



LASER CLADDING Singapore Pte Ltd

Component Remanufacturing Services

www.laser-clad.com



RESTORE
REDUCE
RECYCLE

Original size
Enhance durability
Reduce down time
Costs
Conserve
Go Green

Laser Cladding Singapore Pte. Ltd.
UEN No. 201104279H | 23 Tuas Avenue 2 | Singapore 639454
Phone (65) 6264 2922 | Fax (65) 6264 0202 | sales@laser-clad.com | www.laser-clad.com

A Joint Venture of:

YANMAR


Gall & Seitz
Systems GmbH

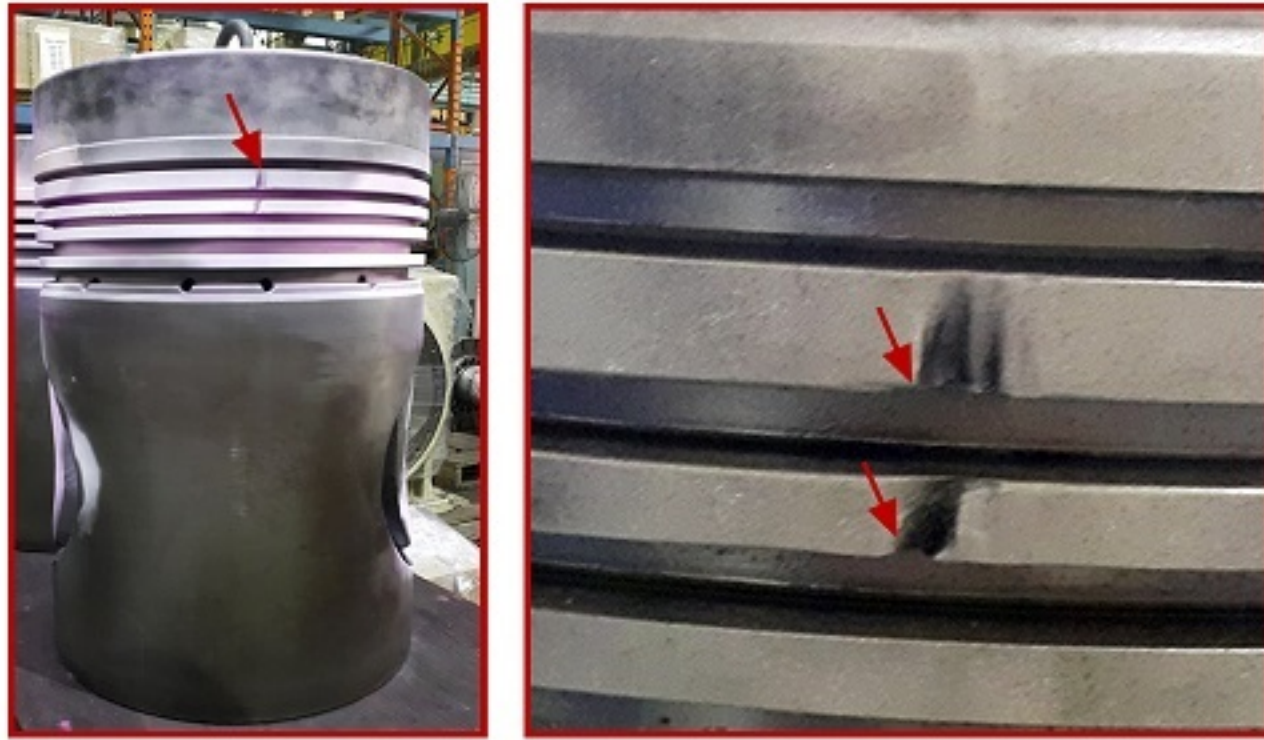
 **CLLS**

NIPPON
DIESEL SERVICE GMBH

Remanufacturing Applications for Engine

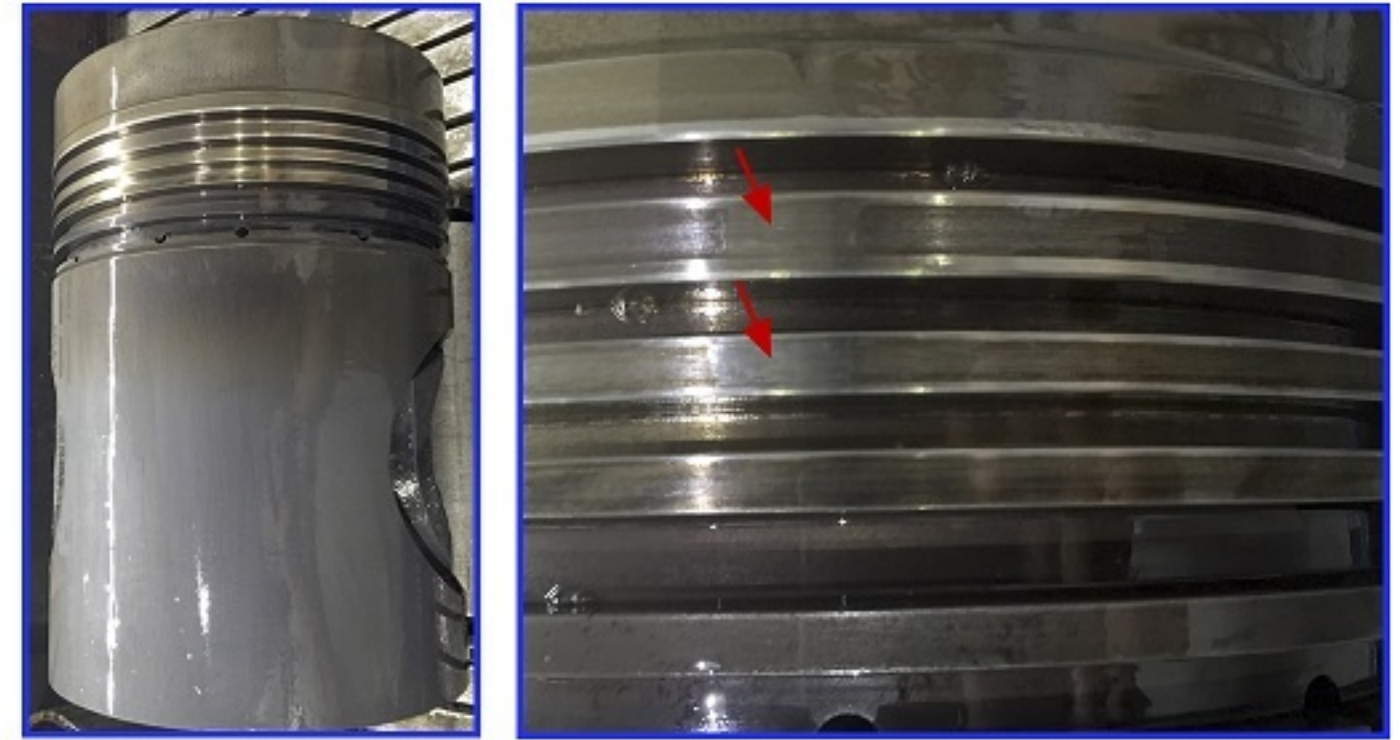
Track record for remanufacturing various types of high-value engine components by laser-powder-cladding:

Worn / Damaged part



4-stroke piston ring grooves & bar blow pass damage

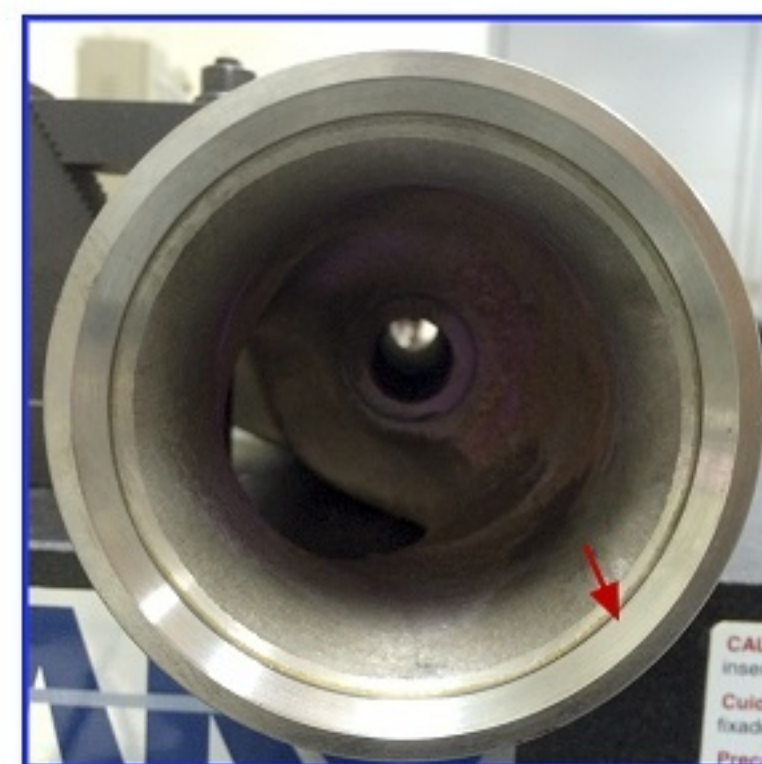
After remanufacturing



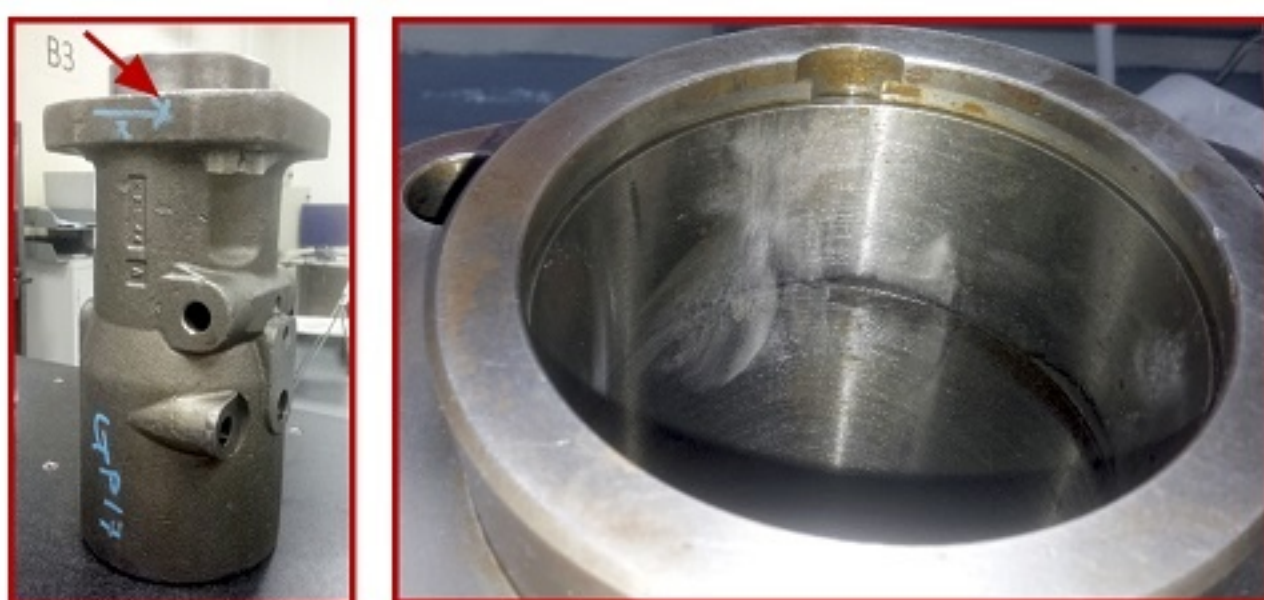
Our remanufacturing process will typically involve inspections, machining, laser-powder-cladding and other support processes.



Valve cage with worn seating area



Rebuilt seat



Fuel pump housing with worn inner bore



Rebuilt housing inner bore

For applications not listed, please contact us at sales@laser-clad.com.

A wide range of other solutions are available by laser-powder-cladding.

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Laser Cladding Centers:



Singapore



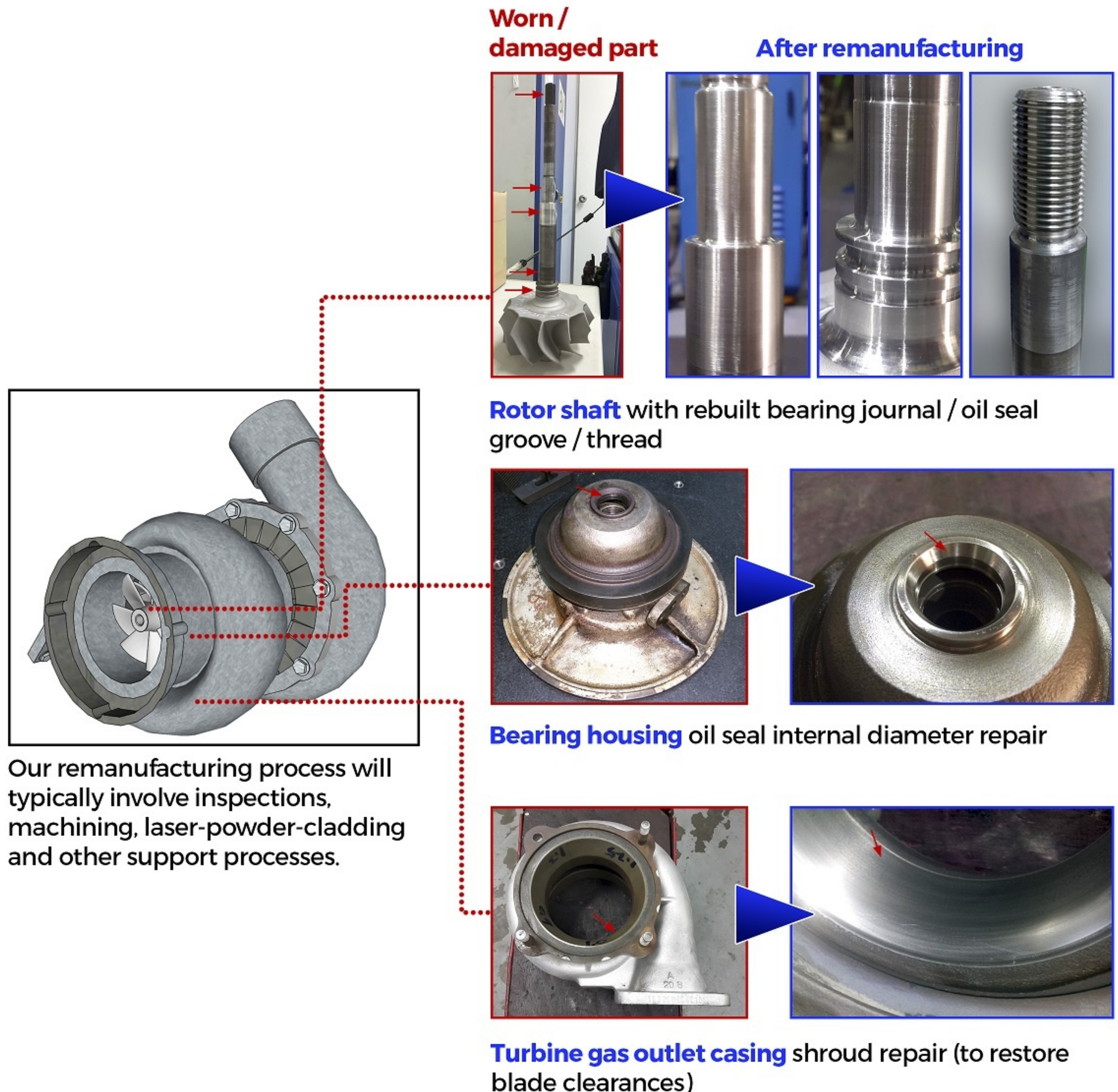
Germany



Japan

Remanufacturing Applications for Turbochargers

Track record for remanufacturing the following high-value turbocharger components by laser-powder-cladding:



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Laser Cladding Centers:



Singapore



Germany



Japan

Remanufacturing Applications for Shafts

Track record for remanufacturing various types of high-value shaft components by laser-powder-cladding:

Worn / Damaged part



Pump shaft scoring and pitting along shaft length

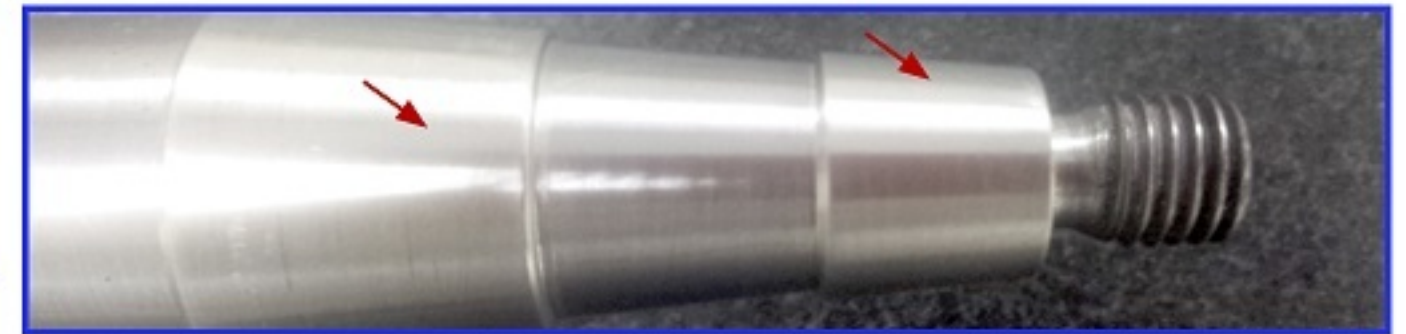
After remanufacturing



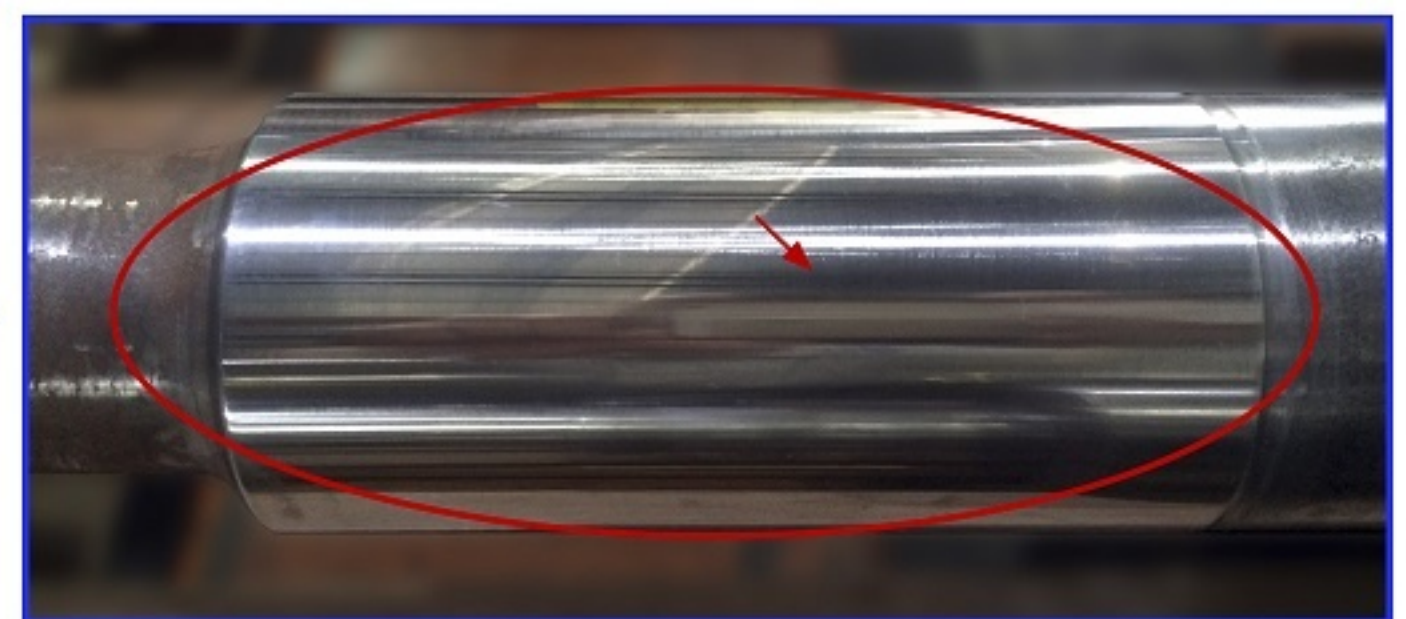
Our remanufacturing process will typically involve inspections, machining, laser-powder-cladding and other support processes.



Oil purifier shaft with worn taper



Intermediate compressor shaft with damage to bearing journal



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Singapore



Germany



Japan

Remanufacturing Applications Above/Below Deck

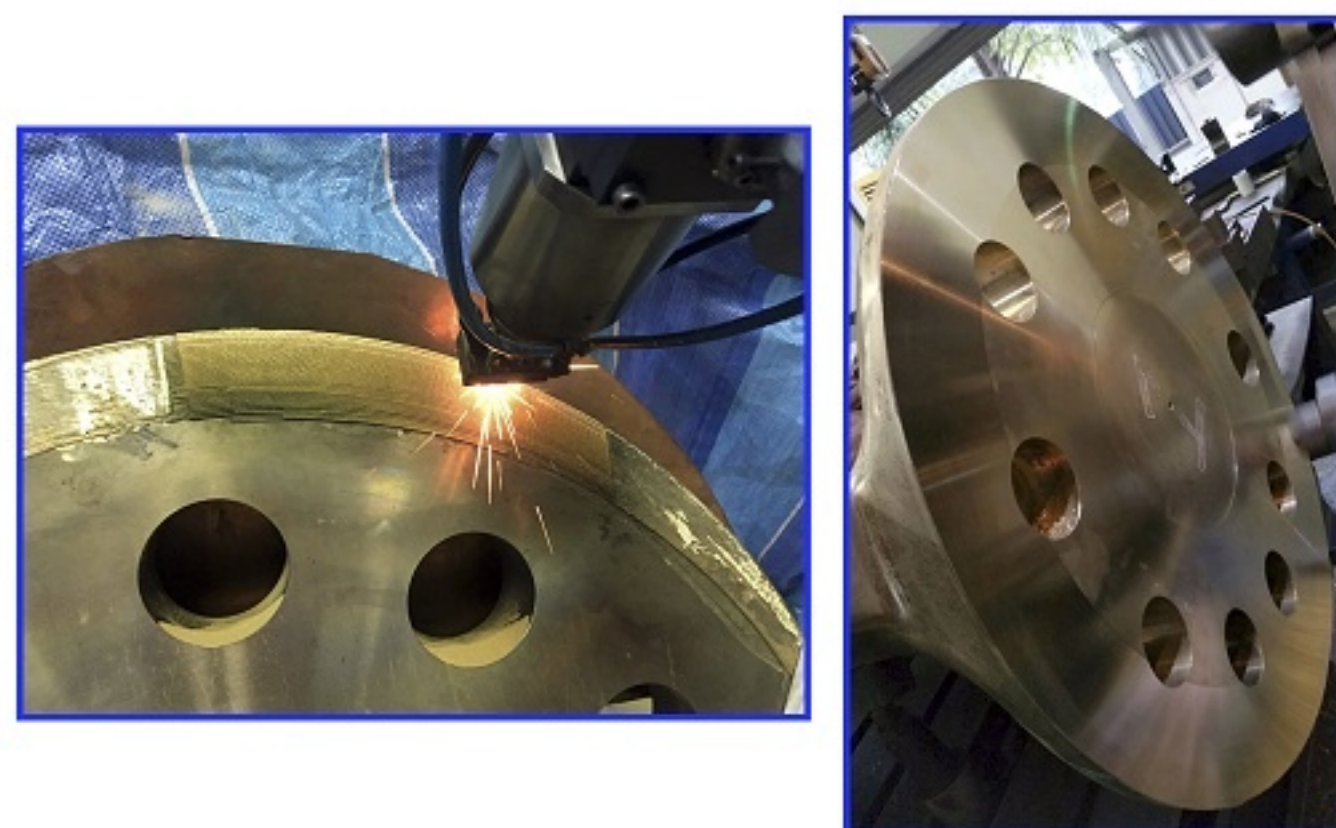
Track record for remanufacturing various types of high-value above/below deck components by laser-powder-cladding:

Worn / Damaged part



CPP blade foot landing porosity

After remanufacturing



Our remanufacturing process will typically involve inspections, machining, laser-powder-cladding and other support processes.



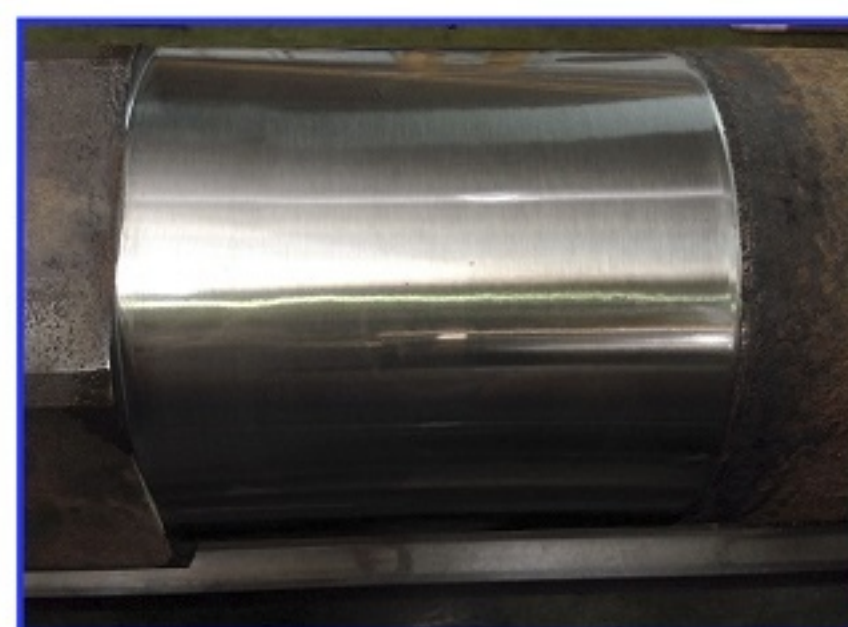
Crane Swivel shaft with damaged thread and shank



Completely rebuilt shank and thread



Mooring winch shaft journal wear



Rebuilt journal

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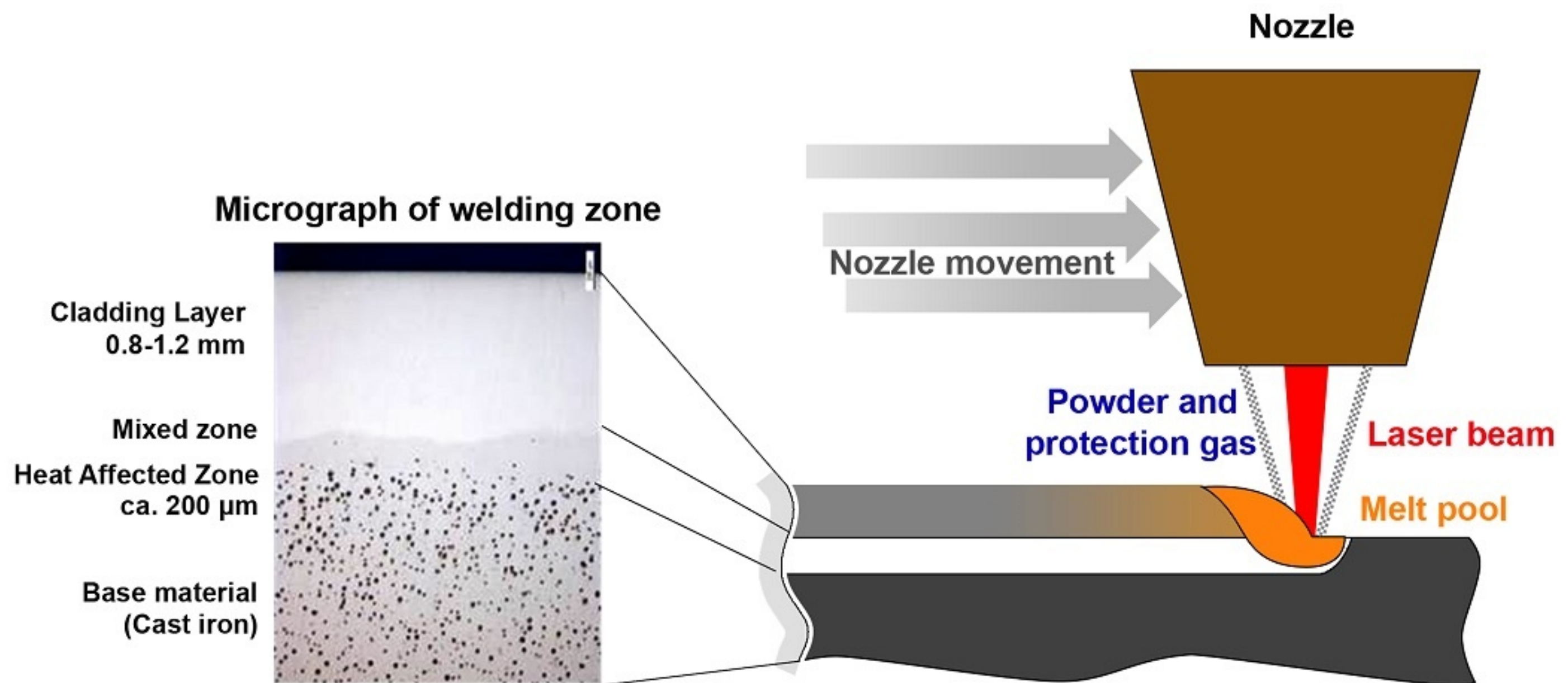


Germany



Japan

How It Works



Various filler materials can be applied onto base materials in order to enhance quality and durability of the original component:

Base Material	Filler Material Options (Clad layer material)		
Steel	Cobalt-based alloys	Manganese steel	Chrome steel
	Nickel-based alloys	Cobalt-based alloys	HSS
Cast Iron GGG	Cobalt-based alloys	Cobalt-based alloys	Nickel-based alloys
Brass / Bronze	Aluminum bronze		
Aluminum	Aluminum		
Nickel-based alloys	Similar materials	Cobalt-based alloys	

Laser Powder Cladding can be used to remanufacture to 4-stroke pistons, turbocharger shafts, housings, casings, pump shafts, purifiers, propeller blades, valve cages and other high value mechanical components.

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