Forging & Casting



LOOK BEYOND





LUCCHININA S

Lucchini RS Group is a leader in the design and production of high quality rolling stock products, castings and forgings for all industrial sectors. The strength of the Group lies in its integrated production facilities, from the steel making to the finished products, in the skill of its human resources, in its knowhow and organization, wholly focused on production and assembly of every kind of forging and casting products for all customers and markets.



LUCCHINI SA





Lucchini RS is one of the main European manufacturers which integrated in two sites, Lucchini RS and Lucchini Mamé Forge, all facilities from research and development of materials, to steel production and finished products.

Forging and casting plants:

LUCCHINIRS Lovere - Italy Melting Shop Foundry Forging Shop Machining Dept.

Forging Shop

Machining Dept.

Lucchini Mamé Forge operates worldwide in the Steel Forgings Business and it has been created from the acquisition in 2015 of Mamé Group Spa by Lucchini RS Spa.

STRENGTHS

Lucchini RS Group stands out for:

- Worldwide presence in highly technological sectors: Oil & Gas, Power Generation,
 High Tech Engineering, Shipbuilding, Cement Works and Tool Steels
- Fully integrated production of high quality forgings and castings (short lead time, streamlined processes and reliability)
- "Tailor-made" solutions such as customised steel grades, co-engineering and Logistic Service
- Cladding and Surface treatment
- Mechanical and Welding assembly

The Company's priority is to offer customers a truly complete service.







LOOK BEYOND







LRS







LRS

OPEN







LRS | LMA













LRS

LMA



MAIN GLOBAL REFERENCE STANDARDS

ISO 9001 ISO | IEC 17025

ISO 14001 OHSAS 18001

ISO 50001 ASME III

ISO 3834-2 NORSOK M122

ISO 9712 NORSOK M123

FACILITIES CERTIFICATIONS TESTING

CERTIFIED BY

DNV-GL RINA

BUREAU VERITAS TÜV

IIES CERT ACHILLES

LLOYD'S REGISTER FPAL

ABS CLASSNK

ASME III



TESTING & INSPECTION

- Laboratory ISO / IEC 17025:2005
- Hardness Tests 3000-kg Fixed King Brinell
- UT Automatic Plant
- Heat Stability Tests
- Non-Destructive Tests
- Dye Penetrant Liquids
- Testing Bench for Simultaneous Magnetic Tests



All materials are tested and certified in accordance with international standards and customer's specifications, using any combination of the following methods: UT-RT-HT-PT-MT-VT-DT.

Furthermore Lucchini RS Group has an internal European Metallurgical Inspection Centre (EMIC) dedicated to in-service non-destructive tests.

EMIC proposes different services such as:

- Customer support for testing of new and in-service products, applying customised standards or instructions
- Technical instructions for NDT tests on new and existing products
- In-service overhaul of components used for the production of thermal, hydroelectric and wind power plants and equipments such as moulds for plastic and die casting.



PRODUCT PORTFOLIO

Carbon, Alloyed, Stainless Steel Grades

STEEL MELTING SHOP

- A 60 t Electric Arc Furnace (EAF) Power 40 MVA
- A Ladle Furnace (LF) Plant
- A Tank Degassing VD VOD type
- Pits for bottom pouring
- ESR Plant (Max Weight 32 t)
- Liquid Steel for castings up to 240 t
- Round & Polygonal Ingots, Weight from 3 t up to 85 t





METALLURGICAL LABORATORIES

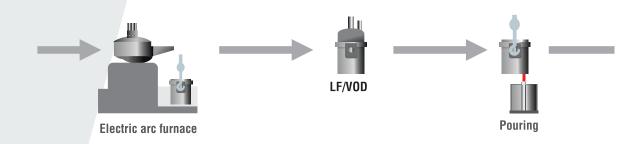
- Testing laboratories certified according to UNI CEI EN ISO/IEC 17025 and ACCREDIA
- Failure analysis and critical metallurgical investigations

METALLURGICAL R&D

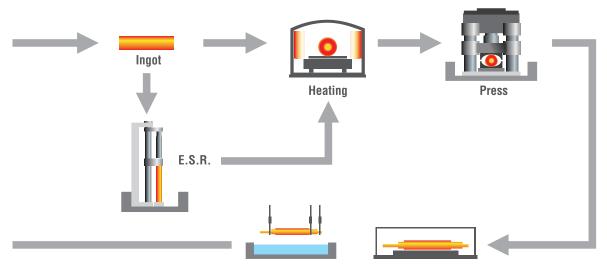
Metallurgical Research and Development supports customers on material choice to reduce Total Life Cycle costs and analyze long-term environmental impacts.



FORGING PRODUCTION PROCESS











FORGING FACILITIES

Products

- Open Die Forgings & Tool Steels bars
- Finished Products up to 35 t
- Ingots with max weight 60 t
- Max length of 18 m

Forging Process

- 3200/4200/6000 t Open die presses
- Manipulators, Lifting Capacity up to 60 t/m
- Heating Forging Furnaces, Max Capacity 150 t
- Furnaces for Hydrogen Bake-Out Up to 14 m



Heat Treatment

- Semi-automatic Heat Treatment System
- Quality Heat Treatment Furnaces
- Max lenght 18 m
- Quenching tanks Up to 16 m





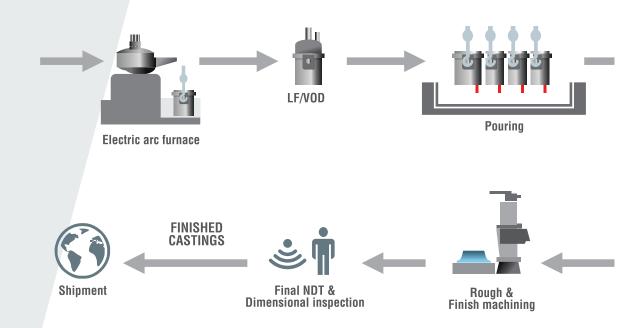
Machining

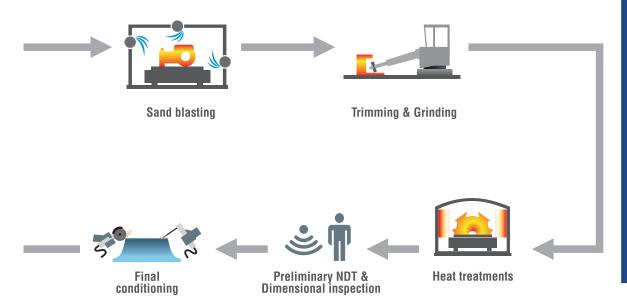
- Rough & Finishing Machining
- Vertical Lathes
- Parallel Lathes
- Extra Large Parallel Lathes
- Boring Machines with Numerical Control
- Milling, Planning Machine
- Column Drill

Cladding & Surface Treatment



CASTING PRODUCTION PROCESS







CASTING FACILITIES

Products

- Weights from 2 t to 140 t
- Advanced software for best control of melting, casting and cooling processes
- Robotized cold trimming equipment, shot and sand blasting machines for surface conditioning

Engineering & Casting Process

- Electric Arc Furnace (EAF)
- Castings up to 140 t shipped weight
- Simultaneous pouring of four sixty-ton ladles of steel, moulding pit up to 12x6x4,2 m
- Sandblasting
- Trimming









CASTING

Heat Treatment

- Semi-automatic Heat Treatment System, transfer time 30 seconds
- Quality Heat Treatment Furnaces
- Max length 11 m
- Quenching tanks up to 6,5x8x6,5 m





Machining

- Rough & Finishing Machining
- OD Max 6 m
- Max weight 140 t
- Max length 11 m

Mechanical & Welding Assembly



MARKET SEGMENT



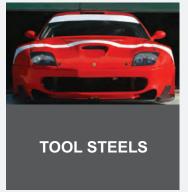
OIL & GAS
PETROCHEMICALS



POWER GENERATION











OIL & GAS | PETROCHEMICALS | FORGINGS

Blow Out Preventer Fluid-Ends Ram

Body Valve Jack-Up System Pinion Risers-Stress Joint

Bonnet Lifting Hook Rotary Swivel Connector

Christmas Tree Component Lower-Upper Body Shear & Pipe
Clamp Master Valve Block Spool Body

Cylinder Head Pile Driver Anvil Stabilizer

Flange Pile Driver Raw Weight Wellhead



OIL & GAS | PETROCHEMICALS | CASTINGS

Ball Valve Body Lifting Hook Assemblies Pile Driver Anvil

BodyLift PointSheaveBottom ReceptacleLift TrunnionShuttersConnection Shroud(double slings or double grommets)Stab-In Cone

Covers Mooring Padeye (castings and assembly)

Expanding Gate Valve (castings and assembly) Tendon Porch
Gate Valve Body Offshore Assemblies Transition Node
Hyperbaric Chamber Assembly X-Brace

Hyperbaric Chamber Assembly (bottom / bonnet / body)





POWER GENERATION | FORGINGS

Cross Head Runner
Gas Turbine Discs
Generator Shafts
Hydraulic Turbine Rotors Lever
Pelton Turbine and Wheels
Piston Runner
Rotor Shaft and Jack Shaft
Trunion Runner
Turbine Shafts



POWER GENERATION | CASTINGS



Compressor Blade Carrier Outer Casing
Distributor Outer Diffusor
Exhaust Casing Outer Shell
Francis Runner Pump Body
Gas Turbine Casing Pump Rotor

Hub Radiation Liner

Kaplan Hub Rotary Body and Conveyor

Inner Casing Valve Casing



HIGH TECH ENGINEERING | FORGINGS

Cylinders Y-Tee Block

Column Nozzle

Connecting Rod Pinion

Cover

Expander Reactor Pressure Vessel

Extension Ring

Flange Shell / Tube Sheet

Heat Exchanger Plate Tie Rod Tube

High Pressure Head Work Roll (Hot/Cold Rolling)

Yokes









HIGH TECH ENGINEERING | CASTINGS



Chocks

Crosshead

Die Forgings Ram

Frame For Die Forging Machine

Ladle

Mill Housing

Mould Base

Press Plate

Press Reaction Plate

Support Plate

SHIPBUILDING | CEMENT WORKS | FORGINGS

Cylinder Inner Head Nut Shaft / Column

Crank Shaft Pinion Thrust Roller

Disc Piston Toothed Wheel

Gear Propeller Shaft Transmission Marine Product

Joke Plate Rudder Shaft Valve

Kiln Support Roller Shaft Assemblies



SHIPBUILDING | CEMENT WORKS | CASTINGS

Mill Head, Kiln Tyre and Roller

Pintle Conical Coupling

Propeller Arm

Propeller Boss

Rudder Support

Stern Post





TOOL STEELS

MARKETS

Automotive
Electronics
Food and Packaging
Home Appliances
Lenses and Optics
Medical
White Goods



MOULD & TOOL BRANDED STEEL GRADES



PLASTIC MOULDING

INJECTION COMPRESSION THERMOFORMING EXTRUSION

HOT WORK

CLOSE DIE DROP FORGING ALUMINIUM EXTRUSION

FORGED LIGHT FRAMES DIE-C BOLSTERS DIES

LIGHT ALLOYS DIE-CASTING DIES **PLASTIC**

MOULDING



FRAMES BOLSTERS IN CAST CONDITION LIGHT ALLOYS DIE CASTING DIES



ELECTRO SLAG REMELTED STEEL GRADES

LIGHT ALLOYS DIE CASTING DIES

PLASTIC

MOULDING

LUCCHINI SE

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LUCCHINI SA





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