

25% of
the fans
in India have
Galvano in it

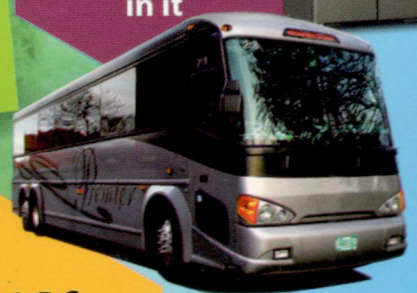
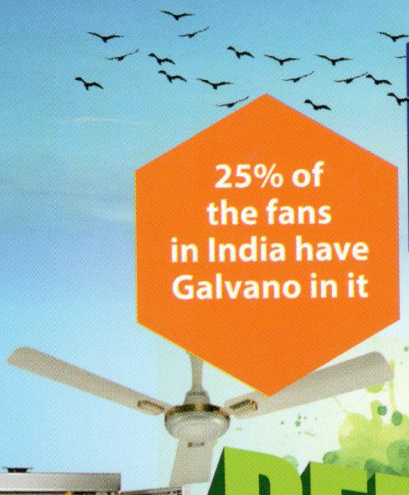
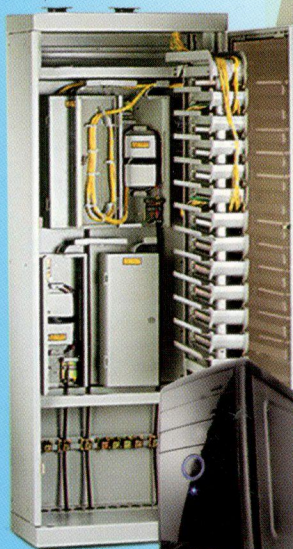
Entertaining
10 million families
every day with
dish antennas made
from Galvano

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

REFRESHING INDIA



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.

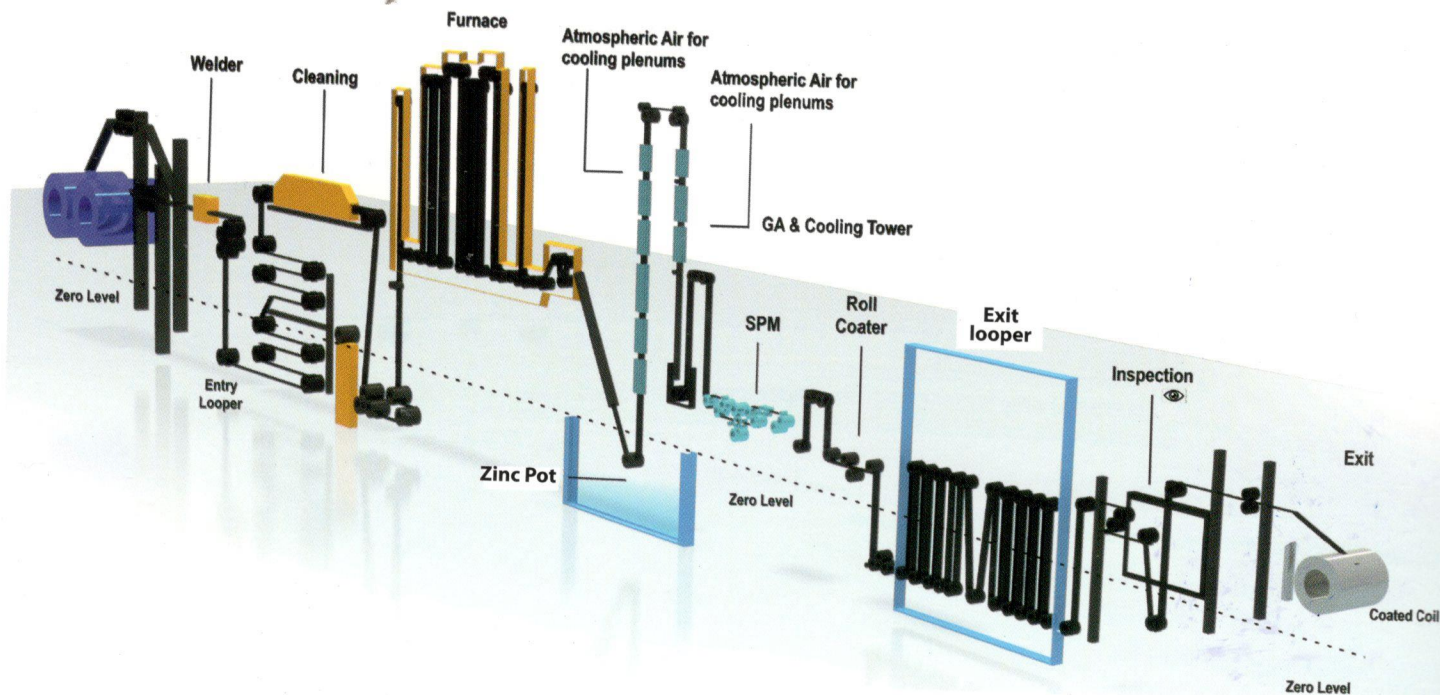
Galvano marks a new beginning in the world of GP steel (coil & sheets) by being the first zero-spangled Galvanised Plain (GP) steel offering in the country. Unlike ordinary spangled products available in the market, Galvano stands out with unmatched surface finish and mechanical properties with capabilities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

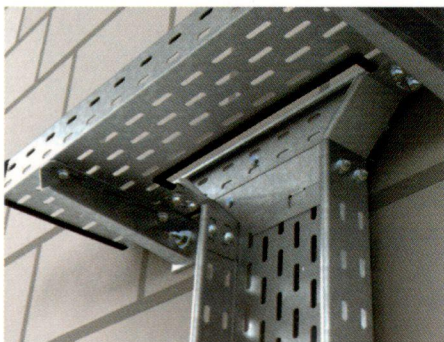
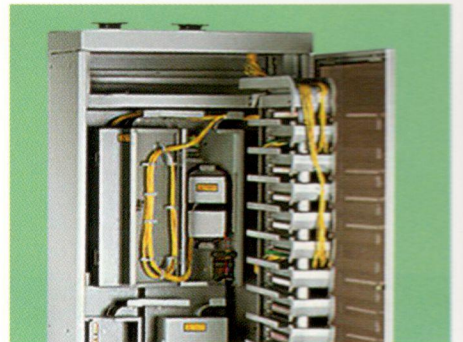
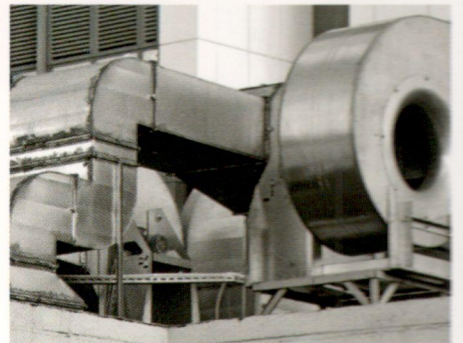
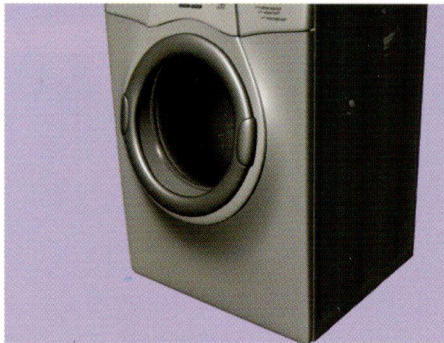
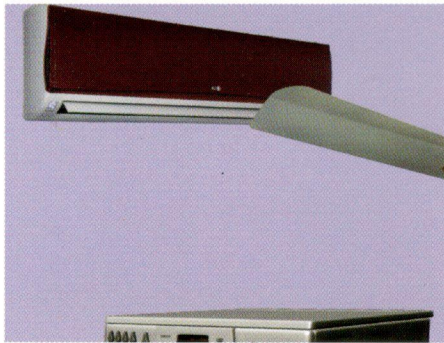
The products of the line are RoHS certified.

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	Max	Min	Max	Min	Max	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

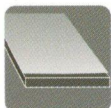
Grade	TDC	N (PPM)	C%		MN%		SI%		S%		P%		Al%	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
DQ	GLA1	70	0.035	0.07	0.15	0.4	-	0.04	-	0.02	-	0.025	-	0.02
DDQ	GLA2	60	-	0.05	-	0.3	-	0.025	-	0.02	-	0.025	-	0.02
EIF	GLA3	40	-	0.0035	-	0.15	-	0.015	-	0.012	-	0.018	0.015	0.06

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	Max	Min	Max	Min	Max	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

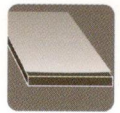
Grade	TDC	N (PPM)	C%		MN%		SI%		S%		P%		Al%	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
DQ	GLP1	70	0.035	0.07	0.15	0.4	-	0.04	-	0.02	-	0.025	-	0.02
CQ	GLP2	70	0.035	0.07	0.15	0.4	-	0.04	-	0.02	-	0.035	-	0.02
CQ	GLP3	70	0.035	0.07	0.15	0.4	-	0.04	-	0.02	-	0.035	-	0.02
EIF	GLP4	40	-	0.0035	-	0.15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



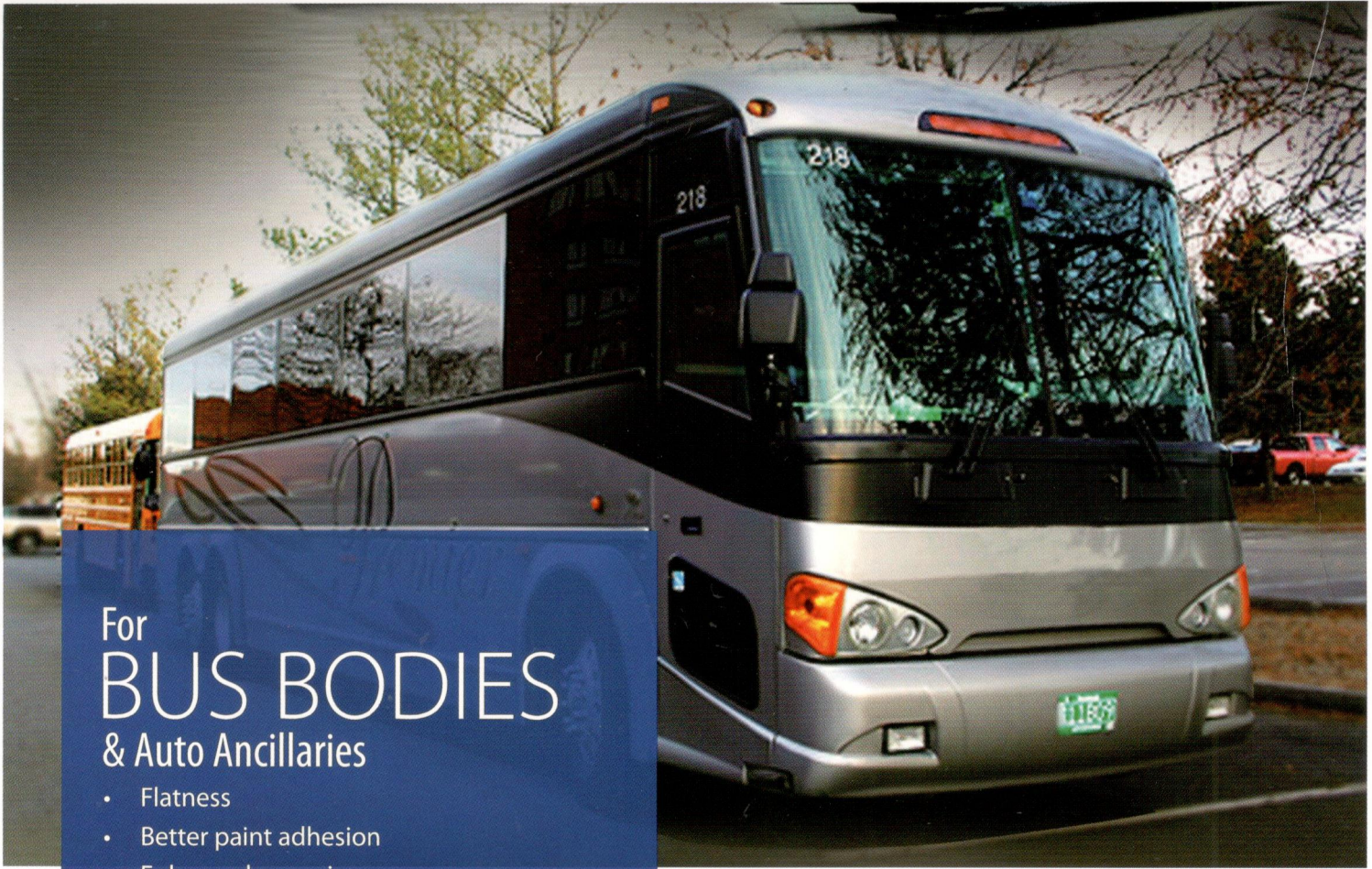
Superior Paint Adhesion



Eco-Friendly



RoHS Compliant



For BUS BODIES & Auto Ancillaries

- Flatness
- Better paint adhesion
- Enhanced corrosion
- 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

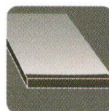
Grade	TDC	N (PPM)	C%		MN%		Si%		S%		P%		Al%	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
DQ	GLB1	70	0.035	0.07	0.15	0.4	-	0.04	-	0.02	-	0.025	-	0.02

Post Treatment

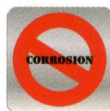
Chromating (Chrome 3 based) [C3] Electrostatic Oiling [O] Both Chromating & Oiling [C3O]



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

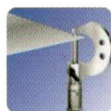
Grade	TDC	Coating (GSM)	Yield Strength (Mpa)		Ultimate Tensile Strength (Mpa)		Elongation (50% GL)			Surface Roughness (Ra)	Thickness Range	Width Range
			Min	Max	Min	Max	Min	Max	Min			
EIF	GLG4	80	-	190	-	330	40	45	-	0.8-1.6	0.4 - 2	900 - 1520
EIF	GLG5	120	-	190	-	330	40	45	-	0.8-1.6	0.4 - 2	900 - 1520

CHEMICAL PROPERTIES

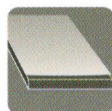
Grade	TDC	N (PPM)	C%		MN%		Si%		S%		P%		Al%	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
EIF	GLG4	45	-	0.0035	-	0.15	-	0.015	-	0.012	-	0.018	0.015	0.06
EIF	GLG5	40	-	0.0035	-	0.15	-	0.015	-	0.012	-	0.018	0.015	0.06

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

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	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

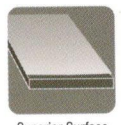
Grade	TDC	N (PPM)	C%		MN%		Si%		S%		P%		Al%	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
HSQ	LS04	70	0.035	0.08	0.75	1	-	0.015	-	0.015	-	0.03	0.02	0.07
HSQ	LS16	70	0.035	0.08	0.75	1	-	0.05	-	0.015	-	0.03	0.02	0.07
HSQ	LS17	70	0.035	0.08	0.75	1	-	0.05	-	0.015	-	0.03	0.02	0.07
HSQ	LS18	70	0.035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

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



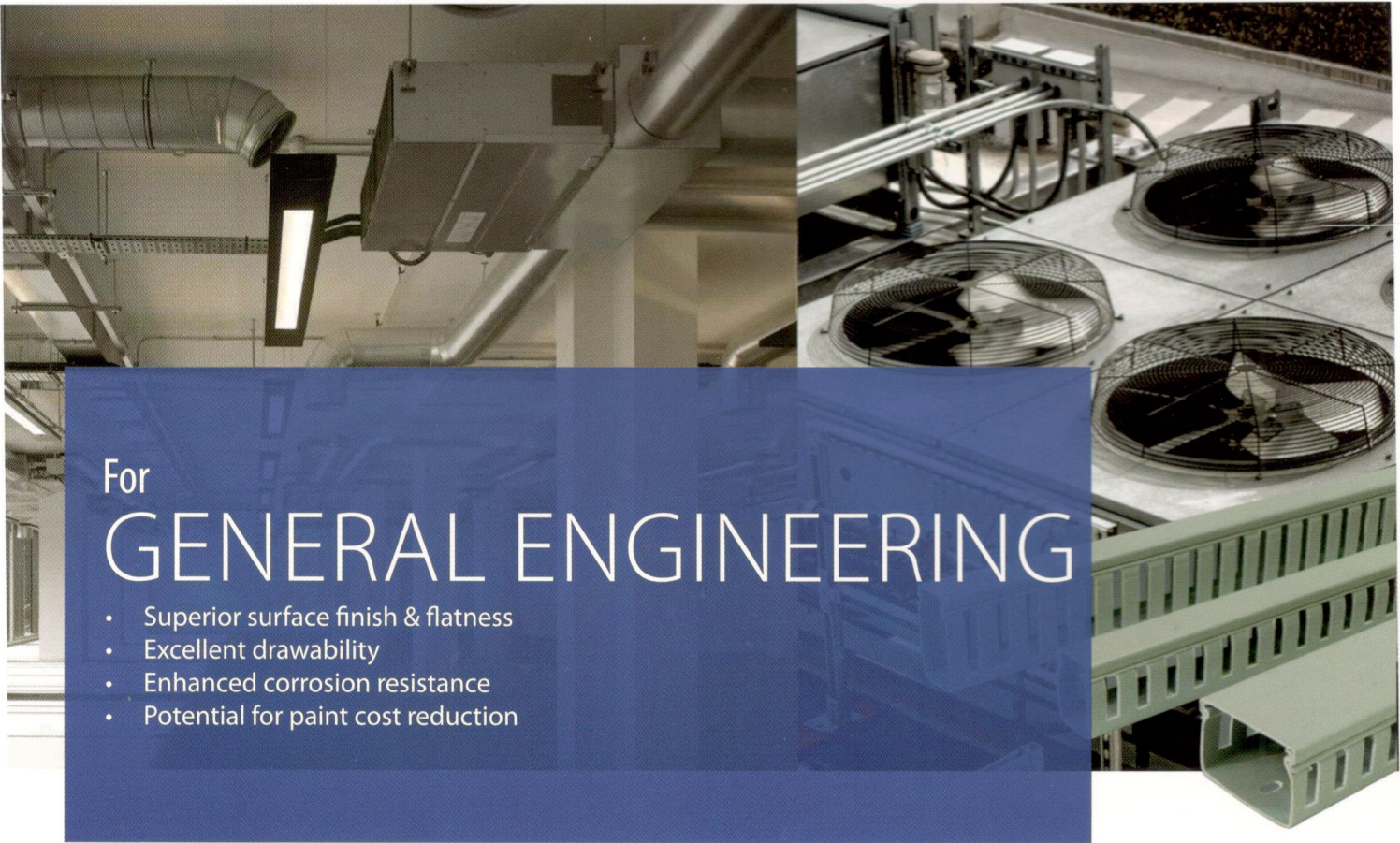
Superior Paint Adhesion



Eco-Friendly



RoHS Compliant



For GENERAL ENGINEERING

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

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	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

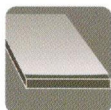
Grade	TDC	N (PPM)	C%		Mn%		Si%		S%		P%		Al%	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
DQ	GLG1	70	0.035	0.07	0.15	0.4	-	0.04	-	0.02	-	0.025	0.02	-
DQ	GLG2	70	0.035	0.07	0.15	0.4	-	0.04	-	0.02	-	0.025	0.02	-
DDQ	GLG3	60	-	0.04	-	0.25	-	0.015	-	0.015	-	0.015	0.02	-
DQ	GLG7	70	0.035	0.07	-	0.4	-	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

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

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

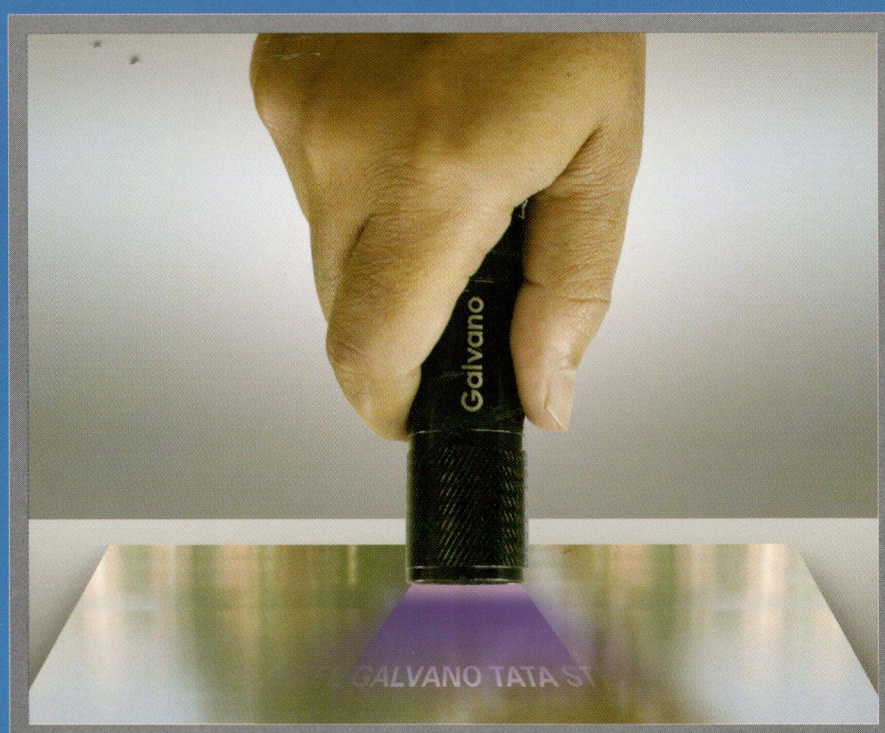
* Thickness shall be measured at any point across the width not less than 25 mm from the edge

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

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

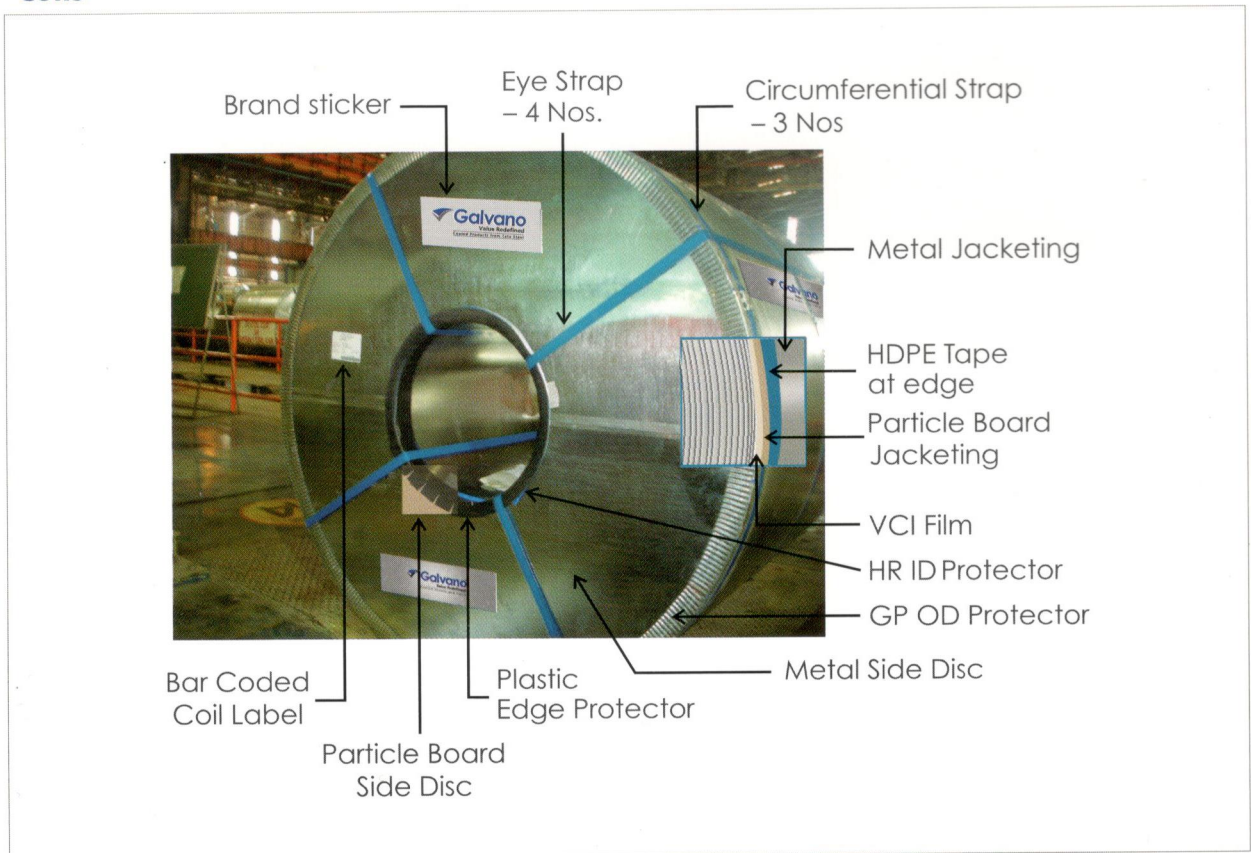
PRODUCT AUTHENTICITY

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.

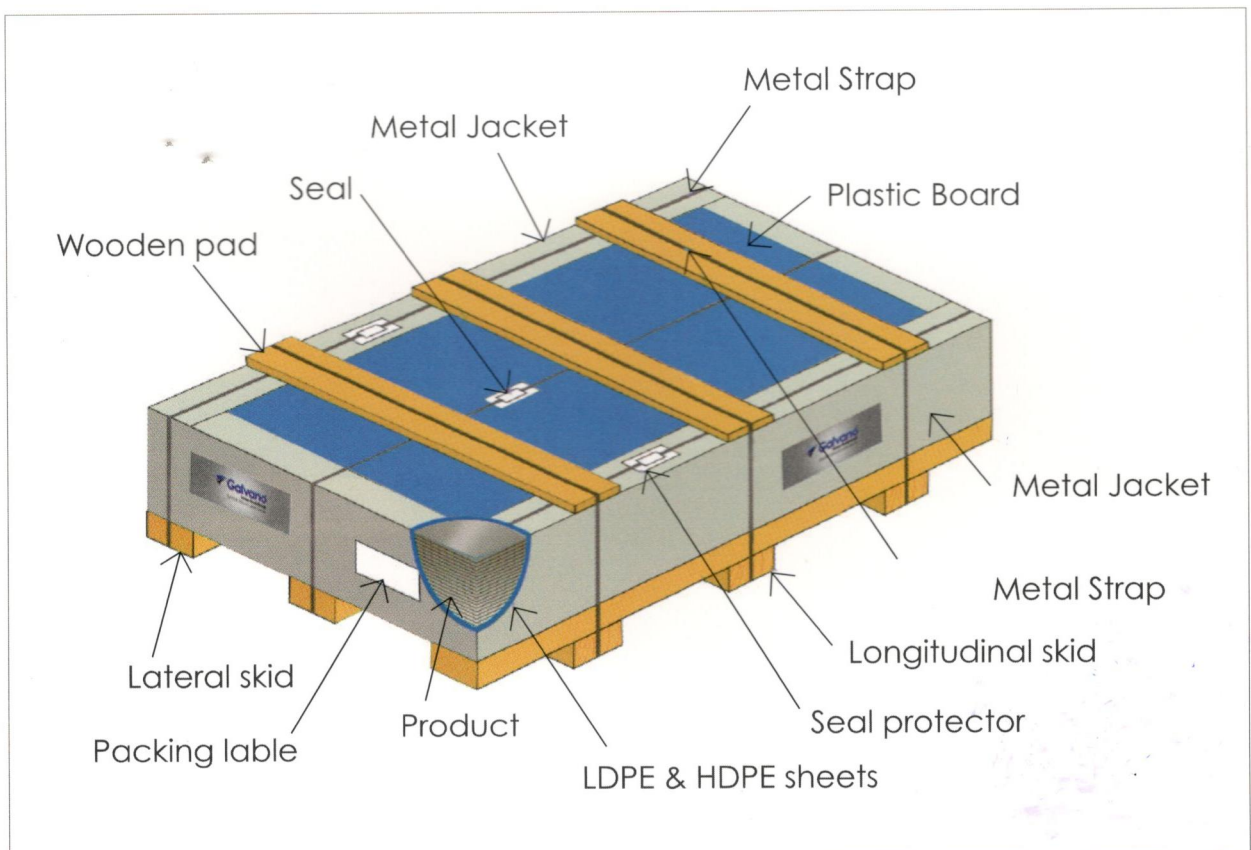


PACKAGING and LABELLING

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.

