



FOR QUERIES AND CONSULTANCY, PLEASE CONTACT
salesdevprocess@jindalstainless.com



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our case studies



MADE IN INDIA FOR
UNINTERRUPTED GROWTH:

JINDAL STAINLESS

**HOT ROLL
BONDED
CLAD
PLATES**



JINDAL STAINLESS PIONEERS INDIGENOUS HOT ROLL BONDED CLAD PLATE MANUFACTURING



100% Uniform Metallurgical Bonding
Ensures superior and consistent product quality.

Reduced Lead Time
Eliminates the need for imports, resulting in faster project execution.

Customised Specifications
Tailored to specific customer and project requirements.

Continuous Production Line
Enables faster delivery and high-volume scalability.

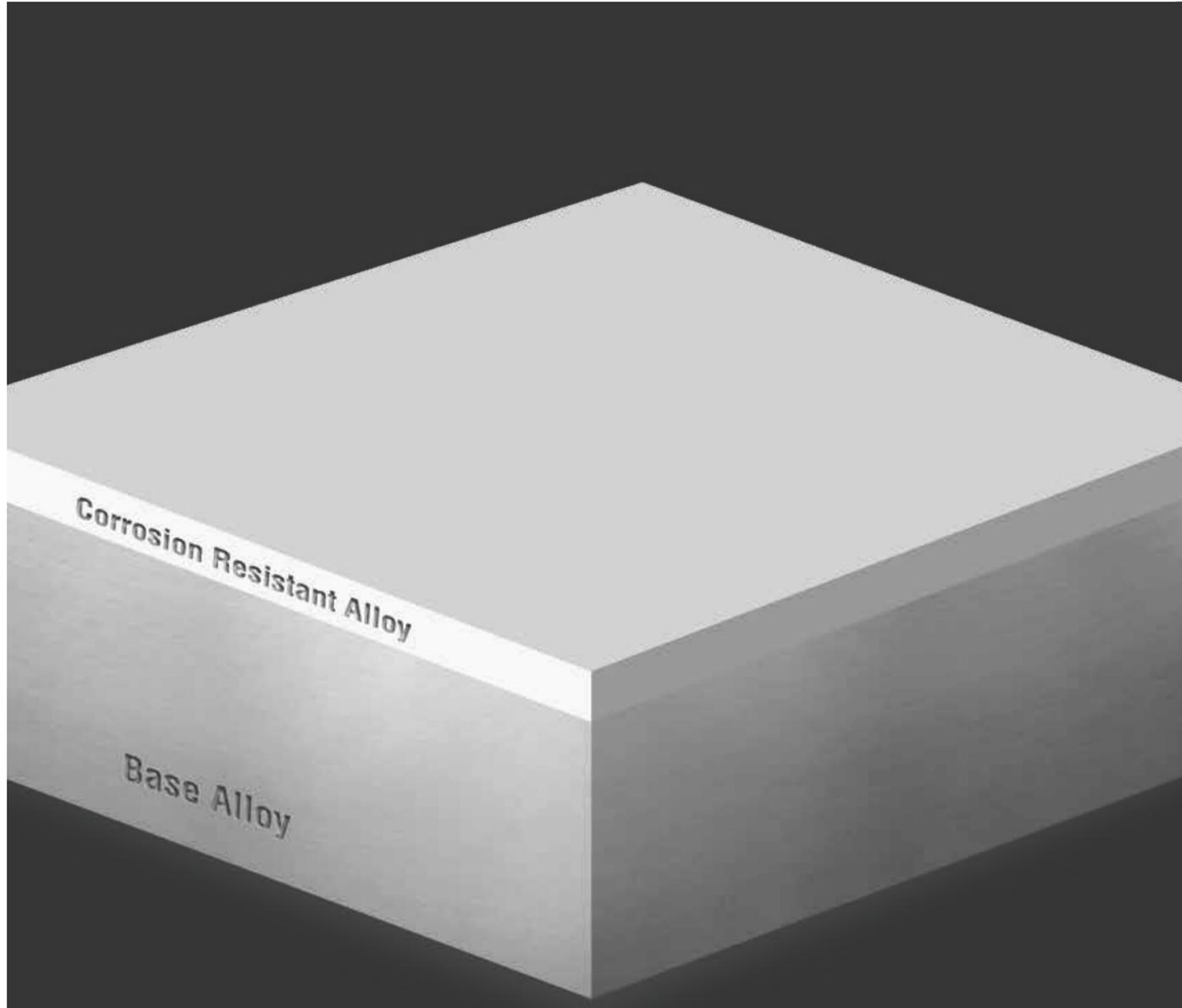
A STAINLESS LEGACY

India's leading stainless-steel manufacturer, Jindal Stainless, had a consolidated annual turnover of INR 38,562 crore (USD 4.7 billion) in FY24 and is ramping up its facilities to reach 4.2 million tonnes of annual melt capacity in FY27. It has 16 stainless steel manufacturing and processing facilities in India and abroad, including in Spain and Indonesia, and a worldwide network in 12 countries, as of March 2024. In India, there are ten sales offices and six service centers, as of March 2024. The company's product range includes stainless steel blooms, slabs, coils, plates, sheets, precision strips, wire rods, rebars, blade steel, and coin blanks.

Jindal Stainless relies on its integrated operations to enhance its cost competitiveness and operational efficiency. Founded in 1970, Jindal Stainless continues to be inspired by a vision for innovation and enriching lives and is committed to social responsibility.

Jindal Stainless remains focused on a greener, sustainable future, fuelled by environmental responsibility. The company manufactures stainless steel using scrap in an electric arc furnace, which involves lower greenhouse gas emissions and enables recyclability with no reduction in quality.





High Performance



Reliable for Continuous Operations



Lower Lifecycle Cost



Extremely Corrosion Resistant



Lower Lead Time & Indigenous



Meets Global Standards

HOT ROLL BONDED CLAD PLATES

DUAL STRENGTH. SINGULAR PERFORMANCE.

Hot Roll Bonded Clad Plates are advanced bimetallic composites engineered through a high-temperature and high-pressure roll bonding process. This metallurgical fusion forms a permanent, inseparable bond between two distinct metal layers-offering the combined advantages of both in a single, high-performance plate.

The structure comprises:

- > **A thin layer of corrosion-resistant alloy** - Provides exceptional protection against aggressive chemical environments, ensuring extended service life in demanding applications
- > **A base of high-strength carbon or low-alloy steel** - Delivers robust structural integrity and mechanical properties at a fraction of the cost of solid corrosion-resistant construction

This intelligent material design ensures optimum utilization of each metal's properties, where they matter most, making clad plates the preferred choice across critical industries that demand performance, durability, and economy.

Heat Exchanger



Coke Drum

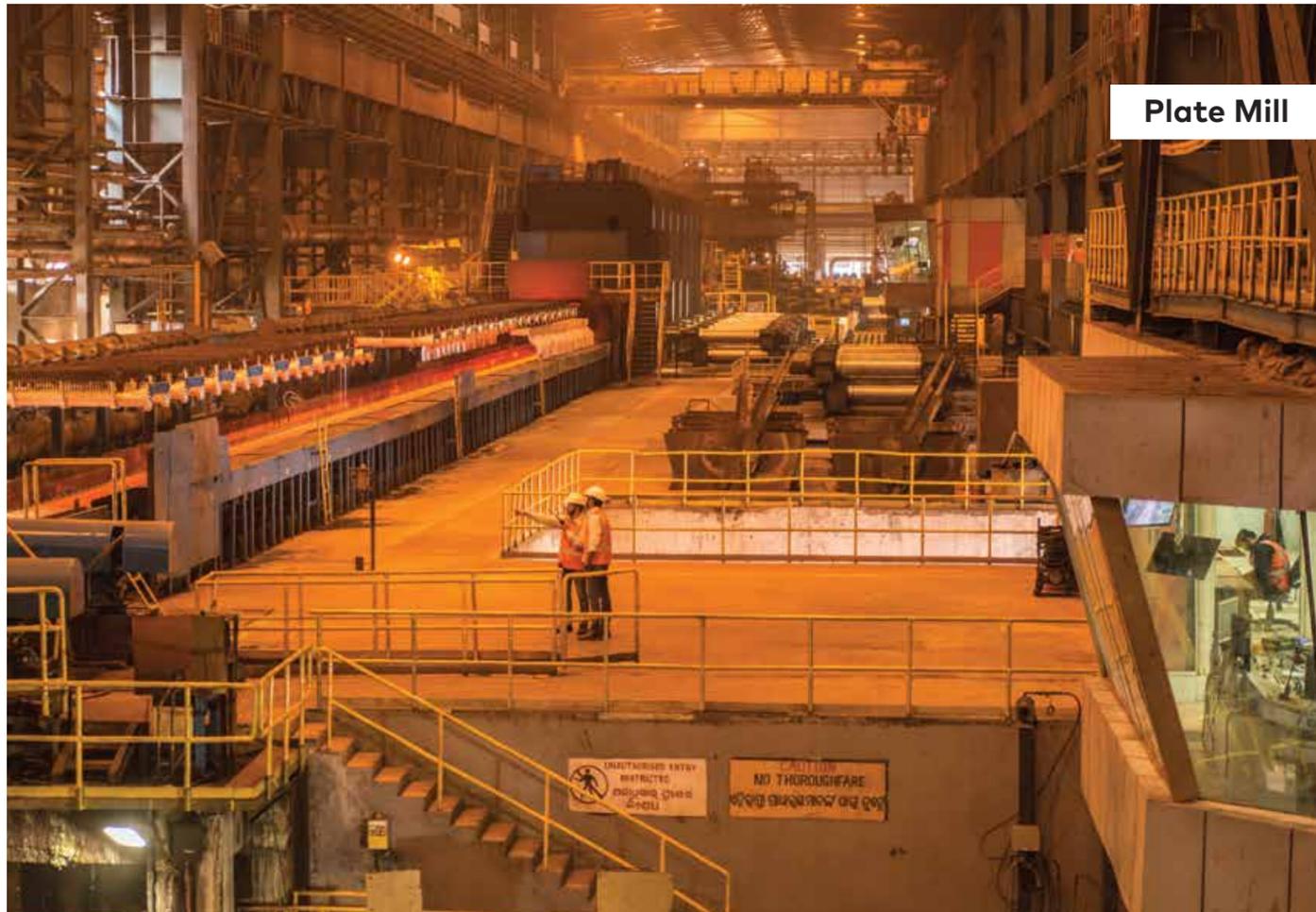


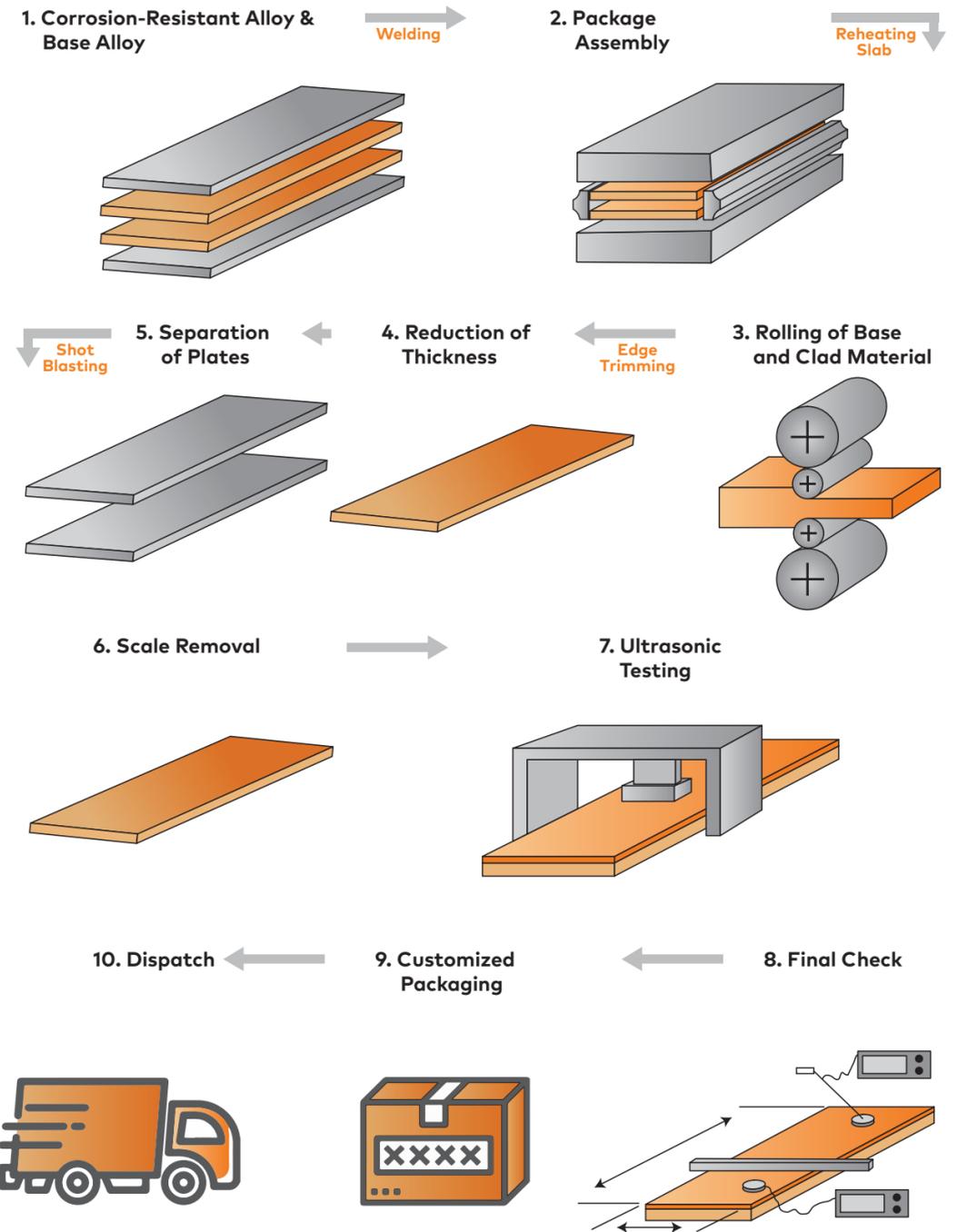
Plate Mill



Rolled Plate

HOT ROLL BONDING PROCESS

Our production equipment is highly automated and provides precise tolerances concerning dimensions, flatness, and surface quality & properties.



Process Pipelines



CORROSION RESISTANT ALLOYS FOR UNPARALLELED STAINLESS SECURITY

AVAILABLE GRADES

1 Nickel Alloy
+
Carbon Steel / Alloy Steel

2 Stainless Steel
+
Carbon Steel / Alloy Steel

3 Nickel Alloy
+
Stainless Steel

Thickness (mm)	Width (mm)	Length (mm)
8.0 - 20.0	1000 - 1200	Up to 8000

Minimum thickness of cladding alloy is 2.0 mm.

Tolerances as per ASTM A264, A265.

Contact our JSL representative for any customized requirements.

TYPICAL BACKING STEEL

- > IS 2062: E250 to E450
- > EN 10025: S235 to S450
- > ASTM A36, A283/283/285, A588
- > ASTM A516: Grades 55 (380), 60 (410), 65 (450), 70 (485)
- > API 5L Grade B, API 5L X-42/X-46/X-52/X-56/X-60/X-65/X-70

Heat Exchanger



Heat Exchanger Tube Sheet

TYPICAL FIELDS OF APPLICATIONS

RENEWABLES



PENSTOCK PIPES



RADIAL & VERTICAL GATES

FLUE STACK



HEAT EXCHANGER



FLUE GAS
DESULPHURISATION



POWER



VESSELS



CLAD PIPELINES



COKE DRUMS



HEAT EXCHANGER

OIL & GAS

REACTORS



PROCESS COLUMNS,
VESSELS PIPINGS



CHEMICALS & PHARMACEUTICAL



TESTING & INSPECTION

MULTIPLE CHECKS FOR ULTRA DURABILITY

Testing and inspection of Clad Plates are performed in accordance with the specifications of ASTM A264 and A265.

- **Tensile Test:**
The tensile properties shall be determined by a tension test of the composite plate or base plate for evaluation of strength of material.
- **Bend Test:**
Bend tests with the cladding metal outside indicate the strength of the bond.
- **Shear Strength:**
The ASTM specification requires minimum shear strength of 140 MPa.
- **Ultrasonic Test:**
Ultrasonic inspection is performed as per ASTM A264/A265
- **Corrosion Test:**
ASTM A262 Practice E for Stainless steel cladding material
ASTM G48 method A for nickel alloy.

Any other type of testing as desired by the customer can be carried out based on mutual agreement.

