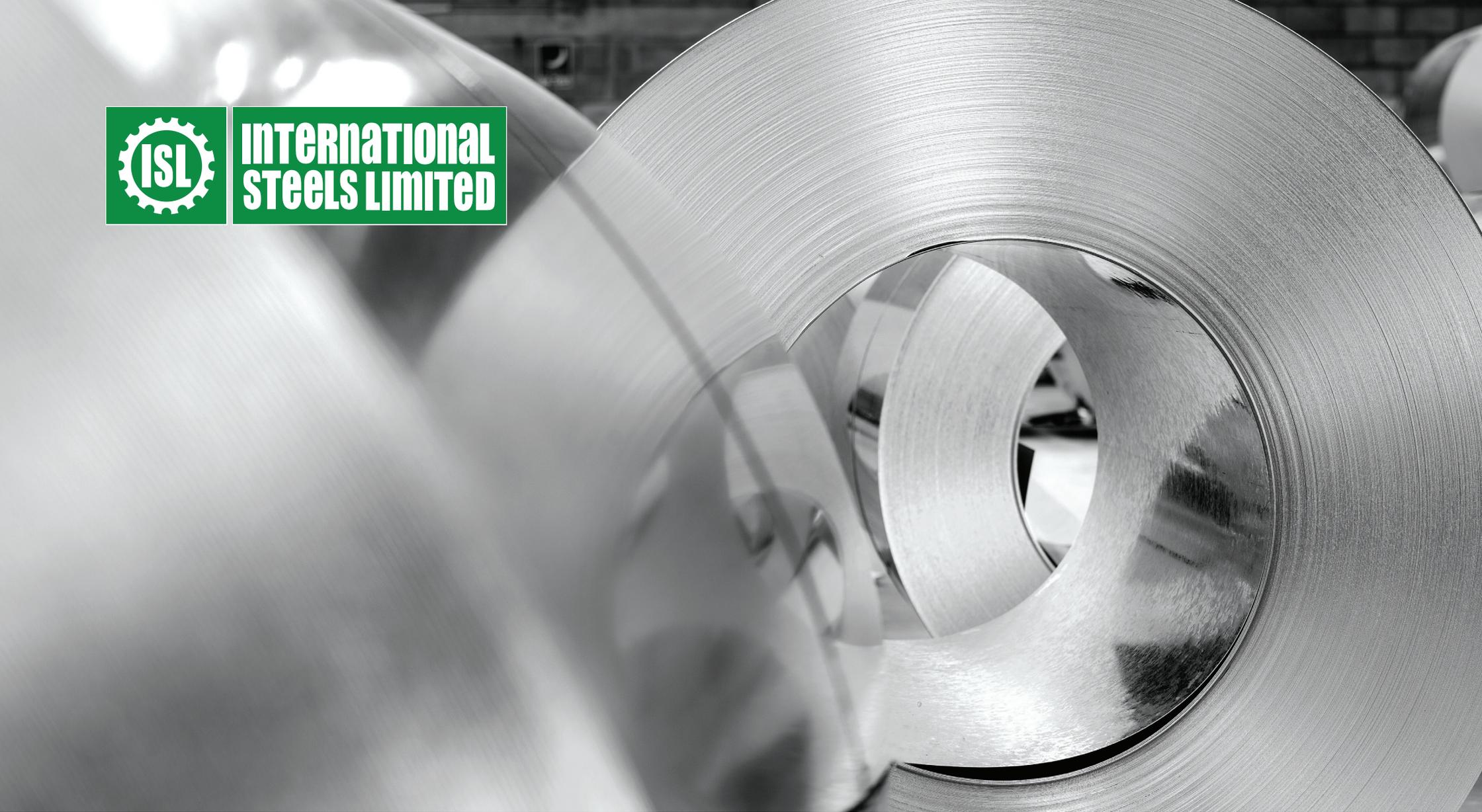




**INTERNATIONAL
STEELS LIMITED**



HOT DIP GALVANIZED STEEL



**INTERNATIONAL
STEELS LIMITED**

**LARGEST FLAT STEEL MANUFACTURER
AND EXPORTER IN PAKISTAN**

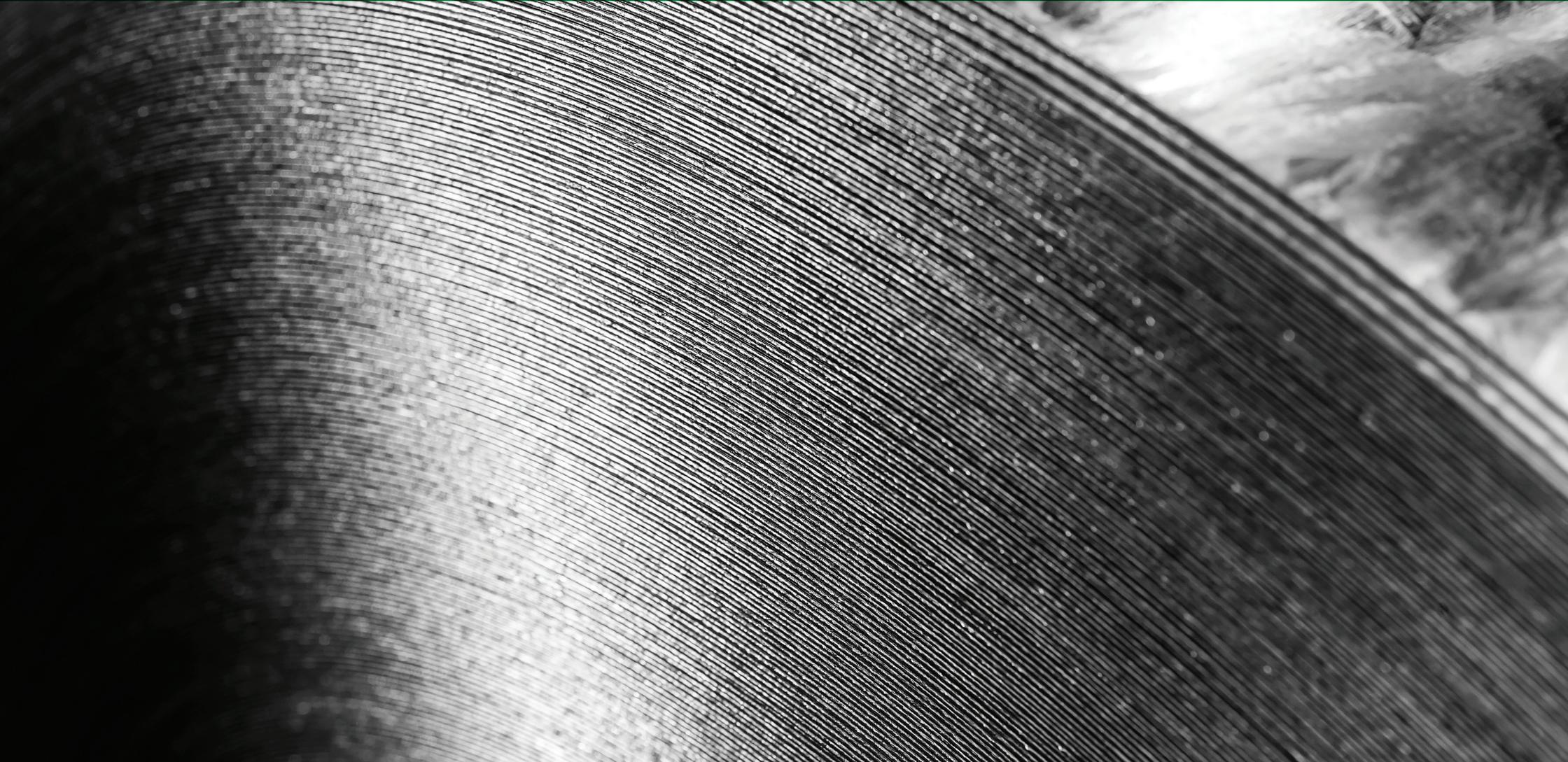


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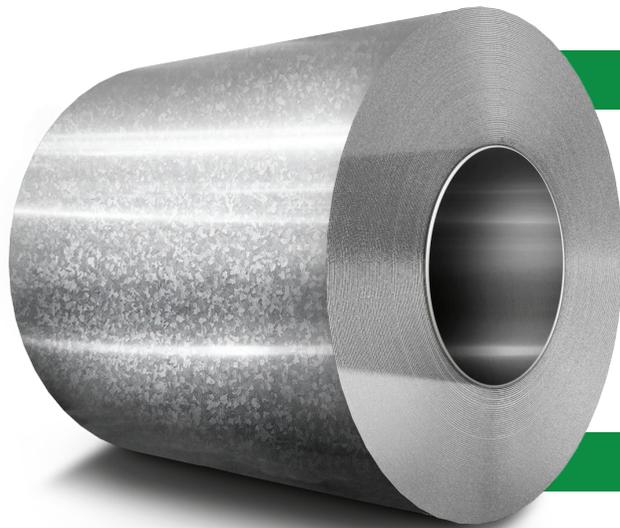
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Hot Dip Galvanized Steel

ISL's Hot Dip Galvanized Steel is produced on a state-of-the-art, fully automated production line. The best available raw materials and processes are applied under controlled conditions to produce material of the highest quality.

With a production capacity of 460,000 MT, ISL's Galvanizing facility produces products of high quality and endurance, thanks to a dynamic production team and rigorous quality control systems.



MAX. WIDTH & THICKNESS

- 1,250 mm
- 0.18 mm - 2.50 mm
(0.007" - 0.098")

GRADES

As per ASTM A653, JIS G3302 and equivalent standards

PROPERTIES

- Regular / Suppressed Spangle
- Chromated and Dried
- Skin-passed / Non skin-passed

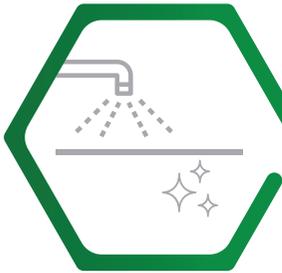




Manufacturing Process

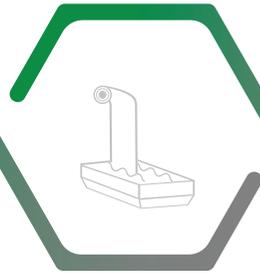
01 DEGREASING & ELECTROLYTIC CLEANING

In order to achieve better coating adhesion, the steel's surface is rinsed and air-dried to get rid of residual electrostatic oil



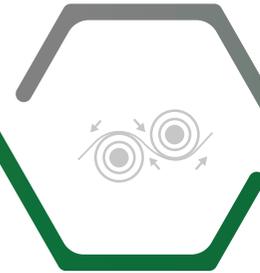
03 GALVANIZING

The annealed steel is then immersed in a molten zinc pot under an inert atmosphere, which forms a protective layer around the steel



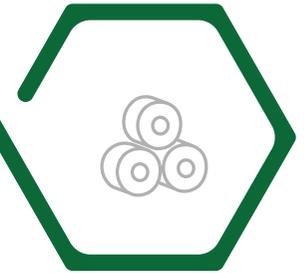
05 TENSION LEVELER

Tension leveler reduces any shape defects and ensures flatness through elongation of steel



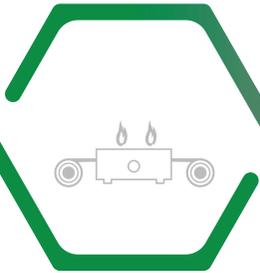
07 PACKING

Packing is customizable according to customer requirements



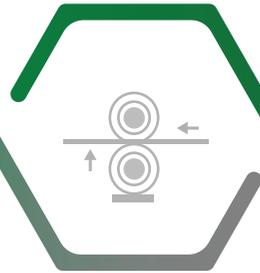
02 CONTINUOUS ANNEALING

Cold rolled coils are annealed in a continuous NOX furnace



04 SKIN-PASSING

Skin Passing is done to reduce strain marks and impart a uniform surface texture on the coated product (If specified by the customer)



06 APPLICATION OF CHROMATE

A thin coat of chromate - a rust inhibitor, is applied to the hot dip galvanized product as it leaves the tension leveler. This chromate solution is squeegeed onto both surfaces and then air-dried



Manufacturing Standards

Our products are manufactured as per ASTM A653, JIS G3302 and equivalent standards related to commercial and structural grades in sheets and coils.



Production Facilities

In order to deliver quality products and to meet different customer requirements, ISL produces high-quality hot dip galvanized steel on two technologically advanced, fully automated continuous galvanizing lines. These galvanizing lines are equipped with cutting-edge galvanizing machinery, provided by some of the world's most renowned equipment-makers and suppliers.

Technology Partners



Grades and Specifications

TYPE	ASTM A653 GRADES	JIS G3302 GRADES	APPLICABLE NOMINAL THICKNESS*	STANDARD WIDTH AVAILABLE BEFORE SLITTING	ZINC COATING WEIGHT* (gm/m ²)
Commercial	CS Type A / B	SGCC	0.007" - 0.098" (0.18 mm - 2.50 mm)	29.53" - 49.21" (750 mm - 1,250 mm)	*Z60 - Z275
		SGCH	0.007" - 0.039" (0.18 mm - 1.00 mm)	29.53" - 49.21" (750 mm - 1,250 mm)	
Forming	FS Type A / B		0.016" - 0.040" (0.40 mm - 1.00 mm)	29.53" - 49.21" (750 mm - 1,250 mm)	
Structural	SS33	SGC340	0.007" - 0.098" (0.18 mm - 2.50 mm)	29.53" - 49.21" (750 mm - 1,250 mm)	
	SS80	SGC570			
	SS40	SGC400	0.012" - 0.079" (0.30 mm - 2.00 mm)	42.12" - 48.00" (1,070 mm - 1,219 mm)	
	SS50	SGC440			
Drawing	DDS EDDS	SGCD1 SGCD2 SGCD3 SGCD4	0.014" - 0.033" (0.36 mm - 0.85 mm)	48.00" (1,219 mm)	Z60 - Z100

*Thickness tolerance: 1/2 of ASTM A924, and 1/2 of JIS G3302 and equivalent standards.

*Minimum zinc coating weight based on the zinc table *Other width and thicknesses can be made available on request



Quality Assurance Tests

QUALITY TESTS PERFORMED	EQUIPMENT
ZINC COATING MASS IN LINE	X-ray Gauge
ZINC COATING MASS LABORATORY	Destructive testing technique (weigh-strip-weigh)
ZINC POT CHEMISTRY ANALYZER	SPECTROMAXx
COATING ADHESION TEST	T bend tester
FLUTING TEST	Fluting tester
TENSILE TEST	Universal tensile testing machine
YIELD POINT TEST	Universal tensile testing machine
ELONGATION TEST	Universal tensile machine, extensometer, vernier caliper
HARDNESS TEST	Rockwell hardness tester, Vickers hardness tester
BASE METAL THICKNESS	Micrometer
STRIP WIDTH	Measuring tape
STRIP FLATNESS	Surface plate
SURFACE DEFECTS	Strobe light for inspection , visual inspection, top and bottom of moving strip
CUPPING TEST	Cupping test machine
STRIP SAMPLING	Strip bench shear
DETERMINATION OF CHEMICAL COMPOSITION	Optical emission spectrometer for ferrous and non-ferrous materials



ISO 9001: 2015 Quality Management System
 ISO 14001: 2015 Environment Management System
 ISO 45001: 2018 Occupational Health & Safety Management System



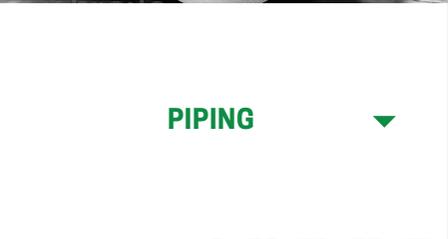
Applications



CONSTRUCTION AND ROOFING



HVACR AND DUCTING



PIPING



TRUNKS AND STORAGE BOXES



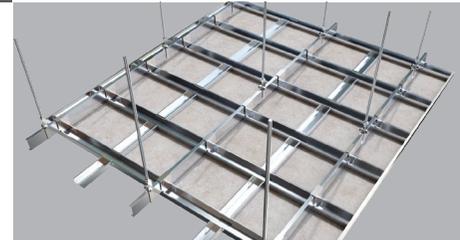
RAZOR WIRE



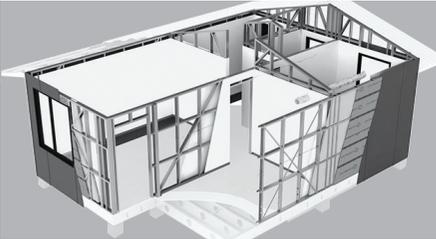
GUARDRAILS, HANDRAILS AND STREET FURNITURE



SUSPENDED CEILINGS



INDUSTRIAL EQUIPMENT



LIGHT GAUGE STEEL STRUCTURES



OUTDOOR SIGNAGE



WALL PARTITIONS



AGRICULTURE AND HORTICULTURE





Why ISL?



AVAILABILITY

ISL's efficient inventory management system ensures that running items are available ex-stock.



GLOBAL FOOTPRINT

With close proximity to the sea port, ISL has a strategic location that provides efficient access to the domestic and international markets.



NATION-WIDE SALES NETWORK

A vast nationwide dealership network caters to all major cities of Pakistan.



CUSTOMIZATION

ISL offers various value-added products and services as per customer requirements, ranging from special grade steel products to services like custom cutting and slitting.



PRODUCT QUALITY

ISL's products are manufactured using premium quality raw material sourced from world's leading tier-1 mills. The steel produced in ISL's cutting-edge facility completely conforms to the global standards of steel manufacturing.



PRECISE DIMENSIONAL TOLERANCE

Minimal deviation in mechanical properties due to state-of-the-art production and quality control systems. The coating thicknesses are regular, predictable and easily specified.



ENDURANCE

Strong adhesion of zinc with the base metal gives it long-lasting protection against corrosion, good service life, and formability in subsequent manufacturing processes.



THREE WAY PROTECTION

The zinc coating slows down the weathering process, the protective layer sacrifices itself to any small areas exposed through drilling, cutting or accidental damage.



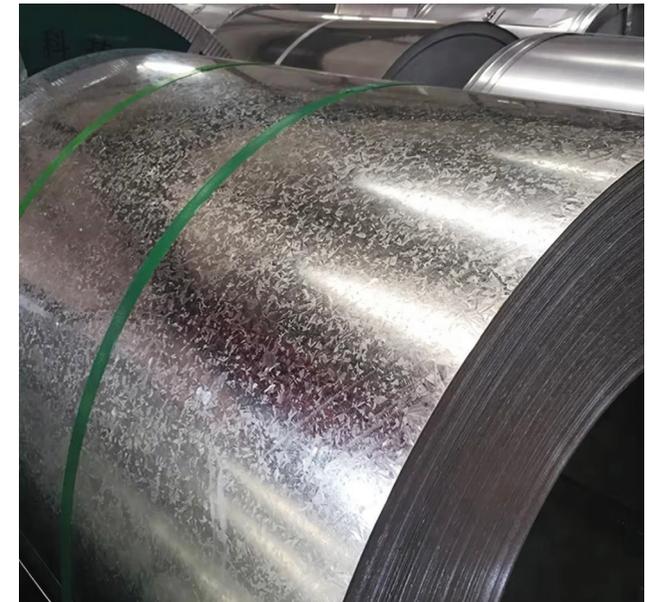
AFTER SALES SUPPORT

ISL being a customer-centric company, ensures peace of mind to its customers with its comprehensive after sales support and swift handling of complaints and queries.



PACKING STANDARDS

Exceptional packaging standards ensure that ISL products reach their destinations in a prime and "mill fresh" condition.





Value-added Services

CUT-TO-LENGTH

ISL has the capacity to provide cut-to-length material depending on customer requirements.



THICKNESS RANGE
0.15 mm to 2.50 mm



COIL WIDTH
1,250 mm max.



COIL WEIGHT
25 tons max.



CUTTING WIDTH
min. 400 mm, max. 1,250 mm



CUTTING LENGTH
min. 400 mm, max. 4,000 mm



PALLET WEIGHT
3.5 MT max.



TOLERANCE OF CUTTING LENGTH
+3 mm max.





SLITTING SPECIFICATIONS

ISL's Service Center has the capability to provide slitted coils as specified by customers.



THICKNESS RANGE

0.15 mm - 2.50 mm



COIL WIDTH

1,250 mm max.



COIL WEIGHT

25 tons max.



INTERNAL DIAMETER

508 mm



EXTERNAL DIAMETER

1,700 mm max.



SLIT WIDTH TOLERANCE

+/- 0.1 mm



MINIMUM SLITTED WIDTH

25 mm

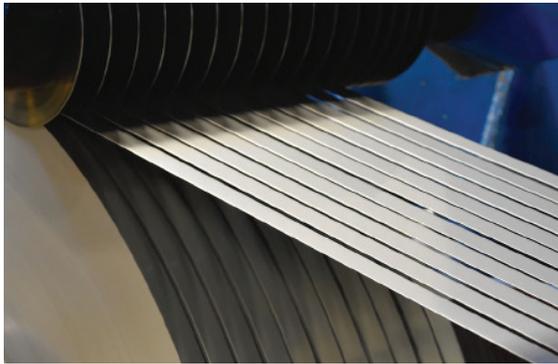




Value-added Services

ISL Service Center shapes flat rolled steel into various forms for a wide range of industrial and commercial applications, ranging from profiles that form exceptionally durable structures to custom cut sheets and slitted coils that serve as ready-to-use input for various purposes.

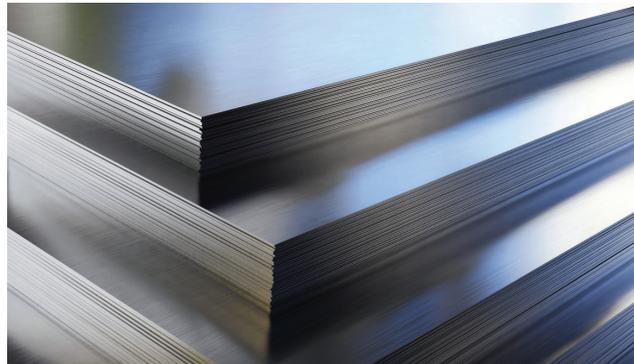
Slitting:



SLITTING SPECIFICATIONS

PARAMETERS	UNIT	VALUE
Min. Thickness	Inch / mm	0.0059" / 0.15 mm
Max. Thickness	Inch / mm	0.098" / 2.50 mm
Min. Width	Inch / mm	0.98" / 25 mm
Max. Width	Inch / mm	49.21" / 1,250 mm
Coil ID	Inch / mm	20" / 508 mm
Width Tolerance	+/- 0.004" (+/- 0.1 mm)	

Cut-to-Length:



CUT-TO-LENGTH SPECIFICATIONS

PARAMETERS	UNIT	VALUE
Min. Thickness	Inch / mm	0.0059" / 0.15 mm
Max. Thickness	Inch / mm	0.098" / 2.50 mm
Min. Width of Sheet	Inch / mm	15.75" / 400 mm
Max. Width of Sheet	Inch / mm	49.21" / 1,250 mm
Min. Length of Sheet	Inch / mm	15.75" / 400 mm
Max. Length of Sheet	Inch / mm	157.48" / 4,000 mm
Length Tolerance	+0.1" (+3 mm)	

Profiles:



PROFILING SPECIFICATIONS

PROFILE	DIAGRAM	DIMENSIONS
Sinusoidal		0.0118" - 0.0236" 0.30 - 0.60 mm
Clip Lock		0.0157" - 0.0236" 0.40 - 0.60 mm
Screw Down		0.0118" - 0.0275" 0.30 - 0.70 mm
C Channels		0.0295" - 0.0452" 0.75 - 1.15 mm



C and Z Purlins

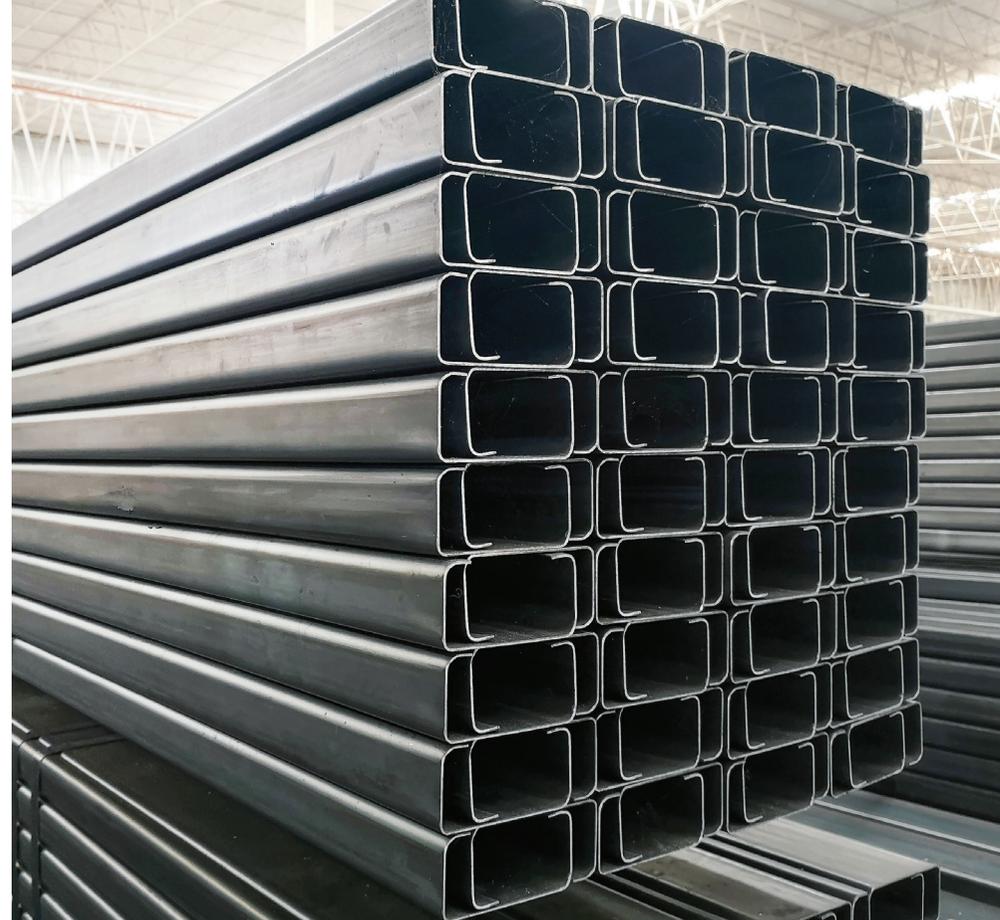
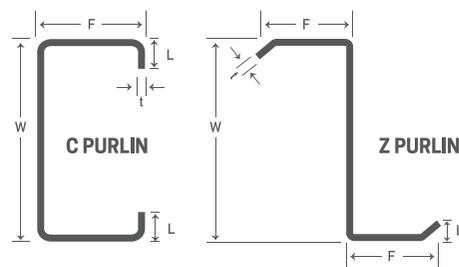
ISL produces a broad range of structural channel sections and purlins for construction and solar-related applications such as Pre-Engineered Buildings, Light Gauge Steel Structures, and Solar Mounting Structures. They are primarily used to provide lightweight, economical, efficient roofing and cladding support systems for framed structures. The proven properties of these purlins make new construction systems cost-effective and safe, because of their high load-bearing capacity.

By providing ease of production, procurement, transportation, and assembly, C and Z purlins also increase the reliability, speed, and affordability of steel construction. Made from quality, Hi-Tensile galvanized steel, ISL Purlins are produced in the ISL manufacturing facility and can be supplied plain or punched as per the requirements of customers.

ISL has two different machines to serve the demands of different types of customers.

Applications:

- Industrial and General Construction
- Halls, Sheds and Warehouse Construction
- Extensions and Refurbishments
- Commercial Buildings
- Modular Structures



SPECIFICATIONS	DETAILS
Input Material	Hot Rolled Steel, Cold Rolled Steel, Hot Dip Galvanized Steel
Thickness Range	1.20 - 3.00 mm
Grades	Commercial Quality / Structural Steel
Zinc Coating	11 - 38.5 microns
Web (W) Size	150 - 450 mm
Flange (F) Size	40 - 100 mm
Lip (L) Size	12 - 30 mm

Transport and Handling Precautions



LIFTING DEVICES

Always use proper lifting devices like C-hooks or parallel hooks, magnetic lifters, nylon slings etc. to lift, load and unload coils and sheet packets.



RUBBER SHEETS

When transporting coils in trucks, use rubber sheets beneath the coils or an exclusive transport stand.



SKIDS

While stacking the coils on floor, ensure that they are placed on proper skids to avoid formation of dents.



MOVING & SHIFTING

While using a lifter, always carry sheets in a packed condition to prevent them from slipping or getting scratched.



HANDLING WITH SLINGS

Nylon slings are preferred. Use rubber pads on coils where the sling comes in contact with them.



SECURE LASHING

While transporting in containers, coils must be lashed adequately and securely to avoid damage to the products.



SECURE STACKING

While transporting, ensure that the stacked sheets are firmly secured down, to avoid them slipping off due to vibrations and movements.



SLINGS & ROPES

Secure coils and sheet packets with slings/chains/ropes while transporting in trucks. Use rubber pads between these fasteners and steel products.



FORKLIFT

Do not push cut-sheets or roll the coils with a forklift, since this could cause scratching.



Storing Precautions



DRY STORAGE

Keep the coil and sheets dry and store them in a well-ventilated place.



AVOID WETNESS AND CONDENSATION

If wetness or condensation is found, then dry it at once. An effective measure is to dry a shipment with a fan or similar equipment while unpacking it.



COVERED STORAGE

Always store the sheets in a covered storage area.

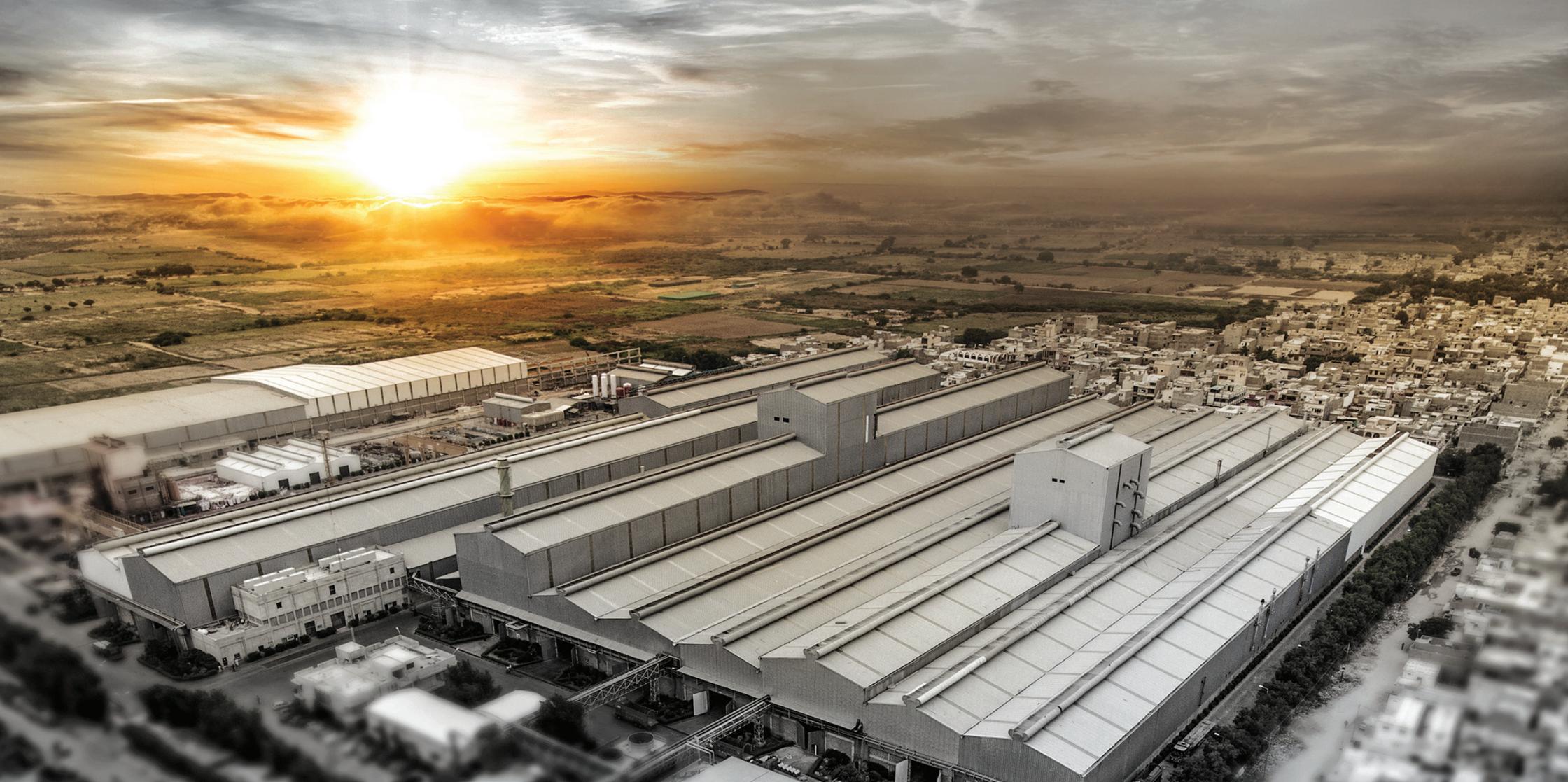


OPEN STORAGE

Although not recommended, if in any case the sheets must be stored in the open, the following precautions should be taken:

- Put sleepers such as square pieces of lumber at proper intervals on the ground and then place the sheets on top of them.
- Lay sleepers on flat ground. The tops of the sleepers must be equally leveled to prevent the sheets from warping.
- Ensure air circulation.
- Ensure that the sheets are covered with waterproof sheeting or canvas to protect them from rain and sunlight.





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ISL SERVICE CENTER

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