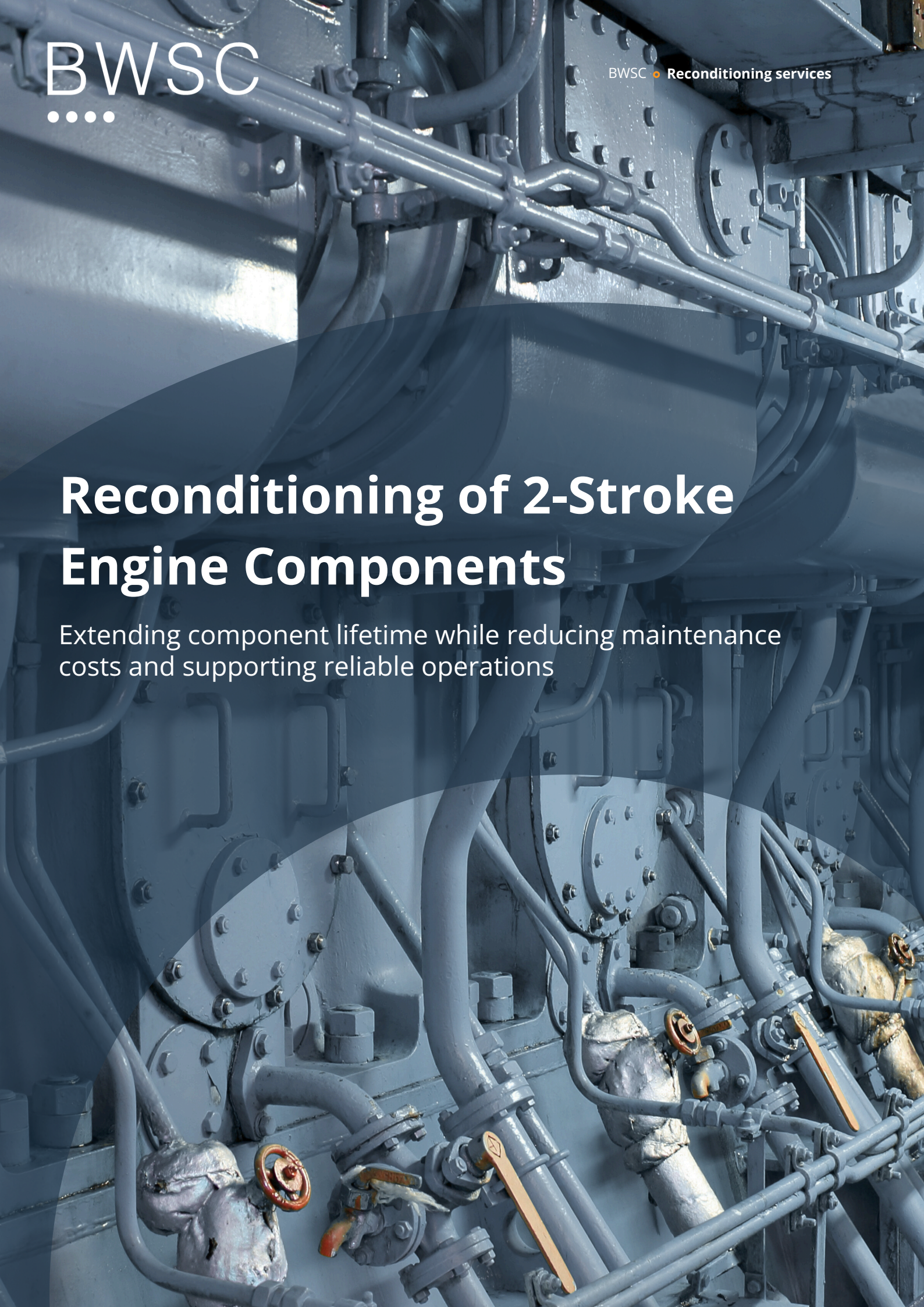


Reconditioning of 2-Stroke Engine Components

Extending component lifetime while reducing maintenance costs and supporting reliable operations



Reconditioning services for 2-stroke engine

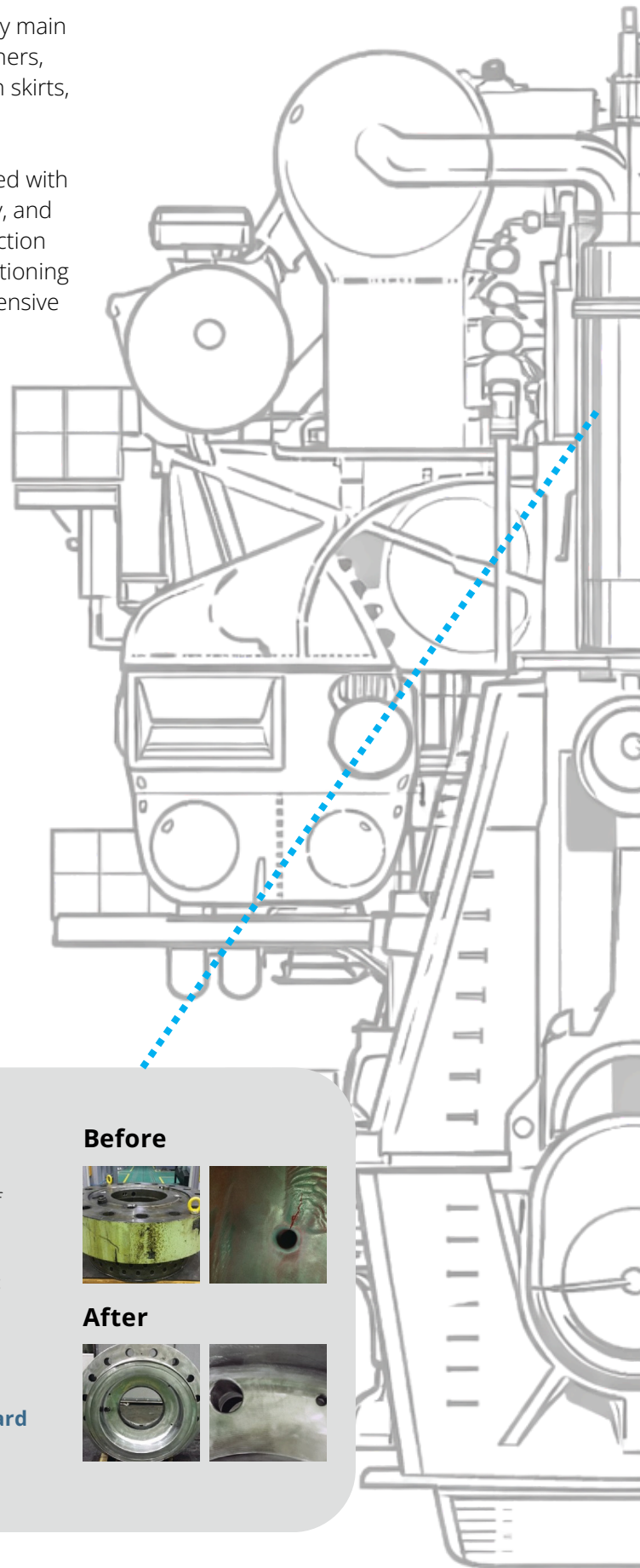
BWSC provides specialized reconditioning services for key main engine components, including cylinder covers, cylinder liners, exhaust valve spindles, piston crowns, piston rods, piston skirts, and stuffing boxes.

All work is performed under controlled procedures aligned with OEM requirements, ensuring consistent quality, reliability, and full traceability. Each project begins with a detailed inspection and condition assessment, followed by precision reconditioning using manufacturer-approved procedures and comprehensive reporting upon completion.

Benefits

Many components can be reconditioned multiple times before reaching specific wear limits or requiring replacement.

Reconditioning provides a cost-effective alternative to premature component replacement, helping reduce maintenance costs and extend component lifetime.



Cylinder covers

Cylinder covers are often subject to cracking in the vicinity of fuel injector holes and cooling water bores.

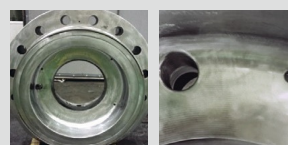
Reconditioning according to OEM procedures includes:

- Heat treatment during any welding repairs
- Machining of cracked and damaged areas
- Welding and re-boring fuel valve holes up to standard size
- Welding and machining of contact surfaces

Before



After



Exhaust valve spindles

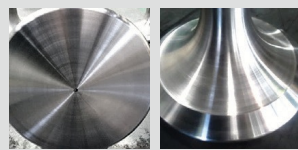
Exhaust valve spindles will wear over time with a rate, depending on air quality and whether a Controlled Oil Level (COL) is installed or not.

Spindle seating will burn-down both on the sealing area against the valve seat as well as on the valve bottom part, which is exposed directly to the combustion chamber.

Before



After



Reconditioning could include:

- High Velocity Oxygen Fuel (HVOF) coating on the valve stem
- Inconel welding application and machining on the seating surface to restore the original geometry
- Rolling process on seating surface
- Inconel welding application and machining on combustion surface
- Final machining and inspection

Piston crowns

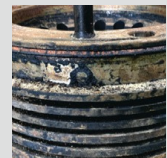
The primary reason for piston crown replacement is the excessive burn-away on the piston top as well as wear in the piston ring grooves.

Reconditioning helps extend the lifetime of the piston crown and includes:

Welding and machining of:

- Piston Ring grooves
- O-Ring contact surface
- Topland surface
- Piston rod contact surface
- Chrome plating of ring grooves

Before



After



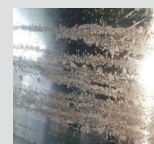
Piston rods

Piston rods will deteriorate over time which can cause a higher lubrication oil consumption. Water contamination of the system oil can accelerate wear and reduce component lifetime.

Reconditioning includes:

- Pre-inspection including inspection report
- Grinding of piston rod running surface
Where required, new undersize stuffing box lamellas are supplied as part of the reconditioning scope.

Before



After

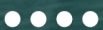


Operational Excellence

Operating in the Panama Canal requires precision, responsiveness, and reliable execution. BWSC Panama is structured to support time-critical marine and industrial operations where delays are not an option.

By combining advanced workshop capabilities with rapid on-site and onboard services, we ensure efficient project execution, minimized downtime, and seamless coordination from planning through completion.

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