

## **PARTIAL OVERHAULING OF MAIN ENGINE'S PNEUMATIC REMOTE-CONTROL SYSTEM (MANOUEVRING SYSTEM)**

Partial Overhaul of the main engine's pneumatic remote-control system process consists of overhauling essential pneumatic valves/cylinders that control main engine operations - start, stop, reversing ahead and astern, speed setting telegraph, from bridge, ECR and EMCY stand.

Following RCS components are identified as essential on MAN B&W MC engines - reversing cylinders on fuel pumps, air distributor and starting valves.

- (1) Engine manufacturers recommend overhauling of pneumatic components every two years.
- (2) It is also recommended to regularly check functioning of the system - air bottles should be drained every day, filters cleaned regularly, automatic water traps emptied, and compressors maintained in order to minimize the content of the oil and water in the system.

When placing order for RCS overhaul, the client should provide - engine type, number of cylinders, RCS schematic diagram (drawing) and list of valves. If some information is not available, PBM shall advise the client about possible solution, based on experience.

### **Procedure of Partial Overhauling of RCS is as follows:**

- 1) upon accepting PBM's offer, client places the Purchase Order
- 2) PBM packs and sends genuine repair kits to the vessel. Packing costs are included in the service price. Transportation costs are not included in the service price.
- 3) when the vessel is ready for the service provisioning, PBM's service engineers join the vessel to overhaul and test the RCS system, including sea trial if needed
- 4) overhauling process consists of following steps:
  - a. dismantling of pneumatic valves/cylinders,
  - b. overhauling using genuine repair kits,
  - c. testing valves/cylinders with special tools,
  - d. returning valves/cylinders on their original position,
  - e. testing/simulation of the RCS. Sea trial is not included in the service price.
- 5) if during test of the RCS system, any of non-overhauled components (valves/cylinders) is found out of order, the situation shall be reported to the client's representative and recommendation provided

PBM provides 6 months warranty on work done and repair kits installed.

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In case some valves/cylinders couldn't be overhauled due to their bad condition, the situation shall be presented to the client's representative, and recommendations provided.

Partial overhauling service can be done on Exchange Basis as well.

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