



STEEL FOR GREEN

**COLOUR-COATED**

STEEL COILS AND SHEETS STRUCTURE SOLUTION  
'NAYI SOCH' TO MOULD IT YOUR WAY





**APL APOLLO GROUP** is India's largest manufacturer of steel pipes and tubes, with an annual capacity of more than 2.6 million tons. As a part of the SG Group, it caters extensively to India, and exports to over 20 countries globally. The company's vast distribution network is spread across the domestic region within warehouses and branch offices in 29 cities. Its structural steel tubes are applied in various load-bearing and building materials in housing and commercial construction infrastructure development.

Founded in 1986 in the capital city of Delhi, it has catapulted its growth over the last three decades by introducing a range of new products coupled with new technologies. Today, APL Apollo is an unrivalled pioneer of breakthrough innovations in the steel pipes industry.







APL Apollo has pioneered the manufacturing and development for structural steel solutions in India for many years.

One such product is the newly launched Apollo Navrang; the narrow width, high thickness colour coated coils and sheets with a designer concept. Apollo's initiative to Save the Earth with the GO Green Concept aims at the replacement of Wood with Steel Sections.

These pre-galvanised/Alu Zinc also known as Galvalume sheets provide a wide range of usage such as Warehouse Sheds, Residential and Commercial Building Rooftops, Open Door Frames, PEB Sheds, along with Infrastructure Industry like Roof Panels, Bus Roofing and Inner Body Panels, Shutter, Purlins, Solar Panel Pedestals, Solar Panel Frames, Ducting, Dish Antenna, Automobiles components, Home appliances & Drums, Crash Barrier, Air Conditioner, Refrigerator etc., all of which are colour coated. They also cater to the aesthetic value of any place with unique colour coatings like Light Blue, Off-White, Brick Red, Green, and Grey with designer finishes like Wood, Marble and Stone Finish and many more. The durable build and variety of colour make Navrang the perfect colour-coated steel solutions to mould it your way.



# CONTINUOUS GALVANISING/Alu Zinc LINE

Navrang has a Hot Dip Non OX Continuous Galvanizing/Alu Zinc Line from an upcoming leading machine manufacture YOGIJI DIGI, for a galvanized and Alu-Zinc product that is designed to process a thickness range of 0.3 mm to 3.0 mm with a 300-750 mm width. The line is integrated with inline 4 Hi Wet Skin Pass Mill and flex tension levelling, giving us the best surface finishing results.

Flawless outcomes are assured through its online tension leveller, coating measurement, and central automation controls.

CONTINUOUS HOT DIP GI+GL COATING LINE – 750 MM WIDE	
EQUIPMENT SUPPLIER	YOGIJI - DIGI
TECHNICAL SPECIFICATIONS	
INCOMING MATERIAL	COLD ROLLED LOW CARBON STEEL
LINE SPEED	120 MPM MAX
INPUT AND OUTPUT COIL DATA	
COIL ID	508/610 MM
COIL OD	900 MM MIN. – 2200 MM MAX.
STRIP THICKNESS	0.30 MM MIN. – 3.0 MM MAX.
STRIP WIDTH	250 MM MIN. – 750 MM MAX.
WEIGHT	12 MT. MAX.
FURNANCE	VERTICAL NONOX FURNANCE, HORIZONTAL ANNEALING FURNANCE, JETCOOL SECTION, CALM SECTION, GRADES FULL HARD, CQ, DQ, DDQ, EDDQ
PRODUCTION CAPACITY	
GALVANIZED (GI)	28 MT/HR
ALU-ZINC (GL)	24 MT/HR
COATING (gms/m2)	
Zinc Coating	80 – 400 (Both Side)
Zinc Aluminium Coating	60 – 200 (Both Side)
SALIENT FEATURES	AUTOMATION ABB ENTRY CHEMICAL CLEANING SECTION ONLINE 4 HIGH WET SKINPASS MILL ONLINE TENSION LEVELLING CHEMICAL ROLL COATER



# ALU ZINC

The alloy-coated product contains 55% aluminum, 43.5% zinc, and 1.5% silicon by weight. Made with the traditional hot-dipping process, Alu Zinc is a suitable match for applications that demand high corrosion resistance and heat reflectivity. It can also be used for construction, appliances, agricultural equipment, solar panels/stands and several non-exposed automotive components.

Its shiny and uniform appearance with the Alu Zinc coating can be used even without needing a layer of paint over it, thanks to its anti-finger coating. This product is best suited for heating and ventilation applications. This product has better resistance to oxidation and can withstand temperatures up to 315°C without discolouration.

Alu Zinc has a unique appearance similar to the matte galvanized metal. It possesses high levels of strength, outdoor corrosion resistance, and longevity. Despite its wide applicability, it is generally not used on concrete, mortar or other highly alkaline substances.

## BASIC FEATURES

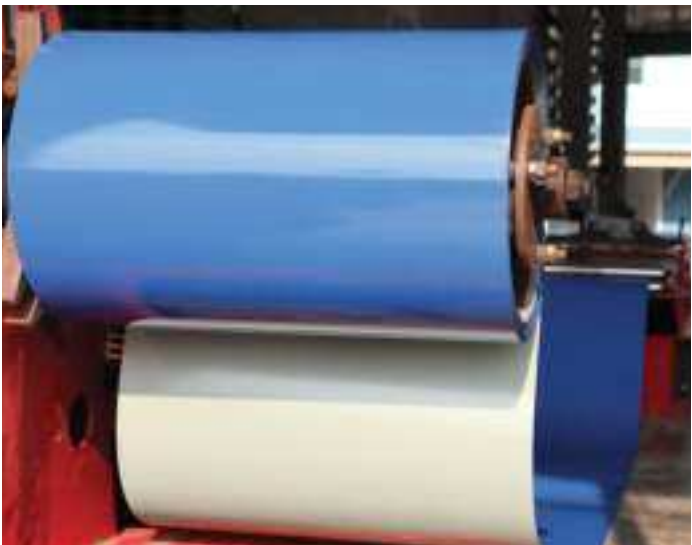
- Smooth surface and uniform appearance.
- A superior anti-fingerprint coating that looks better and lasts longer.
- Surface treatment as per ROHS (Restriction On Hazardous Substance) norms.
- A wider thickness range with tighter tolerance to ensure precision in end applications.
- High corrosion resistance and heat reflectivity.
- High temperature resistance and formability.



# CONTINUOUS COLOUR COATING LINE

In continuation of process equipment, the colour coating line is also made of YOGIJI DIGI, integrated with a catenary type oven with four zones for respectively prime & finish coat, along with Flex Type inline tension levelling with full fledge Chemical degreasing section. Its higher thickness continuous colour coating line uses coaters and cleaners to produce high quality coloured coils that stay protected even during transportation and storage. These are then used as reliable inputs for the infrastructure industry like Roof Panels, Bus Roofing and Inner Body Panels, Shutter, Purlins, Solar Panel Pedestals, Solar Panel Frames, Open-Door Frame, Ducting, etc.

CONTINUOUS COLOUR COATING LINE – 750 MM WIDE			
EQUIPMENT SUPPLIER		YOGIJI – DIGI	
TECHNICAL SPECIFICATIONS			
TYPE COATER		2 Coat, 2 Bake Catenary Oven Primer, Finisher, TEE Coater (3 head) with quick removal of bottom head.	
LINE SPEED: Entry Section		90 m/min.	
Process Section		75 m/min.	
STRIP WIDTH, mm		250 - 750	
STRIP THICKNESS, mm		0.30 - 2.8	
INPUT MATERIAL		Low Carbon Steel, CR, Galvanized, 55% Al-Zn coated (Skin passed & tension levelled)	
COIL DATA		ID: 508/610 mm OD: 2000 mm (max.) Weight : Entry: 15,000 kg. max. Exit: 12,000 kg.	
COATING CONDITIONS		No rinse dry in :Top :1.2-2.0 place Chem.: :Back :1.2-2.0 Coater: DFT, mM:	
PAINT TYPES		Epoxy, SDV, Plastisol, Polyester, SMP, Teflon (Reduced speed) PVDF	
PAINT THICKNESS: DFT, mM:		TOP	BACK
		Primer:	3-13 3-12
		Finisher:	5-50 5-80
		Plastisol:	200 -
OVENS		PRIME	FINISH
		Curing time, seconds:	20 26
		Oven length, m:	36 44
		Solvent Loading:	355
		(average: litres/hr)	
		Throughput rating: t/hr:	17
SPECIAL FEATURES		Tension leveling Online guard film application Incinerator for solvent treatment Hot Water Generator utilizing oven flue gases Stack temperature: < 200 C Tee - coater Quick change bottom heads Chem Coater drier PMT up to: 110 C	



## COLOUR – COATED STEEL TUBES AND PIPES

Innovation is way of life at APL Apollo. Following this principle, Navrang revolutionizes how steel tubes and pipes are manufactured and installed. With traditional methods and Galvanised Iron (GI), steel tubes & pipes are painted on-site with the chosen colour at the manufacturing location/plant. They are then given heat treatment to ensure longer-lasting colour. Generally, steel tubes and pipes are available bare and neutral steel finish and colour, which are then painted for aesthetics and rust prevention. This process pollutes the air and land, as well as being a more expensive choice. Furthermore, while utilising such rusty pipes, painting them not only requires more effort to remove the rust, but it also raises the cost.

APL Apollo addresses this issue by pre-painting steel tubes and pipes in a controlled environment within the plant which has proven to be a big boon for prevention of rusting of steel tubes and pipes in transit and at sites. This is not only more cost-effective, but it also has a low environmental impact. Additionally, painting in automatic lines provides higher quality, minimal wastage, and a longer lifespan. Colour coating is possible on all types of black round and hollow sections, as well as galvanised and pre-galvanised pipes. APL Apollo setup line produces the colour coated pipes/sections from colour coated coils with the state-of-the-art Paint Technology on colour coating lines. Bright Green, Graphite Grey, Brick Red, Off White, Light Blue, Wood, and Marble & Stone are the current colour coated pipe options.

**Applications:** Handrails, Fencing, Home Decor, Door Profile, Light Structures, Furniture, Gates, etc.

**Sizes:** CHS: 21mm - 76.2mm | SHS: 20X20mm | RHS: 80X40mm



# APPLICATIONS



## Solar Panel Frames

**Solar Panel Frames** – Navrang Solar Panel Frames are high-performing and durable pre-painted galvanized sheets which make them a reliable steel sheet solution that are better than Galvanized Iron (GI) for constructing Solar Panel Frames. In all weather conditions and for the life span of the structure, the advanced technology of Alu Zinc Line has been used, which results in superior heat stability / reflectivity. Navrang Solar Panel Frames ensures a more durable product that gives more than 4x service life.

STRUCTURE AND SPECS OF COLOUR COATED SHEET	
PARAMETERS	SPECIFICATIONS
THICKNESS	0.6 TO 3.00 MM
WIDTH	300 - 750 MM
COATING TECHNOLOGY	02 COAT POLYESTER PAINT
GSM	120 GSM, AZ 70, AZ 150
COATING THICKNESS -DFT	TOP COAT: 15 -18 µ PRIMER: 05 - 07 µ BACK COAT: 07 TO 08 µ
ELONGATION	APPROX. 17%
MEK RUB	100 DR
BEND PROPERTIES	0 T TO 3 T
SCRATCH HARDNESS	1.5 TO 2.0 KGS (MIN)

### COATINGS METHODOLOGY WILL BE

- ◆ REGULAR MODIFIED POLYESTER
- ◆ SILICON MODIFIED POLYESTER
- ◆ PVDF COATINGS

### IN VIBRANT RAL COLOURS

- ◆ PLAIN PASTORAL COLOURS
- ◆ HIGH GLOSSY
- ◆ FULL MATT
- ◆ TEXTURE
- ◆ WOODEN FINISH
- ◆ EMBOSSING
- ◆ ...AND MUCH MORE





## PEB Purlins

**PEB Purlins** – Navrang C Purlins and Z Purlins are specially designed for Purlin and Girt applications, and are the more economical and environment friendly alternative for infrastructures, making them more durable and malleable in comparison to Galvanised Iron (GI). Their highly flexible extra bend properties from 0T to 3T, Edge-Protection with Coatings, and Epoxy coatings for better adhesive qualities over Metal make them suitable for bridging and a comprehensive range of accessories of purlins and girts.

Pre-painted metal outperform the post-painted metal. As a part of an experiment, pre-painted metal louvers with exposed cut edges were tested against 3 post-painted metal louvers – electro coated, powder finished and spray finished. All of them were made of hot dipped galvanized steel and exposed to the same environment in Florida. After 16, 44, and 68 months, pre-painted parts were more corrosion resistant than post-painted parts that were uniformly cleaned, treated, and painted as a flat surface, thus proving that pre –painted metals are better than post-painted metal.

Pre-painted parts have two coats of paint tightly bonded to metal and paint on the back, as opposed to a single coat on a post-painted part. Corrosion resistance increases and durability enhances with uniform pre-cleaning, pre-treatment and pre-painting.

STRUCTURE AND SPECS OF COLOUR COATED PURLIN COILS	
PARAMETERS	SPECIFICATIONS
THICKNESS	0.6 TO 3.00 MM
WIDTH	300 - 750 MM
COATING TECHNOLOGY	02 COAT POLYESTER PAINT
GSM	120 GSM
COATING THICKNESS -DFT	TOP COAT: 15 -18 µ PRIMER: 05 - 07 µ BACK COAT: 15 -18 µ
ELONGATION	12% TO 17%
MEK RUB	100 DR
BEND PROPERTIES	0 T TO 3 T
SCRATCH HARDNESS	1.5 TO 2.0 KGS (MIN)
SALT SPRAY TEST	MIN 750 HRS.
SPECIAL ADVANTAGE	4 SIDE COATED

COATINGS METHODOLOGY WILL BE

- ◆ REGULAR MODIFIED POLYESTER
- ◆ SILICON MODIFIED POLYESTER
- ◆ PVDF COATINGS

IN VIBRANT RAL COLOURS

- ◆ PLAIN PASTORAL COLOURS
- ◆ HIGH GLOSSY
- ◆ FULL MATT
- ◆ TEXTURE
- ◆ WOODEN FINISH
- ◆ EMBOSSING

SPECIAL FEATURES

- ◆ ANTI DUST PAINT
- ◆ HIGH SCRATCH RESISTANT







## Open Door Frames

**Open Door Frames** – With the strength of steel and a variety of aesthetics to choose from, Navrang Color Coated Open Door Frames provide the best of protection and innovative aesthetic appeal to your spaces, which gives them advantage over Galvanized Iron (GI). The Navrang Door Frame is easy to install and keeps doors termite-free, humidity resistant, and are recyclable and better for the environment.

STRUCTURE AND SPECS OF COLOUR COATED SHEET	
PARAMETERS	SPECIFICATIONS
THICKNESS	0.6 TO 3.00 MM
WIDTH	300 - 750 MM
COATING TECHNOLOGY	02 COAT POLYESTER PAINT
GSM	120 GSM
COATING THICKNESS -DFT	TOP COAT: 15 -18 µ PRIMER: 05 - 07 µ BACK COAT: 07 TO 08 µ
ELONGATION	APPROX. 17%
MEK RUB	100 DR
BEND PROPERTIES	0 T TO 3 T
SCRATCH HARDNESS	1.5 TO 2.0 KGS

### COATINGS METHODOLOGY WILL BE

- ◆ REGULAR MODIFIED POLYESTER
- ◆ SILICON MODIFIED POLYESTER
- ◆ PVDF COATINGS

### IN VIBRANT RAL COLOURS

- ◆ PLAIN PASTORAL COLOURS
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- ◆ EMBOSSING

### SPECIAL FEATURES

- ◆ ANTI DUST PAINT
- ◆ HIGH SCRATCH RESISTANT





**Solar Panel Pedestals**



**Bus Roofing and Automobile Parts**



**Building Rooftops Frames**



**Colour Coated Shutter**



**Crash Barrier**



**Water Gutters, Down Take Pipes**



**Ducting**



**Dish Antenna**



**Air Conditioner**



**Refrigerator**



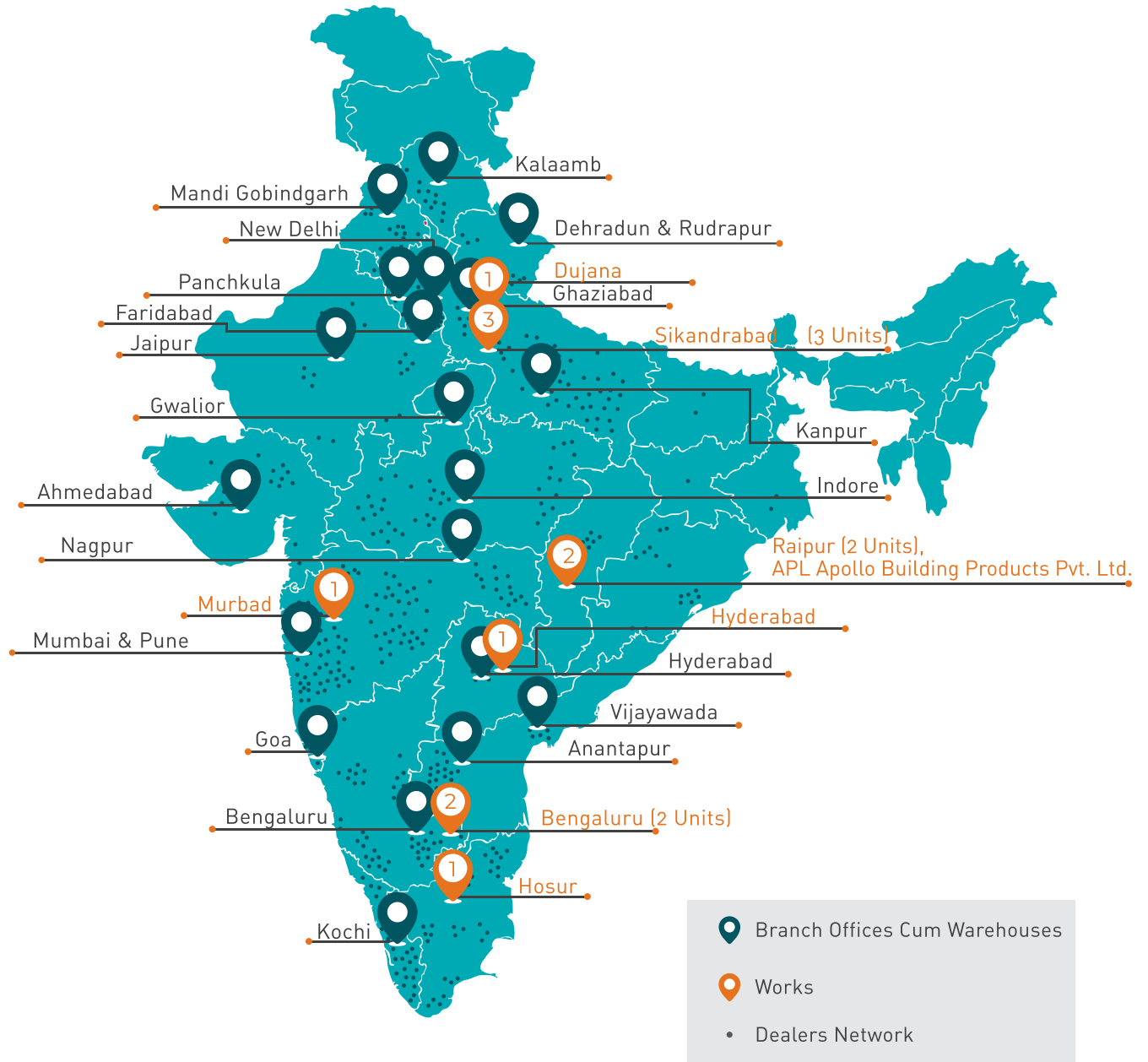
## ENVIRONMENT

At APL Apollo, we are committed to taking care of the environment by implementing several measures for a better and cleaner tomorrow, while ensuring that the entire process is energy efficient. Our Zero Discharge sustainable policy makes sure that all water used in the production process is treated and reused. This reduces industrial water wastage drastically. We have planted trees in and around our premises and we've converted barren lands into green pastures.





## OUR NATIONWIDE PRESENCE



11 Plants



29 Sales Office



800 Dealers & Distributors



2000 Towns & Cities



1,00,000 Retailers & Fabricators



Scan to know more about us



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