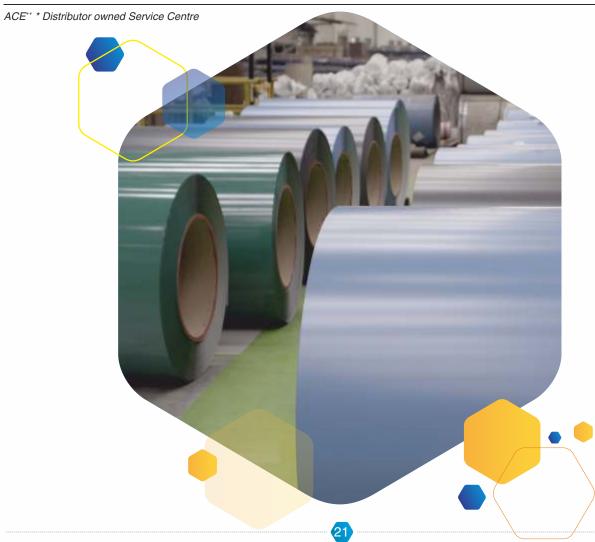
Scan-O-Lite is compact color matching booth, which is equipped with standard light sources.





# NETWORK OF ACE\*\* SERVICE CENTRES\*

DISTRIBUTOR	LOCATION	SERVICE CENTRE
NORTH ZONE		
Bhagwati Steel Processor	Chandigarh	ACE <sup>++</sup>
G R Gupta & Bros	Ghaziabad	ACE**
Mangla Sons	Mohali	ACE**
R S Steel	Ghaziabad	ACE <sup>++</sup>
EAST ZONE		
Bubna Commercial Private Limited	Hooghly	ACE**
WEST ZONE		
SKM Mumbai	Mumbai	ACE <sup>++</sup>
SOUTH ZONE		
Govindaraja Mudaliar Sons (P) Ltd	Chennai	ACE <sup>++</sup>
Kummenchery Steels	Cochin	ACE <sup>++</sup>
Ramsaroop & Sons	Bengaluru	ACE**
Shree Sai Krishna Steels	Secunderabad	ACE <sup>++</sup>







# **SALES OFFICES**

#### **North Zone**

#### Delhi

Tata Steel Limited

15th Floor, Hindustan Times Building, New Delhi 110 001

Phone: 011-66248500

Tata Steel BSL Limited

Ground Floor, Plot 1&2, Mira Corporate Suites, Mathura Road

New Delhi, India

#### Ghaziabad

Tata Steel Limited

Plot No. 1227-1229, GT Road, Lalkuan, Ghaziabad 201 001

Phone: 0120-2866780

#### **Faridabad**

Tata Steel Limited

2<sup>nd</sup> Floor, Business Centre 33-B NIT, Faridabad 121001

Phone: 0129-4098321

#### Chandigarh

Tata Steel Limited

SCO -16, 1st Floor, Sector 26, Madhya Marg, Chandigarh 160 019

Phone: 0172-2791047/2790932

Tata Steel Limited

16/97, Navroz Building, The Mall, Kanpur 208 001

Phone: 0512-2316605

#### Ludhiana

Tata Steel Limited

C/44-47, Phase II, near Majestic Auto,

Punjab, Ludhiana 141 010, Phone: 0161-5022805

#### Jaipur

D -34, Subhash Marg, Near Agrasen, Circle, Jaipur 302 001

Phone: 0141-2225244

#### **East Zone**

#### **Kolkata**

Tata Steel Limited

43, Jawaharlal Nehru Road, Kolkata 700 071

Phone: 033-22821778/22281348

Tata Steel BSL Limited

Jasmine Towers, 31, Shakespeare Sarani Road,

Mullick Bazar, Park Street, West Bengal, Kolkata - 700017

#### Bhubaneswar

Tata Steel Limited

Marketing & Sales, 2 - B, Fortune Tower, Chandrasekharpur Odisha, Bhubaneswar 751023, Phone: 0674-6651007

#### Jamshedpur

Tata Steel Limited

Opposite Chummery Guest House

B Road East, Northern town, Bistupur, Jamshedpur 831001

Phone: 0657-6500511

#### Guwahati

Tata Steel Limited

Guwahati Sales Office

4th floor, Subham Velocity, Honuram Boro Path, Opp. Wallford

G S Road, Guwahati 781005, Phone: 0361-2130959

#### Patna

4th Floor, Orchid Mall, Opposite AN College, Boring Road

Patna 800 001, Phone: 0612-2570094.95/96

#### **West Zone**

#### Mumbai

Tata Steel Limited

3rd Floor, One Forbes 1, Dr V B Gandhi Marg

Fort Mumbai 400001, Phone: 022 67494600

#### **Ahmedabad**

Tata Steel Limited

2<sup>nd</sup> Floor, Premchand House Annexe, P.O. Box No. 4096,

Ashram Road, Old High Court Way Ahmedabad 380 009

Phone: 798012306

#### Indore

Tata Steel Limited

3rd Floor, NRK Business Park, Block B -1, PU-4,

Scheme No. 54 Vijay Nagar Square, A B Road Indore 452010, MP

Phone: 0731-6450688/691

Nagpur Tata Steel Limited

Museum Road, Civil Lines Nagpur 440 001

Phone: 0712-2520170/2533209

Tata Steel Limited

Office Nos. 6 & 7, Second floor Wing B,

Great Eastern Plaza (Bajaj Allianz Building)

Airport Road, Pune 411001, Phone: 020 66407580

Tata Steel Limited

Office No-539, 5th Floor Magneto Office, Raipur 492001

#### Khopoli

Tata Steel BSL Limited

At- I Po-Khalapur, Via- Savroli, Dist- Raigad 410203

Maharashtra, India

#### **South Zone**

#### Chennai

Tata Steel Limited

8th Floor, Chettinad Sigapi Achi Building

18/3 - Rukmini Lakshmipathy Road (Behind Air India Office)

Egmore, Chennai 600 008, Phone: 044-66960024

Tata Steel BSL Limited

(Formerly known as BHUSHAN STEEL LIMITED)

No.190, Unit-1, 3rd Floor, Mount Chambers, Anna Salai

Chennai - 600 002, Tamil Nadu, India

#### Bengaluru

Tata Steel Limited

A Wing, 2<sup>nd</sup> Floor, Jubilee Building, 45, Museum Road,

Bengaluru 560 025, Phone: 080-66950001

#### Hyderabad

Tata Steel Limited

6th Floor, Gummidelli Towers 1-10-39 to 44,

Begumpet Airport Road, Hyderabad, Telangana 500016

Phone: 040-67040300

Tata Steel BSL Limited

305, Purni Plaza, Khairatabad, Hyderabad - 500004 Telangana, India

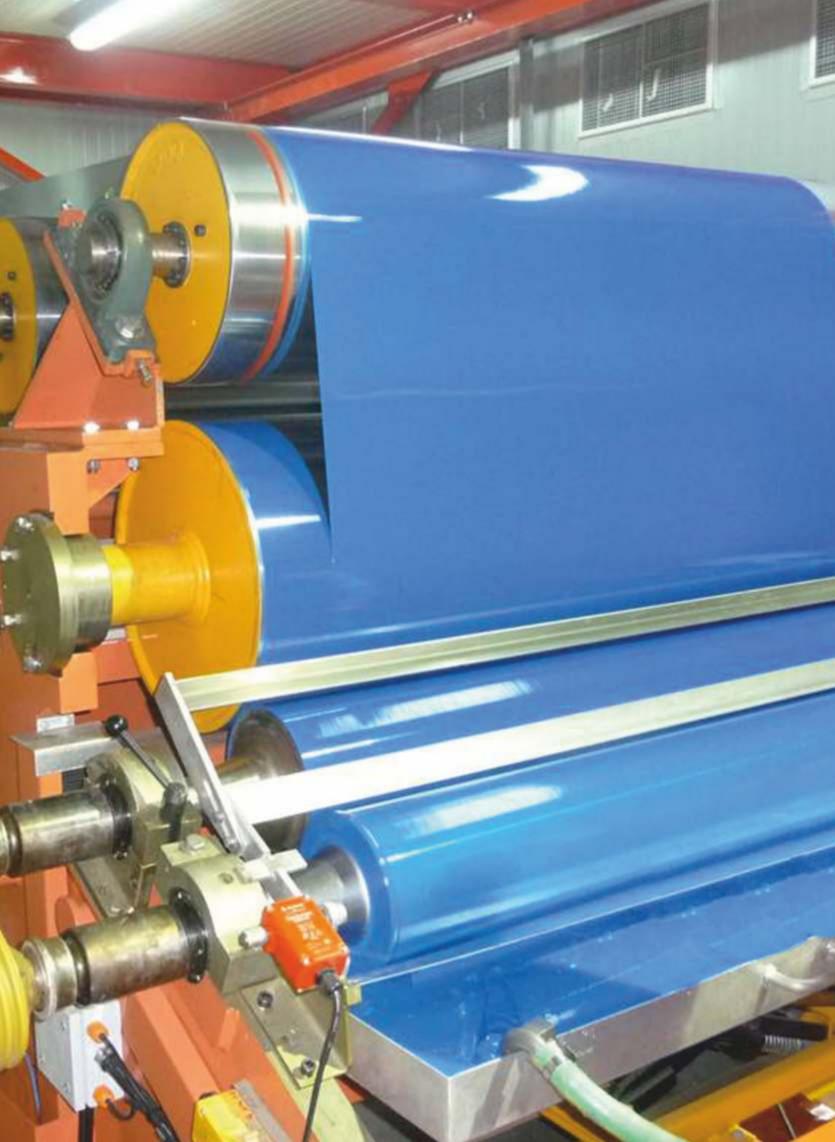
Tata Steel Limited

Santha Nivas, Door No. 41/3393, Manaikkapadi Lane, PRA No. 52, Padivattom Edappally (Post), Kochi - 682 024

#### Coimbatore

Tata Steel Limited

No:6, New Damunagar, Pulaikulam, Coimbatore-641036



# **TATA STEEL**

**\*** WeAlsoMakeTomorrow

Tata Steel Limited, Tata Centre, 43, Jawaharlal Nehru Road, Kolkata 700 071

#### **TATA STEEL BSL**

Mira Corporate Suites, Plot Nos. 1 & 2 B-1, Mathura Road, Ishwar Nagar, Bahapur, New Delhi, Delhi 110065

Customer helpline **1800 108 8282** (toll free)