

**Your Service Partner**  
Service Solutions for the Rail Industry





MILLTORG ENGINEERING LTD

# Customized Service Solutions

*Your rotating equipment needs to have the highest levels of reliability. With our customized service solutions, we support you in keeping your operation at higher efficiency and to reduce maintenance costs. By managing all steps of the process, from design to testing and re-installing serviced parts, we make sure you receive the highest quality repair and fastest delivery.*



# Services for You

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*Sulzer is known around the world for its breadth of experience servicing AC and DC traction motors, generators, bogies, braking systems, gearboxes, and many more parts and equipment used in transportation.*

*With extensive design and manufacture capabilities, we quickly produce commutators and slip rings as well as complete motor and generator repairs. Our workshops are equipped with the latest 3D computer-aided design (CAD) systems and software for re-engineering and manufacturing of both mechanical and electrical components.*

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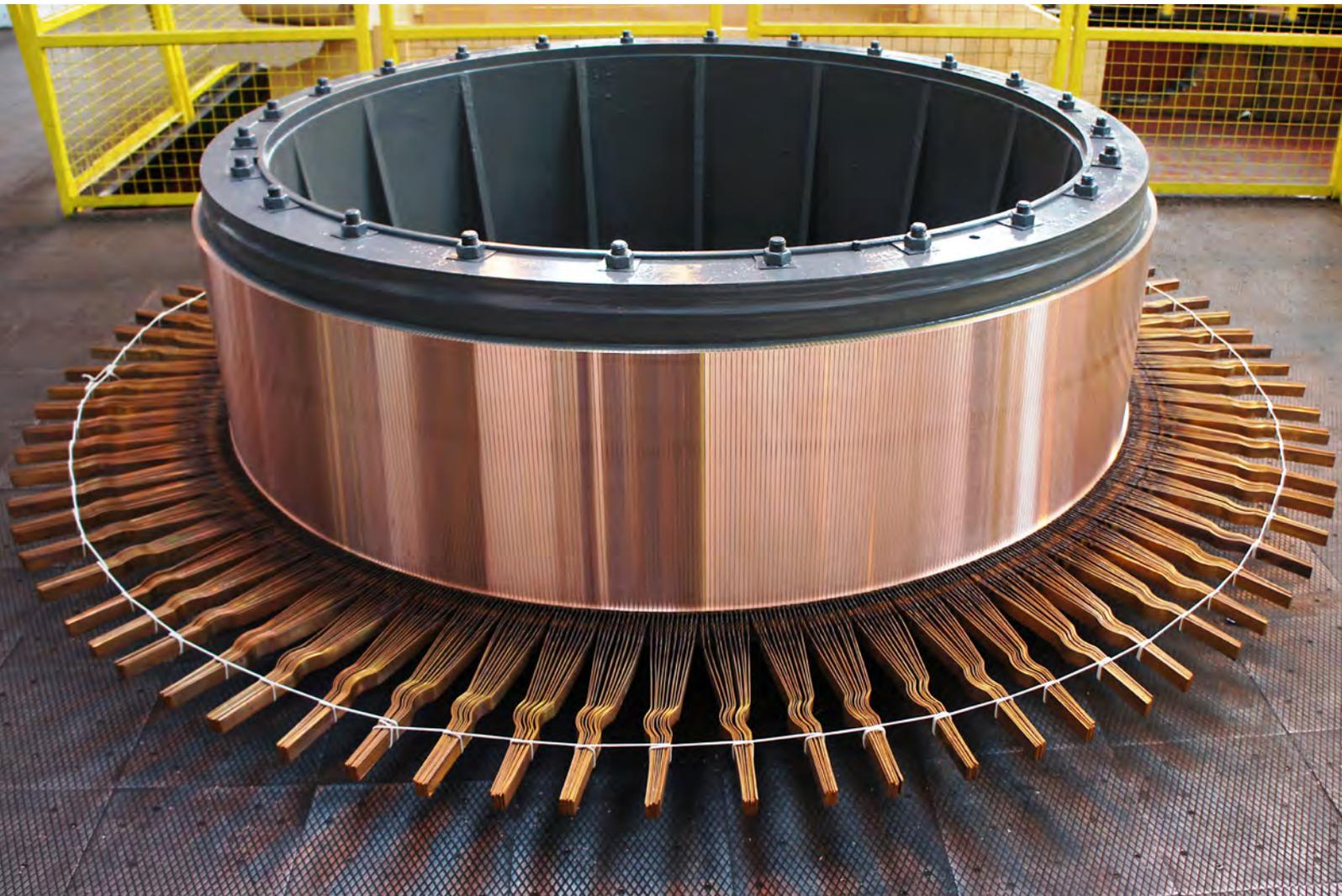
# Capabilities

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*Utilizing our considerable experience in overhauling rotating equipment, we have the capability to repair a wide range of traction machines. Automatic undercutting and resurfacing of commutators, commutator profiling, automatic commutator welding, rotor testing and in-situ commutator profiling are just a few examples of our extensive capabilities.*

*Sulzer's dedicated traction coil production facilities manufacture the complete range of stator, armature, interpole and field coils, using all forms of the latest insulation. Our accreditation to ISO 9001, ISO 14001, ISO 18001, Achilles and Link Up, ensure that all of our repair work is delivered safely and to the highest quality.*

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# Service Panorama

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*Our service capabilities span the full range from inspection to repairs, testing, and commissioning. We offer our services according to the Railway Group Standards and approved procedures. Overhaul processes extend the lifetime of your critical parts and our highly effective processes offer fast delivery.*

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## Locomotive bogie services

- Measure and manufacture of suspension pads
- Replacement of primary and secondary suspension pads
- Bonding and mechanical fixation of the pads into their position
- Symmetry measurement inspection
- In-situ machining on the bogie
- Removal of broken studs and line boring



## Traction motor frame services

- Welding repair to reclaim stator frames and end shields
- Non-destructive testing (NDT)
- Removal of cracked or damaged sections
- Hot wire Tungsten Inert Gas (TIG) welding
- Precision machining to restore tolerances



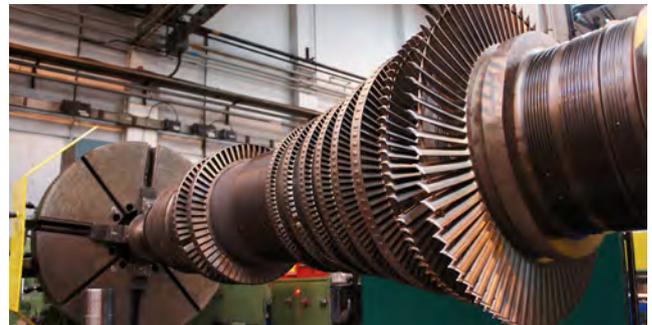
## Gearbox services

- Overhaul and repair
- Weld and machine repairs to torsion bar locations
- Refurbishments of worn bearings and location bores
- Metal spraying processes to build up bores/shafts
- Manufacture to exact specifications



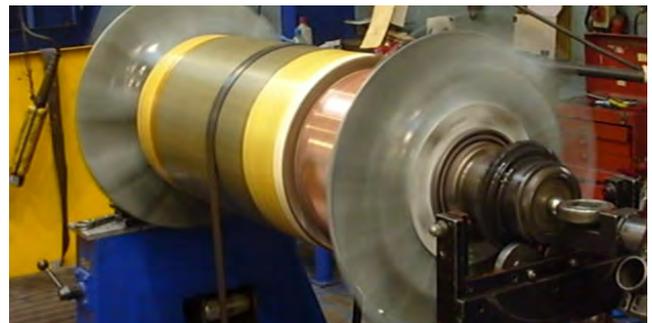
### Shaft services

- Overhaul processes to return
  - shaft dimensions
  - physical properties
  - to „as new“ standard
- Manufacture of replacement components
- Removal of broken studs and line boring



### Hydraulic and pneumatic system services

- In-house and on-site testing
  - Power packs
  - Hydraulic systems
  - Pneumatic systems
- Freight hopper machine systems
- Track maintenance machine systems



### Traction services

- Commutator machining, undercutting and beveling
- Low and high speed balancing
- TIG and MIG (Metal Inert Gas) welding
- In-house or on-site testing
- Load testing
- Black band testing
- Dielectric in-house or on-site testing



[www.sulzer.com](http://www.sulzer.com)



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