



YOUR PARTNER IN FURNACE & ROLL RELIABILITY

FOR STEEL PROCESSING LINES

From technical audit to advanced roll coating, we deliver end-to-end solutions that enhance furnace performance and extend component life.

Engineering expertise. Furnace understanding. Advanced surface solutions



A Comprehensive Furnace Performance Solution

1 Furnace & Roll Audit

Operating condition assessment, roll duty analysis, wear pattern evaluation

2 Engineering Diagnosis

Root cause identification, surface failure analysis, process condition review

3 Coating Solution

Roll refurbishment, advanced thermal spray, technology selection by duty

4 Finishing & Quality

Precision grinding, surface roughness control, quality validation

5 Lifecycle Support

Performance monitoring, maintenance recommendations, continuous improvement

Lifecycle Benefits

**Stable Furnace
Performance**

**Extended
Roll Life**

**Superior
Strip Quality**

**Higher
Productivity**

We support steel producers across the full lifecycle of furnace roll performance, from diagnosis and engineering analysis to coating and long-term reliability improvement.

Coating, Refurbishment and Reliability for Every Roll Application



COILER MANDREL



DEFLECTOR ROLL



SKIN PASS TENSION ROLL



TOP ROLL



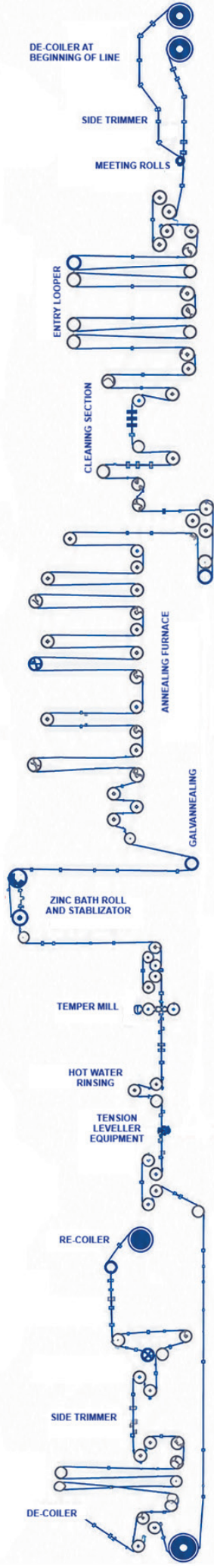
ZINC BATH ROLLS



FURNACE ROLL



ACCUMULATOR ROLL



LEVELLING ROLL



COUNTER BRUSH

OEM Expertise, Delivered Locally

What Sets Us Apart



200+ years
of experience



Technology
Innovator / Partner



Commitment to
Sustainability



Strong Focus on
R&D

Processing Lines
Reference: 300+

Continuous Galvanising Line
Reference: 180+

Continuous Annealing Line
Reference: 13

Colour Coating Line
Reference: 100+

The John Cockerill Talaja facility is a dedicated roll surface engineering platform serving steel producers in India and South-East Asia.

New-Gen HP-HVAF Capability For Steel Processing Rolls

- Precision grinding, dimensional recovery & texture control
- Thermal spray: carbide, cermet, ceramic & metallic systems
- HP-HVAF — highest kinetic energy thermal spray process
- Dynamic balancing for high-speed stability
- Dedicated manufacturing, refurbishment & inspection zones

1

Precision Grinding & Finishing

Dimensional recovery, surface conditioning, polishing & roughness control

2

Thermal Spray Coating (HP-HVAF)

Wear & corrosion resistant coatings; advanced cermet, carbide & ceramic systems

3

Dynamic Balancing

High-speed roll stability validated to line specifications

4

Inspection & Quality Control

Full dimensional, surface and coating validation before return to service

Process Understanding Before Coating

Roll surface failures are rarely random—they originate from the interaction between strip condition, roll duty, environment, metallurgy and surface state.

Strip & Process Condition

Campaign objectives, target surface quality, defect history, strip treatment status

Roll Function & Environment

Duty type (transfer, traction, steering, levelling), thermal and chemical operating zone

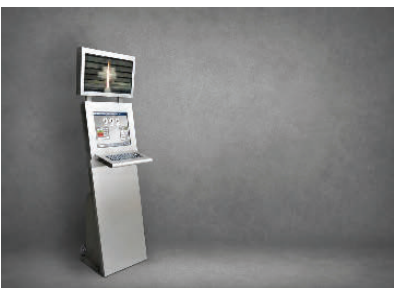
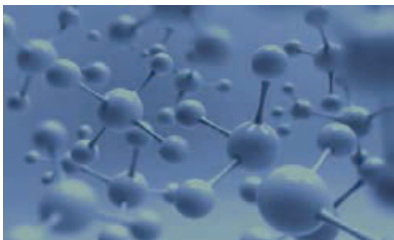
Mechanical Design Parameters

Roll geometry, base material, tolerances, wear profile, balance sensitivity

Surface Engineering Outcome

Coating chemistry, thickness, roughness profile, finishing route & refurbishment frequency

Technology layer



Thermal Spray Portfolio

HP-HVAF Differentiation

Finishing Discipline

Complete Roll Coating & Furnace Solutions

John Cockerill provides end-to-end service covering inspection, coating, finishing, and lifecycle performance optimisation.

Roll Inspection & Diagnostics

- Wear analysis
- Damage pattern identification
- Root cause investigation

High-Performance Coating

- Thermal spray coatings
- Wear-resistant surfaces
- Corrosion-resistant protection

Surface Preparation

- Precision grinding
- Surface conditioning
- Pre-coating preparation

Finishing & Validation

- Precision finishing
- Roughness control
- Performance verification



Others Coat. John Cockerill Engineers Performance.

Because we understand every critical factor that influences roll performance - we don't simply coat rolls.



Furnace Designer

Deep expertise in furnace design, thermal systems and atmosphere control



OEM of Mills & Lines

Engineering, integration & process flow understanding for the full line



Process Expert

Comprehensive understanding of process parameters and line dynamics



Roll Designer

Knowledge of roll metallurgy, design, mechanics and surface engineering

We engineer performance across:

Strip Tension

Roll Duty

Furnace Atmosphere

Heat Transfer

Line Dynamics

Roll Loading

A Partnership Designed to Accelerate the Market



Pioneer in thermal spray technology since 1985.

This partnership transfers expertise, process discipline, technology selection and a proven industrial network built over decades.

What Advanced Coating brings

- ✓ Pioneer-level thermal spray expertise and industrial references
- ✓ Application know-how for severe wear, corrosion, pick-up and bonding environments
- ✓ Technology route selection, coating recipes and best-practice finishing logic
- ✓ Knowledge transfer, training support and access to a broader specialist network

Service boundaries and accountable interface

Area	John Cockerill lead scope	Advanced Coating contribution
OEM & line interface	Customer interface, process understanding, roll duty analysis, local execution	Coating strategy, feasibility review, know-how transfer
Workshop execution	Grinding, coating application routing, finishing, balancing, quality control	Technology leadership on thermal spray methods and best-practice parameters
Optimization	Audits, refurbishment strategy, shutdown support, lifecycle planning	Expert input on failure mechanisms, coating upgrades, optimization

Why We Matter

For Steel Producers

Quality

More stable strip quality, better defect prevention, stronger confidence for premium grades

Productivity

Higher line availability, faster refurbishment cycles and improved restart reliability

Economics

Lower spare dependency, lower lifecycle cost and better use of local infrastructure

Reliability

Proactive audits and engineered solutions that extend roll life and ensure process stability

Our Structured Approach



1

Analyse

We study your furnace conditions and roll performance history



2

Engineer

We define the right solution tailored to your specific line



3

Execute

We refurbish and coat with precision and quality control



4

Deliver

We ensure reliable performance with continuous support

**Engineering
Expertise.**

**Furnace
Understanding.**

**Advanced
Surface Solutions.**



Right coating for the right roll

Based on actual process conditions — not generic specs



Better performance & longer life

With fewer unplanned stops and lower spare parts consumption



Lower total cost of ownership

Optimised refurbishment intervals reduce lifecycle spend



Accountable results, start to finish

Single partner responsible from design to delivery

Delivering Reliable Furnace Operation

At John Cockerill, we combine furnace process expertise with advanced roll surface engineering to support steel producers in achieving reliable, high-performance furnace operation.

From technical audit to advanced coating, we act as a single accountable partner for furnace performance.

- ✓ Longer roll service life
- ✓ Reduced strip defects
- ✓ Improved furnace stability
- ✓ Lower maintenance downtime
- ✓ Higher process reliability



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