

TATA STEEL

Galvano
Value Redefined
Coated Products from Tata Steel



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www.ecahez.com | www.tatasteel.com

versusad_18

25% of fans in India have Galvano in it

Entertaining 10 million families every day with dish antennas made from Galvano

REFRESHING INDIA

2 out of every 5 air-conditioners have Galvano in it

30 Lakh Refrigerators made annually have Galvano in it

Helping 1.5 Cr people look smart daily with washing machines made from Galvano

Introduction of GALVANO

“Imagination is the beginning of creation. You imagine what you desire, you will what you imagine and at last you create what you will”

Galvano is Tata Steel's tribute to the ever- changing pattern of steel demand. It is environmentally safe and economically advantageous. With Galvano, we have refined quality and raised the bar of strength, durability, performance and versatility.

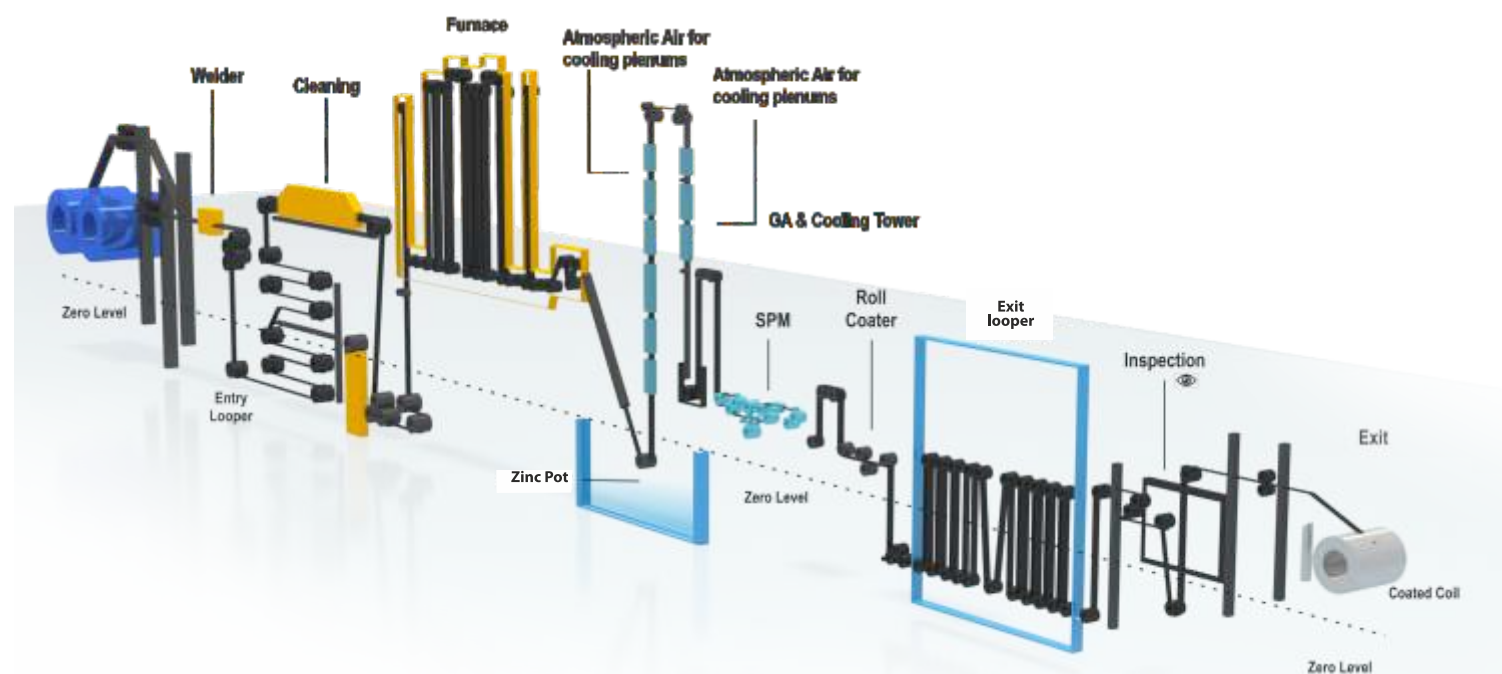
Galvano marks a new beginning in the world of GP steel (coil & sheets) by being the first zero-spangled Galvanised Plain (GP) steel offering in the country. Unlike ordinary spangled products available in the market, Galvano stands out with unmatched surface finish and mechanical properties with capabilities to meet stringent quality requirements of discerning customers.

GALVANISING THROUGH STATE-OF-THE-ART LINE

Galvano is a product of the **Continuous Galvanising Line (CGL-2)** at Tata Steel's world-class facilities in Jamshedpur. The line has been designed to cater to the high end galvanised steel requirements of Automotive, Appliance, Panels, General Engineering, Solar & other segments. The high standards of quality are maintained by advanced levels of automation, renowned suppliers and a highly motivated and well-trained team.

The products of the line are RoHS certified.

Process Flow of Galvanising Line



SPECTRUM of APPLICATIONS

Serving an array of segments





For
APPLIANCES

- Excellent durability
- Absolute flatness
- Superior surface texture and finish
- Superior paint adhesion and powder coating

MECHANICAL PROPERTIES

Grade	TDC	Coating (GSM)	Yield Strength (Mpa)		Ultimate Tensile Strength (Mpa)		Elongation (50% GL)	Hardness (HRB)		Surface Roughness (Ra)	Thickness Range	Width Range
		Min	Min	Max	Min	Max	Min	Min	Max			
DQ	GLA1	120	250	350	-	410	32	55	65	0.8-1.6	0.4 - 2.2	900 - 1540
DDQ	GLA2	120	-	240	-	360	35	45	60	0.8-1.6	0.4 - 2.0	900 - 1540
EIF	GLA3	120	-	190	-	330	40	45	-	0.8-1.6	0.4 - 2.2	900 - 1520

CHEMICAL PROPERTIES

Grade	TDC	N (PPM)	C%		MN%		Si%		S%		P%		Al%	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
DQ	GLA1	70	0.035	0.07	0.15	0.4	-	0.04	-	0.02	-	0.025	-	0.02
DDQ	GLA2	60	-	0.05	-	0.3	-	0.025	-	0.02	-	0.025	-	0.02
EIF	GLA3	40	-	0.0035	-	0.15	-	0.015	-	0.012	-	0.018	0.015	0.06

Post Treatment

Chromating (Chrome 3 based) [C3] Electrostatic Oiling [O] Both Chromating & Oiling [C3O]



Consistent Thickness



Superior Surface Finish & Flatness



Highest Corrosion Resistance



Uniform & Superior Zinc Adhesion



Optimum Formability



Superior Paint Adhesion



Eco-Friendly



RoHS Compliant



For
PANELS

- Absolute flatness
- Enhanced corrosion resistance
- No spring-back effect
- Superior paint adhesion

MECHANICAL PROPERTIES

Grade	TDC	Coating (GSM)	Yield Strength (Mpa)		Ultimate Tensile Strength (Mpa)		Elongation (50% GL)	Hardness (HRB)		Surface Roughness (Ra)	Thickness Range	Width Range
		Min	Min	Max	Min	Max	Min	Min	Max			
DQ	GLP1	80	250	360	-	410	32	55	65	0.8-1.6	0.4 - 2.2	900 - 1540
CQ	GLP2	120	250	350	-	410	32	55	65	0.8-1.6	0.4 - 2	900 - 1540
CQ	GLP3	275	250	350	-	410	32	55	65	0.8-1.6	0.4 - 2.2	900 - 1540
EIF	GLP4	275	-	190	-	330	40	-	-	0.8-1.6	0.4 - 2	900 - 1520

CHEMICAL PROPERTIES

Grade	TDC	N (PPM)	C%		MN%		Si%		S%		P%		Al%	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
DQ	GLP1	70	0.035	0.07	0.15	0.4	-	0.04	-	0.02	-	0.025	-	0.02
CQ	GLP2	70	0.035	0.07	0.15	0.4	-	0.04	-	0.02	-	0.035	-	0.02
CQ	GLP3	70	0.035	0.07	0.15	0.4	-	0.04	-	0.02	-	0.035	-	0.02
EIF	GLP4	40	-	0.0035	-	0.15	-	0.015	-	0.012	-	0.018	0.015	0.06

Post Treatment

Chromating (Chrome 3 based) [C3] Electrostatic Oiling [O] Both Chromating & Oiling [C3O]



Consistent Thickness



Superior Surface Finish & Flatness



Highest Corrosion Resistance



Uniform & Superior Zinc Adhesion



Optimum Formability



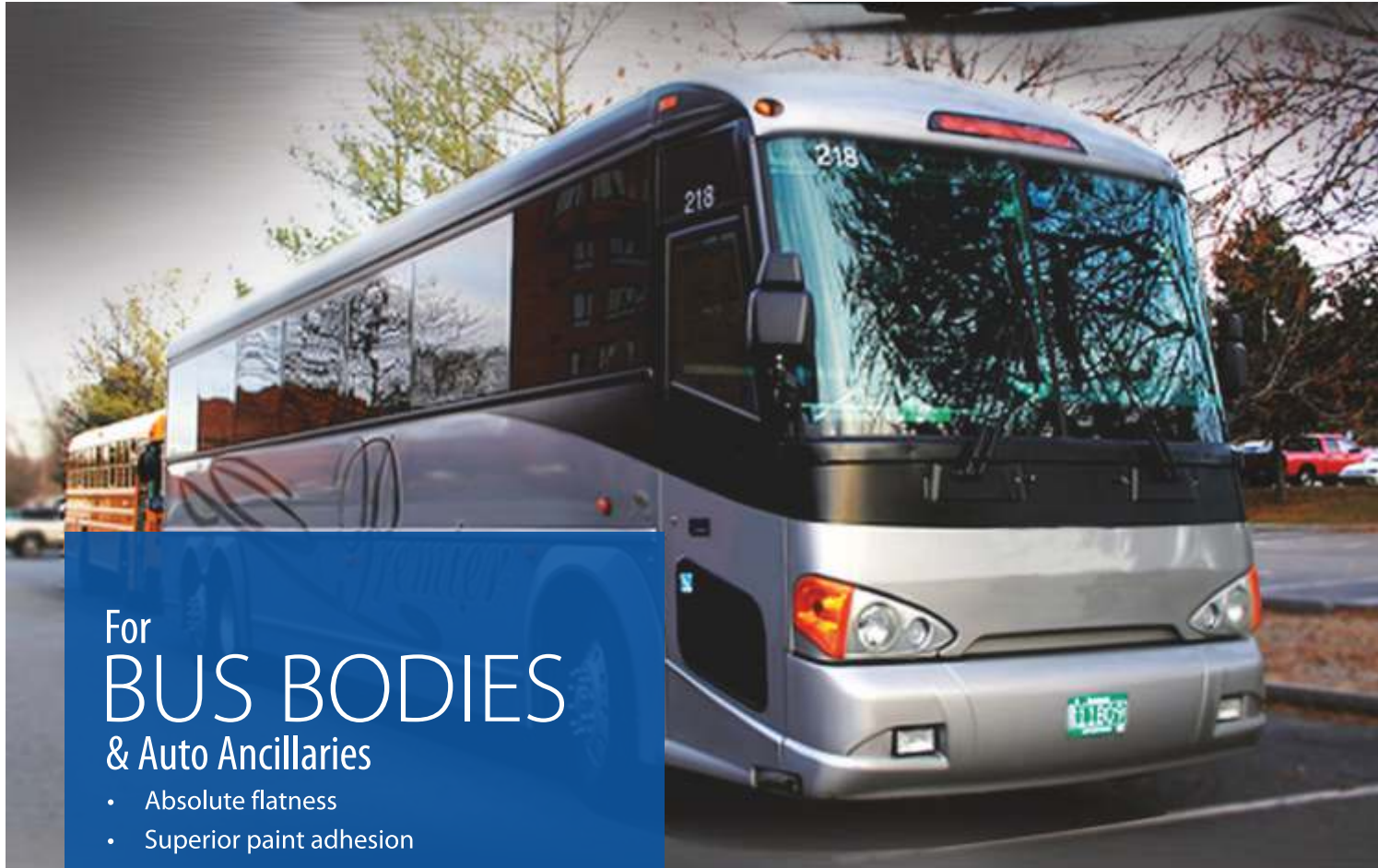
Superior Paint Adhesion



Eco-Friendly



RoHS Compliant



For
BUS BODIES
& Auto Ancillaries

- Absolute flatness
- Superior paint adhesion
- Enhanced corrosion resistance
- Excellent drawability

MECHANICAL PROPERTIES												
Grade	TDC	Coating (GSM)	Yield Strength (Mpa)		Ultimate Tensile Strength (Mpa)		Elongation (50% GL)	Hardness (HRB)		Surface Roughness (Ra)	Thickness Range	Width Range
			Min	Max	Min	Max		Min	Max			
DQ	GLB1	120	250	350	-	410	32	55	65	0.8-1.6	0.4 - 2.2	900 - 1540

CHEMICAL PROPERTIES														
Grade	TDC	N (PPM)	C%		MN%		Si%		S%		P%		Al%	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
DQ	GLB1	70	0.035	0.07	0.15	0.4	-	0.04	-	0.02	-	0.025	-	0.02

Post Treatment
Chromating (Chrome 3 based) [C3] Electrostatic Oiling [O] Both Chromating & Oiling [C3O]



Consistent Thickness



Superior Surface Finish & Flatness



Highest Corrosion Resistance



Uniform & Superior Zinc Adhesion



Optimum Formability



Superior Paint Adhesion



Eco-Friendly



RoHS Compliant



For
DISH ANTENNAS

- Excellent drawability
- Superior paint adhesion
- Enhanced corrosion resistance

MECHANICAL PROPERTIES												
Grade	TDC	Coating (GSM)	Yield Strength (Mpa)		Ultimate Tensile Strength (Mpa)		Elongation (50% GL)	Hardness (HRB)		Surface Roughness (Ra)	Thickness Range	Width Range
			Min	Max	Min	Max		Min	Max			
EIF	GLG4	80	-	190	-	330	40	45	-	0.8-1.6	0.4 - 2	900 - 1520
EIF	GLG5	120	-	190	-	330	40	45	-	0.8-1.6	0.4 - 2	900 - 1520

CHEMICAL PROPERTIES														
Grade	TDC	N (PPM)	C%		MN%		Si%		S%		P%		Al%	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
EIF	GLG4	45	-	0.0035	-	0.15	-	0.015	-	0.012	-	0.018	0.015	0.06
EIF	GLG5	40	-	0.0035	-	0.15	-	0.015	-	0.012	-	0.018	0.015	0.06

Post Treatment
Chromating (Chrome 3 based) [C3] Electrostatic Oiling [O] Both Chromating & Oiling [C3O]



Consistent Thickness



Superior Surface Finish & Flatness



Highest Corrosion Resistance



Uniform & Superior Zinc Adhesion



Optimum Formability



Superior Paint Adhesion



Eco-Friendly



RoHS Compliant



For
PEB, SOLAR

- Absolute flatness
- Superior strength
- Enhanced corrosion resistance

MECHANICAL PROPERTIES

MECHANICAL PROPERTIES												
Grade	TDC	Coating (GSM)	Yield Strength (Mpa)		Ultimate Tensile Strength (Mpa)		Elongation (50% GL)	Hardness (HRB)		Surface Roughness (Ra)	Thickness Range	Width Range
		Min	Min	Max	Min	Max	Min	Min	Max			
HSQ	LS04	275	340	-	450	-	12	55	70	0.7-1.2	1 - 2	1050 - 1300
HSQ	LS16	275	350	450	420	510	16	-	0.7	1.2	1 - 2	1050 - 1300
HSQ	LS17	120	350	450	420	510	16	-	0.7	1.2	1 - 2	1050 - 1300
HSQ	LS18	180	350	450	450	510	16	-	0.7	1.2	1 - 2	1050 - 1300
HSQ	LS21	550	350	450	420	510	16	-	0.7	1.2	1 - 2	1050 - 1300
HSQ	LS22	450	350	450	420	510	16	-	0.7	1.2	1 - 2	1050 - 1300

CHEMICAL PROPERTIES

Grade	TDC	N (PPM)	C%		MN%		Si%		S%		P%		Al%	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
HSQ	LS04	70	0.035	0.08	0.75	1	-	0.015	-	0.015	-	0.03	0.02	0.07
HSQ	LS16	70	0.035	0.08	0.75	1	-	0.05	-	0.015	-	0.03	0.02	0.07
HSQ	LS17	70	0.035	0.08	0.75	1	-	0.05	-	0.015	-	0.03	0.02	0.07
HSQ	LS18	70	0.035	0.08	0.75	1	-	0.015	-	0.015	-	0.03	0.02	0.07
HSQ	LS21	70	0.035	0.08	0.75	1	-	0.05	-	0.015	-	0.03	0.02	0.07
HSQ	LS22	70	0.035	0.08	0.75	1	-	0.05	-	0.015	-	0.03	0.02	0.07

Post Treatment

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For
GENERAL ENGINEERING

- Superior surface finish & flatness
- Excellent drawability
- Enhanced corrosion resistance
- Potential for paint cost reduction

MECHANICAL PROPERTIES

MECHANICAL PROPERTIES												
Grade	TDC	Coating (GSM)	Yield Strength (Mpa)		Ultimate Tensile Strength (Mpa)		Elongation (50% GL)	Hardness (HRB)		Surface Roughness (Ra)	Thickness Range	Width Range
		Min	Min	Max	Min	Max	Min	Min	Max			
DQ	GLG1	80	250	350	-	410	32	55	65	0.8-1.6	0.4 - 2.2	900 - 1540
DQ	GLG2	120	250	350	-	410	32	55	65	0.8-1.6	0.4 - 2	900 - 1540
DDQ	GLG3	120	-	240	-	360	35	45	60	0.8-1.6	0.4 - 2	900 - 1540
DQ	GLG7	180	250	360	-	420	32	55	65	0.8-1.6	0.4 - 2	800 - 1540
CQ	CG16	350	250	360	320	500	26	55	65	0.7-1.5	0.33 - 2	800 - 1580
CQ	CG17	120	250	360	320	500	26	55	65	0.7-1.5	0.33 - 2	800 - 1580
CQ	CG42	120	250	360	330	500	26	55	65	0.9-1.5	0.33 - 2	800 - 1580
CQ	CG45	120	230	350	270	500	26	55	65	0.7-1.5	0.33 - 2	800 - 1580

CHEMICAL PROPERTIES

Grade	TDC	N (PPM)	C%		MN%		Si%		S%		P%		Al%	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
DQ	GLG1	70	0.035	0.07	0.15	0.4	-	0.04	-	0.02	-	0.025	0.02	-
DQ	GLG2	70	0.035	0.07	0.15	0.4	-	0.04	-	0.02	-	0.025	0.02	-
DDQ	GLG3	60	-	0.04	-	0.25	-	0.015	-	0.015	-	0.015	0.02	-
DQ	GLG7	70	0.035	0.07	-	0.4	-	0.04	-	0.02	-	0.025	0.02	-
CQ	CG16	70	-	0.08	-	0.5	-	0.04	-	0.02	-	0.025	0.025	0.05
CQ	CG17	70	-	0.08	-	0.4	-	0.04	-	0.02	-	0.035	-	0.02
CQ	CG42	70	0.035	0.07	-	0.4	-	0.04	-	0.02	-	0.035	0.02	-
CQ	CG45	70	0.035	0.07	-	0.4	-	0.04	-	0.02	-	0.035	0.02	-

Post Treatment

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THICKNESS TOLERANCE GUARANTEE

Thickness/Allowable Tolerance/Width	Width <1000 (mm)	Width: ≥ 1000, < 1250 (mm)	Width: ≥ 1250, ≤1600 (mm)
0.25 ≥ , <0.40	± 0.020	± 0.025	–
0.40 ≥ , <0.60	± 0.025	± 0.030	± 0.040
0.60 ≥ , <0.80	± 0.030	± 0.040	± 0.040
0.80 ≥ , <1.00	± 0.030	± 0.040	± 0.040
1.00 ≥ , <1.25	± 0.030	± 0.040	± 0.040
1.25 ≥ , <1.60	± 0.040	± 0.040	± 0.050
1.60 ≥ , <2.00	± 0.040	± 0.050	± 0.060
2.00 ≥	± 0.050	± 0.060	± 0.070

* Thickness shall be measured at any point across the width not less than 25 mm from the edge

** For specified strength levels of Re = 360 N/mm2 and greater, increase the thickness tolerances by 10%, applying normal rounding-off procedural

*All above tolerances are on Base Metal Thickness (BMT)

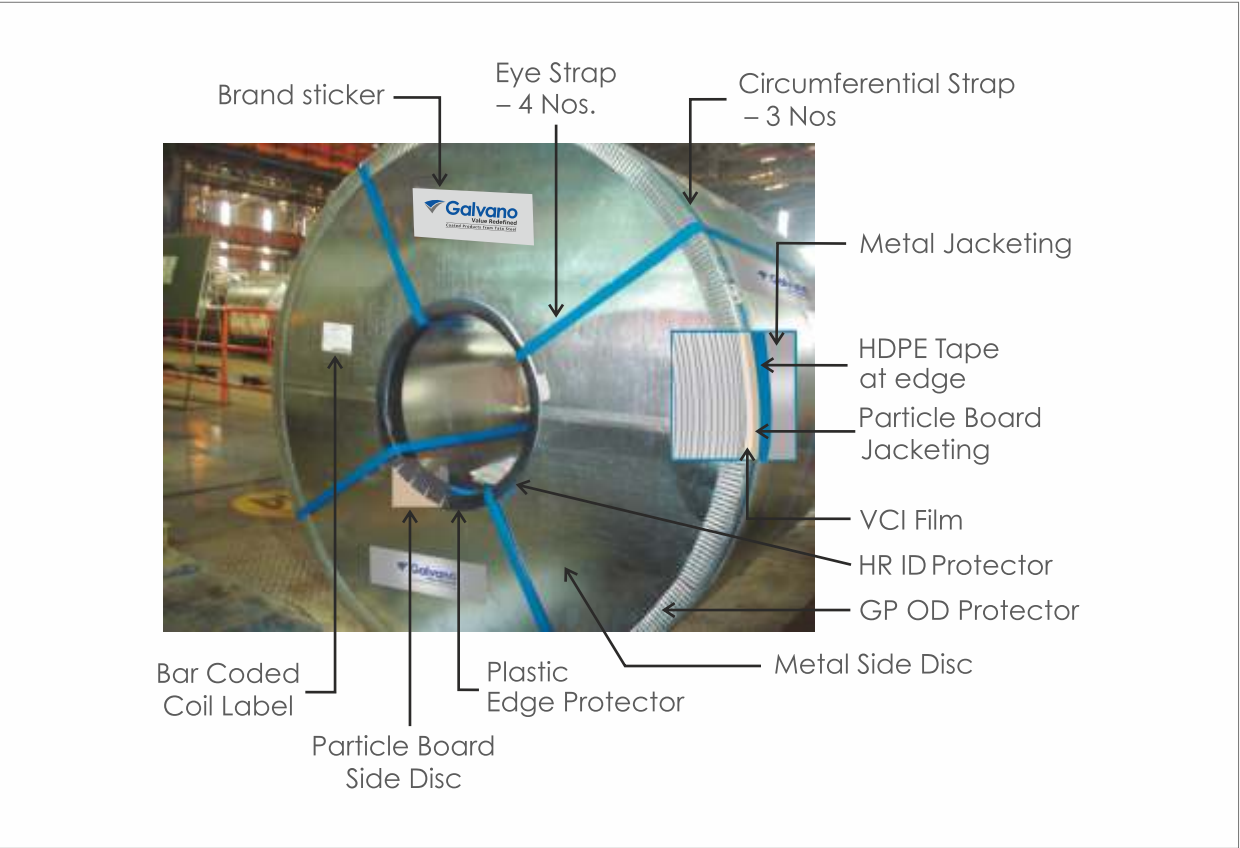
PRODUCT AUTHENTICITY

Galvano comes with Tata Steel's assurance of quality. Each coil is marked with invisible and chemically neutral UV ink as a guarantee of its authenticity. UV print can be viewed with the help of a UV torch, as illustrated below.

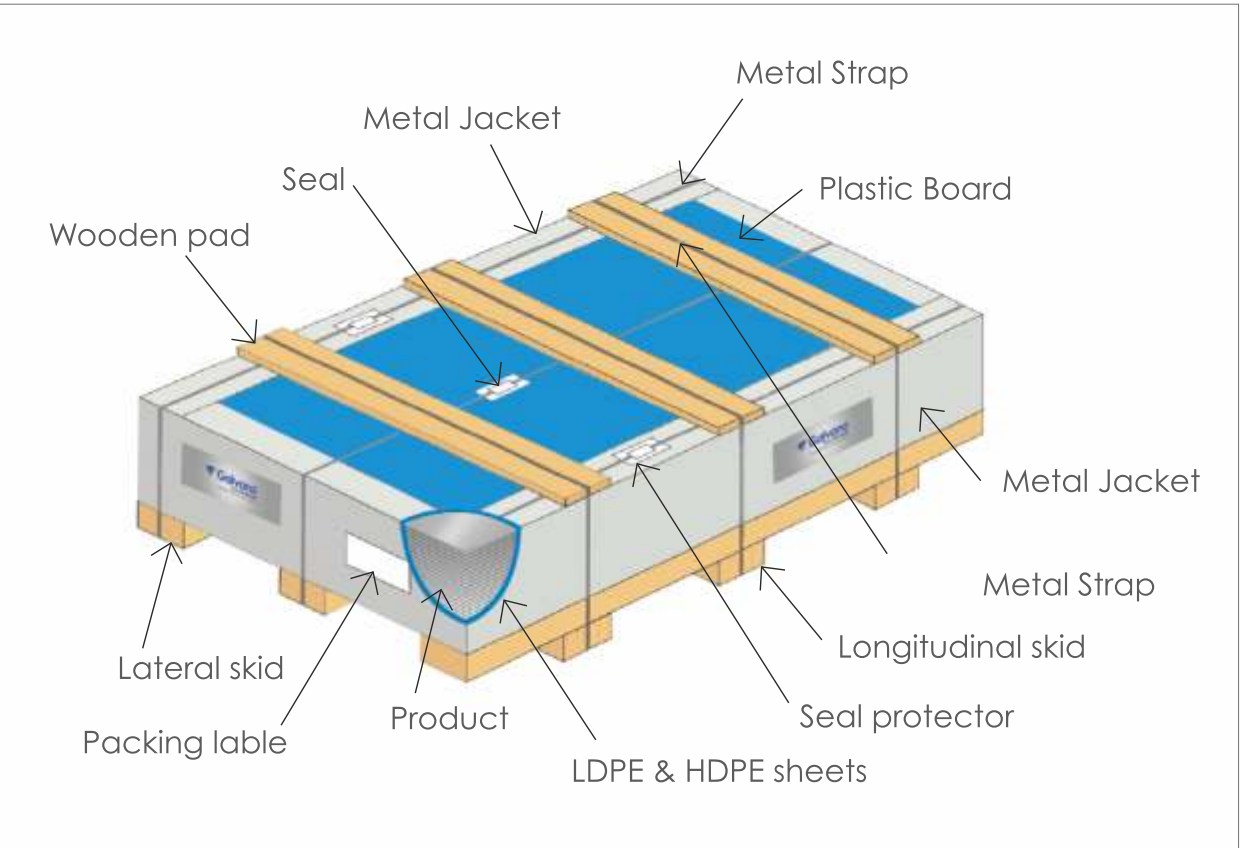


PACKAGING and LABELLING

Coils



Sheet



NETWORK of Distribution and **ACE+** Service Centres

Galvano meets the diverse needs of its customers through a strong distribution channel of distributors and service centres.

With ACE+, Galvano has taken its service capabilities to the next level and set a benchmark in the industry. This is a service centre development programme, a first in the steel industry, to enhance capability to deliver excellence in product and service customisation across a network of service centres.

Each authorised service centre is equipped with state-of-the-art facilities and processes for world-class handling, storage and processing to deliver on the highest parameters of quality and minimise wastage.



North Zone		
1	Rudrapur	TSPDL Uttrakhand (ACE+ & Authorised)
2	Derabassi	Bhagwati Steel
3	Mohali	Mangla Sons (ACE+ & Authorised)
4	Faridabad	Ferro Steel Solutions (ACE+ & Authorised)
5	Faridabad	GRG & Bros (ACE+ & Authorised)
6	Faridabad	Sanjeev Industrial
7	Faridabad	Rakesh Steel
8	Faridabad	TSPDL Faridabad (ACE+ & Authorised)
9	Jaipur	Pelikan Dossier

East Zone		
10	Guwahati	Sagar Steels (ACE+ & Authorised)
11	Kolkata	Bubna Commercial (ACE+ & Authorised)
12	Bokaro	R S Bokaro

West Zone		
13	Raipur	Pasa Associates
14	Indore	SKM Indore
15	Mumbai	SKM Galva (ACE+ & Authorised)
16	Pune	TSPDL Pune (ACE+ & Authorised)
17	Ahmedabad	Rohit & Co

South Zone		
18	Hyderabad	Indicor Steel
19	Hyderabad	Shree Sai Krishna (ACE+ & Authorised)
20	Kochi	Kummenchery (ACE+ & Authorised)
21	Bangalore	G K Ispat (ACE+ & Authorised)
22	Chennai	GMS Chennai



SALES OFFICES

North Zone

Delhi :

Tata Steel Limited
Jeevan Bharati Building,
Tower – 1(7th Floor),
124 Connaught Circus
New Delhi 110 001
Mobile: 9711176517
Off(P&T) : 66248504

Ghaziabad :

Tata Steel Limited
Plot No. 1227-1229,GT Road,
Lalkuan ,Ghaziabad 201 001
Phone: 0120-866780

Faridabad :

Tata Steel Ltd.
2nd Floor, Business Centre
33-B NIT, Faridabad
Haryana - 121001
Tel no 0129-4098321

Chandigarh:

Tata Steel Limited
SCO-16 1st Floor, Sector 26,
Madhya Marg, Chandigarh - 160 019
Phone: 91 172 2791047,2790932
Fax: 91 172 279 2426

Kanpur :

Tata Steel Limited
16/97, Navroz Building,
The Mall, Kanpur 208 001
Phone: 91 512 231 6605,
Fax: 91 512 231 6631

Ludhiana :

Tata Steel Limited
B-30, 1858/1 Focal Point,
Ludhiana 141 010
Phone: 91 161 267 3759 / 0806,
Fax: 91 161 267 6659

Jaipur :

Tata Steel Limited,
G - Business Park, 6th Floor,
D-34, Near Agrasen Circle,
Subhash Marg,
C-Scheme, Jaipur - 302 001

South Zone

Chennai :

Tata Steel Ltd.
8th Floor, Chettinad Sigapi Achi Building,
18/3- Rukmini Lakshmipathy Road,
(Back of Air India Office)
Egmore, Chennai – 600 008

Bengaluru :

Tata Steel Limited
A Wing, 2nd Floor, Jubilee Building,
45 Museum Road, Bengaluru 560 025
Office- 080 66950001,
Fax- 080 66950038

Secunderabad :

Tata Steel Limited
6th Floor, Surya Towers,
104 Sardar Patel Road,
Secunderabad 500 003
Phone: 91 40 5526 1020 / 1030,
Fax: 91 40 2781 2418

Coimbatore :

Tata Steel Limited
No: 6, New Damunagar, Puliakulam,
Coimbatore – 641036

East Zone

Kolkata :

Tata Steel Limited
52 Jawaharlal Nehru Road,
Kolkata 700 071
Phone: 91 33 2282 1778 / 2282 1348
Fax: 91 33 2282 1687

Bhubaneswar :

Tata Steel Limited
Marketing & Sales
2 - B , Fortune Tower
Chandrasekharpur
Bhubaneswar - 751023
Odisha

Jamshedpur :

Tata Steel Limited
191, Burma Road, Burma Mines,
Jamshedpur 831001
Phone: 91 657 227 0123

Guwahati:

Tata Steel Ltd.
Guwahati Sales Office
4th floor, Subham Velocity,
Honuram Boro Path, Opp. Wallford,
G.S.Road, Guwahati – 781005

Patna:

Mr. Abhinav
TATA Steel Limited
Boring Road | Patna-800 001

West Zone

Mumbai :

Tata Steel Ltd
3rd Floor, One Forbes
1, Dr V B Gandhi Marg,
Fort, Mumbai -400001

Ahmedabad :

Tata Steel Limited
2nd Floor, Premchand House,
Annexe, P.O. Box No. 4096,
Ashram Road, Old High Court Way,
Ahmedabad 380 009,
Phone: 91 79 801 2306,
Fax: 91 79 801 2604

Indore:

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3rd Floor , NRK Business Park ,
Block B-1 , PU-4, Scheme No 54,
Vijay Nagar Square , A.B.Road
Indore – 452010, MP
Office Tel :- 0731-6450688/ 691

Nagpur :

Tata Steel Limited
Museum Road, Civil Lines,
Nagpur 440 001,
Phone: 91 712 252 0170 / 253 3209,
Fax: 91 172 253 7078

Pune :

Tata Steel Ltd.
Office No.6 and 7, Second floor,
Wing B, Great Eastern Plaza
(Bajaj Allianz Building),
Airport Road, Pune-411001.

Raipur :

Mr. Alok Kumar
Tata Steel Limited
Office No. 539 , 5th Floor,
Magneto Offizo, | Raipur-492001

Toll free Helpline: 1800 108 8282

