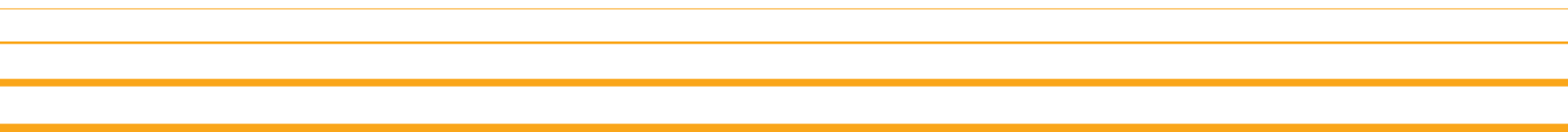
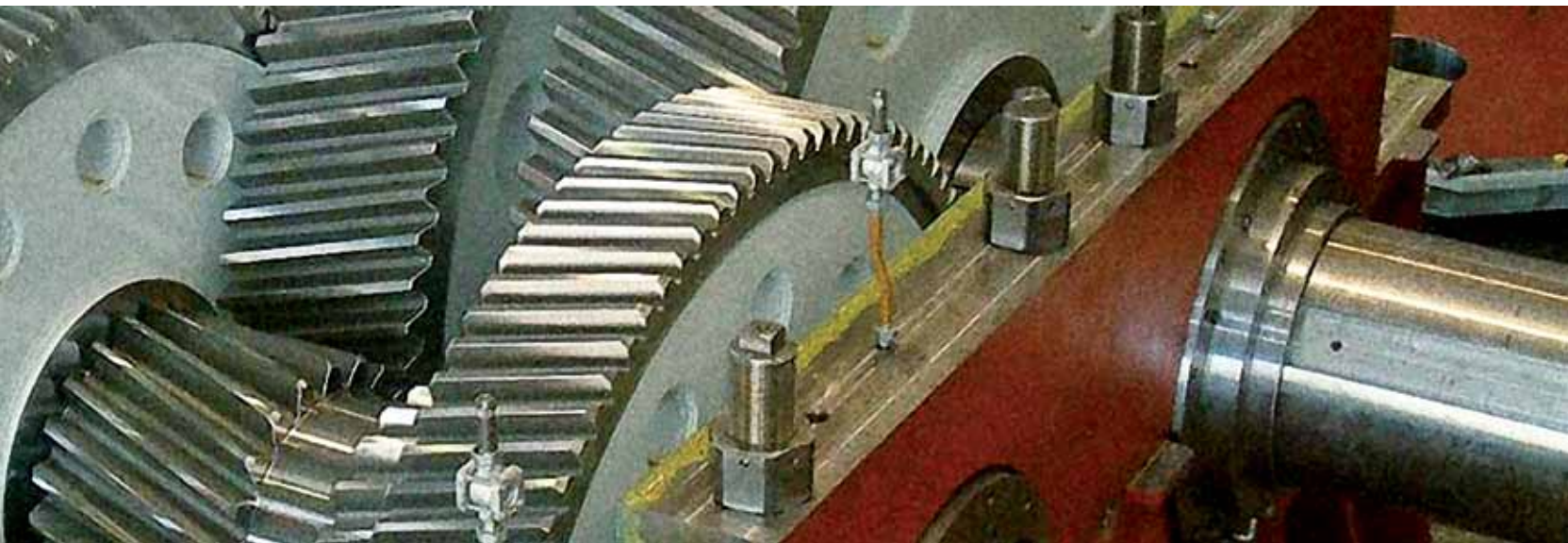




**Gear Reducers**  
by Galbiati Group





## GEAR REDUCERS

Gear reducers and increasers, mechanical power transmissions for mid- and large-sized industrial applications.

### DESIGN, CONSTRUCTION, AND RECONDITIONING

Galbiati Group has extensive experience in the **design manufacturing and revamping** of mechanical transmissions:

- ❑ Steel industry (hot and cold rolling mill)
- ❑ Large Edger drives
- ❑ Pinion stands and twin drives for mill stands
- ❑ Main drives for shears
- ❑ Tilting converters drives
- ❑ Coilers and uncoilers
- ❑ Turbine and pump gearboxes for hydroelectric power plants
- ❑ Planetary drives for antenna actuation and for TBM rotating heads
- ❑ Drives for rubber and plastic mixers
- ❑ Drives for cement industry and solid mills
- ❑ Winch drives for cable-car industry (cable railways, cable ways, cable cars, and chairlifts) and hosting equipment
- ❑ Gears and toothed gear segments for antenna actuation
- ❑ Girth gears for cement mills and kilns
- ❑ Gears for harbor cranes and marine winches
- ❑ Ring gears and pinions for TBM head drives



## INSPECTION AND CERTIFICATION

### Inspection and Certification

All Galbiati Group gear drives are “full speed – no load” tested for a minimum of six hours. The gear drive performance (lubrication system, temperature probes, etc.) and its accessories (ejectors, hold down rolls, etc.) are properly checked. On each new unit, as well as on the overhauled one, temperatures (oil, housing, and bearings), noise levels, and vibrations are measured and recorded on **relevant test record**.

A “**Certification File**” is issued for each drive, which contains the raw materials and all the manufacturing process inspection certificates as well as the final test report.

### Certified Quality: Extreme accuracy without tolerances

Thanks to the three dimensional measuring machine, ZEISS MMZ-G 30 60 25, Galbiati Group is one of the few Italian companies performing inspections on items for applications that require micron-tolerances and issuing proper certifications.

In addition to dimensional inspection, the following non-destructive test are performed:

- MAGNETIC TEST MT
- DYE PENETRANT TEST PT
- ULTRASONIC TEST US



## □ GEAR DRIVES AND GEARS FOR CEMENT AND SOLID MILLING INDUSTRY

Cement Mill Drives



## □ RUBBER INDUSTRY DRIVES

Rubber mixer drive 2500 kw at 77 rpm

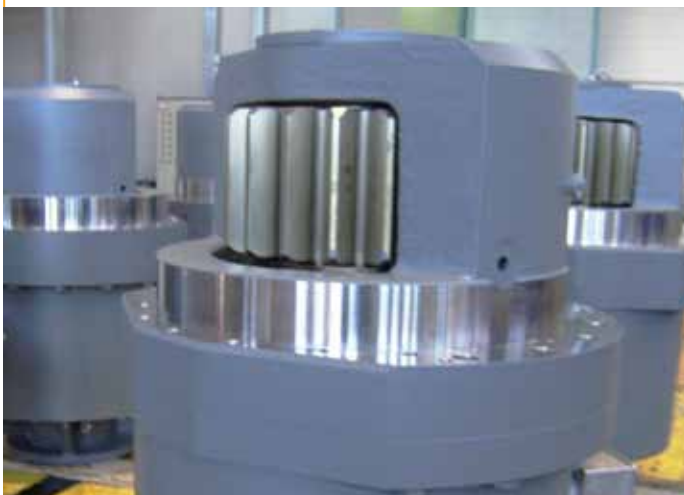


## □ PLANETARY DRIVES

Planetary drives for "TBM" rotating head



Planetary drives for antenna actuation



## □ DRIVES FOR CABLE CAR SYSTEMS AND HOISTING WINCHES

Winch drive installed on the panoramic elevator, "Bigo", in Genoa



Submarine-cable laying winches drum. Specifically manufactured with low temperature - high resistance carbon steel



## □ DRIVES FOR METALLURGY INDUSTRY, COLD MILL

### Cold rolling Pinion Stand

Pinion stand for cold mill 5,200 kw – 466 rpm. Roll center distance 450 mm



Twin drive for plate cold mill 5,000 kw – 446 rpm. Roll center distance 470 mm



### Uncoiler 650 kw at 75 rpm

Pay-off gear unit sliding on bronze guides, including mandrel and hold down roll. 2,200 mm max. diameter, 1,500 mm, 30,000 kg coil weight



### Coiler 1600 kw at 95 rpm

Coiler unit including mandrel and coil ejector plate. Motor power 1600 kw – Output shaft 95 rpm (18.5 tons total weight)





## □ DRIVES FOR METALLURGY INDUSTRY/HOT MILL

### Pinion Stand Mill Drive/Twin Drive – Hot Rolling

Integrated pinion stand mill drive for special alloys



Integrated pinion stand mill drive for continuous cast aluminum rolling mill hot three-stand Tandem



Twin Drive for hot aluminum mill



Twin drive reversible hot mill



## □ EDGER DRIVES

### Edger drive

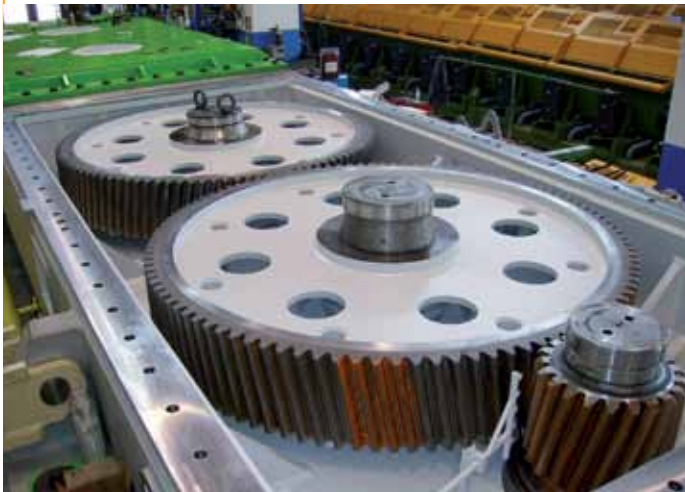
Vertical twin motor self-supported solution



F1 hot rolling mill pinion stand, 4300 mm sheet width



Gears made with Ni/Cr/MO ring gears, on electrowelded frames



## □ STEEL INDUSTRY DRIVES/CONVERTERS

Tilting converter drives/Steel Industry (350 ton)



Tilting converter (170 ton)



Four motor tilting converter drive unit with during assembly and intermediate geometrical inspection



## □ STEEL INDUSTRY / MISCELLANEOUS APPLICATIONS

### Steel Pipe Drawer Drive

Steel pipe drawer drive including chain driving pinion, 220 kw – 2 rpm  
– 150 ton thrust (weight 63,000 kg)



### Screw Down drives

Worm screw gear set for screw down drive



### Shear Drives

1,600 kW crop shear drive at 27 rpm, max 6,000 kNm torque. Total unit weight exceeds 160 ton



Double helical output gear for Crop Shear Drive



## □ GEAR INCREASERS

Hydroelectric power plant gear increaser. Equipped with temperature probes for oil and bearing temperatures detection, and vibration probes with relevant analysis and control equipment



## □ GEARBOX RECONDITIONING

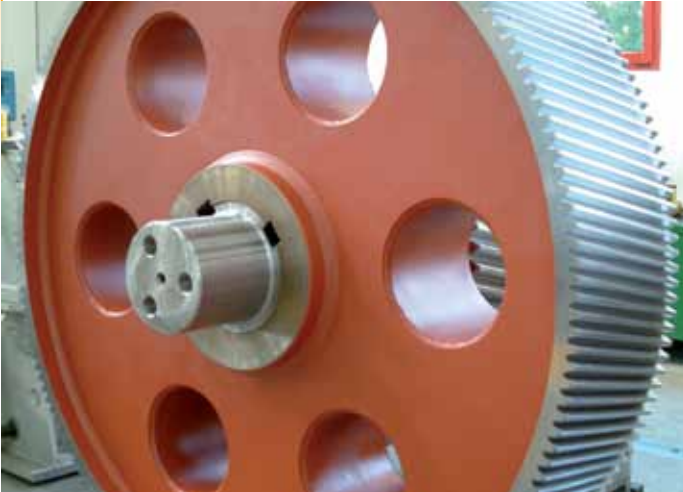
**Galbiati Group reconditions gear drives for all heavy industrial applications**

Reconditioning Integrated pinion stand drive for wire rolling mill  
(before and after reconditioning)



## □ GEARS

Bull Gear for 350 ton Steel Converter Drive



Crane rotation toothed gears



Teeth contact inspection



Gear toothed segments for parabolic antenna and radiotelescope application







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