



As one of today's major world suppliers of propulsion systems, Wärtsilä builds a wide range of propulsion systems; from small monoblock fixed pitch propellers (FPP) to the most sophisticated types of propulsion systems available on the market today. These include state-of-the-art controls such as those required on modern cruise vessels and on semi-submersible drilling and production rigs.

After operating for many years, an adjustable installation can face mechanical and operational problems as well as wear. As a result, the installation may function poorly, and may need to be overhauled. In most cases the overhaul is carried out at repair yards located around the world.

During the past few years the demand has increased for the overhaul of complete installations in the shortest possible time. One way to decrease the overhaul time

is to make use of the specialized tools and personnel at the manufacturer's workshop. We have a specialized department that meets this demand: Inhouse repair.

The Inhouse repair department is staffed with our highly trained personnel with years of experience in service. These experts are specialized in the overhaul of controllable pitch propellers (CPP), steerable thrusters, side thrusters and waterjets; everything from the oil distribution box to the entire installation. The Inhouse repair department overhauls not only LIPS® units but also CPP hubs, bow thrusters and steerable thrusters from other manufacturers.



Inspection of bearing surface.

An overhaul at Wärtsilä guarantees a quality repair with the shortest possible time in dock, because we have know-how of the entire installed base. And, in addition, all necessary expertise is inhouse. The Inhouse repair department is well equipped with all the necessary auxiliary tools, has close connection with the engineering department and has most of the necessary spare parts in stock. The workshop is based at our factory and therefore it has all the special equipment and specialists at hand.

### Working procedure

The first step, when the installation arrives at Wärtsilä, is to disassemble the unit completely. The method of repair is determined from measurements taken and non-destructive inspections (NDI) by qualified personnel. This always takes place in close consultation with our engineering department, the classification society and of course the customer.

After cleaning all the parts and replacing seals, bearings and bolts, the units are reassembled and bearing and gear set clearances are adjusted. A spin test, pitch test and pressure test always finish the overhaul process. The

results of these tests are recorded in an official report that is handed over to the classification society. The customer receives a complete overhaul report including these test results.

Advantages for the customer:

- Shorter down time for the vessel due to high level of expertise
- OEM quality repairs
- Spin test
- Short communication lines between engineers and technicians
- All required (spare) parts available.



Inspection of actuating mechanism.

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