

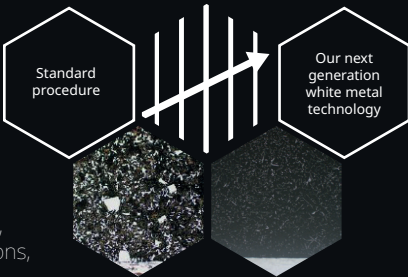
The Bearing Centre

Unlocking the future with 100BOND®
our innovative new laser technology



Wärtsilä is always looking to support our customers by sourcing new innovations that make products durable, efficient and environmentally sound.

Utilising our specially designed white metal laser technology, we can significantly improve the mechanical and tribological properties of white metal applications. The refined microstructure provides exceptional bonding strength, helping to increase the performance and lifetime of your applications, while keeping downtime to a minimum.



- Traditional Process**
Existing processes are made through vertical and centrifugal casting:
- Warming up the metal to 500°C.—
 - Material utilisation ration approximately 25% (60% to recycle).
 - Manual process is dependent on operator's experience.
 - Involves smoke, cooling water and handling hazardous components such as acids.
 - All of this costs time, money, and experienced personnel.



- 100BOND Technology**
The application is an automatised method that is:
- Independent from environmental conditions, minimalsing hazardous impact.
 - Faster processing with enhanced quality.
 - Completely free of inner defects.
 - Suitable for mass production and complicated geometries.
 - A special application for white metal repairs.
 - Decarbonization - 90% GHGs reduction.

How does it work?

The pre-machined base metal is placed under the laser. The program starts and the laser apply the white metal with precise lines in extreme precision

It's easy, fast, safe and environmentally sound.



Why go with 100BOND® Technology?

Do you want your materials to have:



Improved mechanical and tribological properties, making a real technological difference to your bearings



Exceptional, long-lasting bonding strength



A longer life span, especially under high load requirements and heavy vibration demands

The Bearing Centre

A trusted global partner in bearing development, delivering specialized solutions tailored for the energy and industrial sectors.

Using 100Bond® innovative white metal laser technology for high performance applications.

Comprehensive Turnkey Management

Full in-house capabilities covering the entire project lifecycle (design, engineering services, and manufacturing/repair).

Innovation with Technology and Sustainability

Traditional casting combined with advanced laser-performance technology, including 100BOND®, focused on innovation and decarbonization.

Personalized Service and Immediate Response

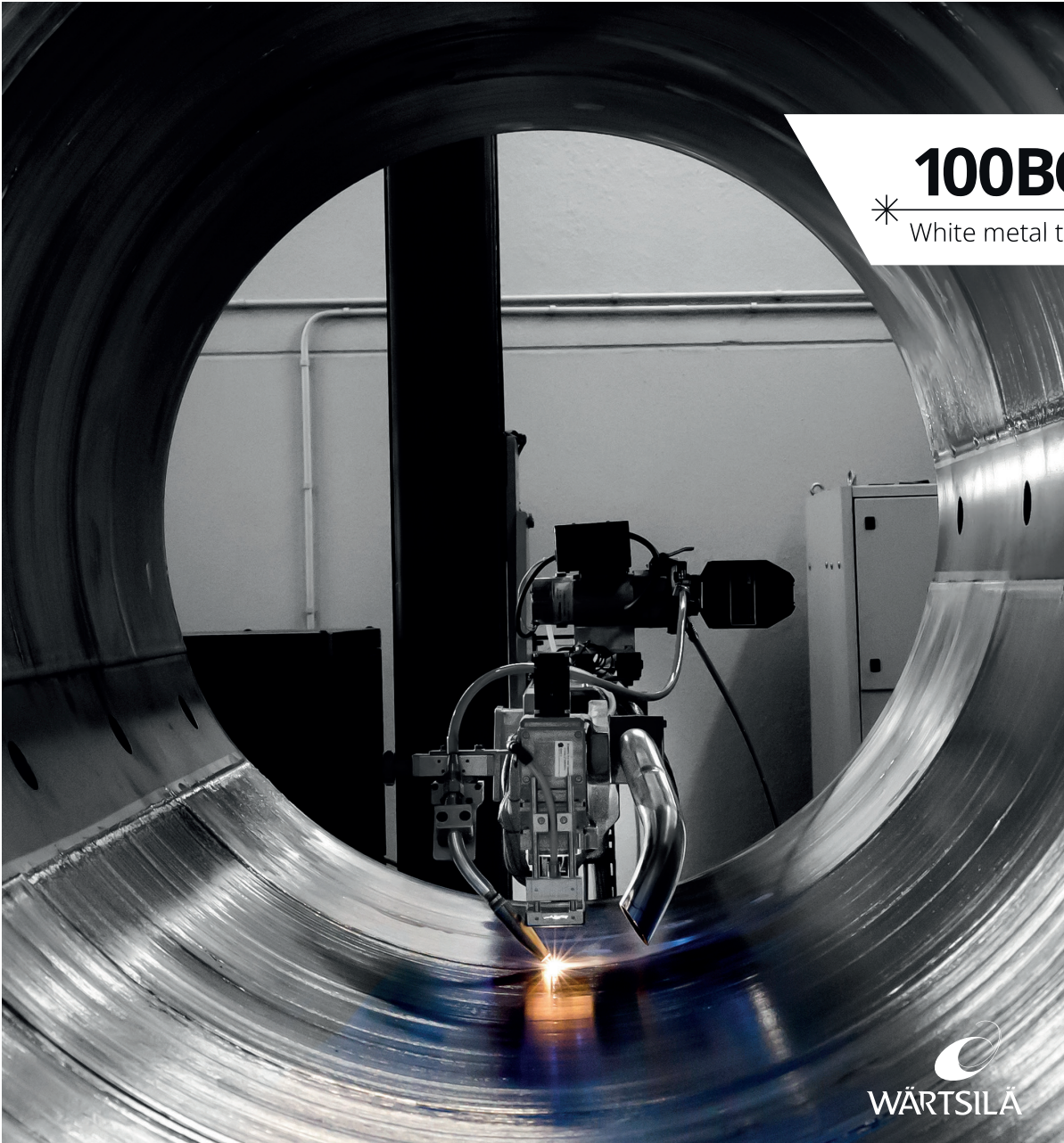
Centralized attention for critical needs and issues, including urgent services (lead time).

The Bearing Center

Scan the QR Code to Know More



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The Bearing Centre



Driving Innovation and Excellence in Bearing Solutions

Product datasheet

As world leaders in advanced white metal technology and with more than 50 years of experience, Wärtsilä can repair and upgrade any specifications of white metal bearings and pads for a vast range of industrial applications, using the most advanced technology in the industry.



Design, repair and upgrade services

Wärtsilä's services and capabilities are on a global scale and provide design, repair and upgrades for white metal bearings in the following industries:

- Marine
- Navy
- Industrial
- Hydro
- Oil and Gas
- Steam Power

FEATURES	ADVANTAGES	BENEFITS
Cutting-edge white metal laser technology.	Suitable for many white metals across the industry to make a real technological difference.	Improves mechanical and tribological properties.
Refined microstructure.	Exceptional bonding strength beyond the standard range.	Lowers chance of premature component failure and minimizes operational risk.
Fully tested and proven.	Test results show the white metal capable of withstanding far more stress.	Improvements of up to 40% in mechanical bonding and fatigue resistance compared to regular casting procedures.

Environmentally, friendly, sustainable solution.	Rapid service from Wärtsilä, delivering improved results.	Adheres to environmental regulations.
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100BOND®
* White metal technology

The Bearing Centre Services

Contract Manufacturing

Build to Drawing Build to Specification Inventory Program Emergency Services

Repair Services

Babbitt Bearing Repair Inspection Services Part Refurbishment Welding and Machining Engineering and Upgrades Coating Emergency Services

Aftermarket

Inventoried Parts Supplier Replacement of Obsolete Parts Repair and Replacement Services

Engineered Bearings

Custom Designs Upgrade Designs Manufacturing Efficiency Solutions Bearing Computations and Modeling for Rotor Analysis Reverse Engineering