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CALIBRATION

1. MACHINERY CALIBRATIONS

Machinery calibrations shall be recorded on the appropriate manufacturers prescribed forms. Chief Engineer Officer shall ensure that all wear rates are carefully calculated each time a calibration is made, and that prognoses and decisions made as a result of these calculations are implemented.

Machinery Calibration files shall contain current and historic calibration sheets for the following major components.

- Main engine cylinder liners.
- Main engine pistons.
- Main engine main bearings and journals.
- Main engine bottom end bearings and journals.
- Main engine crankshaft deflections.
- Auxiliary engine cylinder liners.
- Auxiliary engine pistons.
- Auxiliary engine main bearings and journals.
- Auxiliary engine bottom end bearings and journals.
- Rudder clearances and wear down.
- Tail shaft clearances and wear down.

2. GAS DETECTION METERS

2.1. Two operational gas meters shall be maintained on board at all times, and these shall be handled with care[1].

2.2. Gas detection meters (PS-200) shall be calibrated on board annually and bump test shall be conducted every three months or more frequently if required. Calibrating gas should be retained on board for this purpose.

2.3.

2.4. Each equipment must be functionally tested on board prior to use (if fitted for this). If performance is inaccurate, it shall be withdrawn from service immediately until it is repaired or replaced.

2.5. Note the following with respect to both the PS200 gas meter sensors:[2]

[1] W 24 / 2022

- CO/H2S/LEL sensor:[3]
  If the CO or H2S or LEL sensor fails, the gas meter shall be disposed. The sensors will not be renewed as it costs almost equal to a new gas meter.
- Oxygen sensor[4]
  If the Oxygen sensor fails, it can be replaced as it is not expensive.

2.6. As the life expectancy of the CO/H2S/LEL sensors is generally between 18-24 Months, the Company will supply a new gas meter every 18 months to each vessel.[5]

3. PRESSURE GUAGES

The vessel should maintain an inventory of Pressure gauges fitted to all machinery and equipment. Each pressure gauge should be marked to be traceable against the inventory.

3.1. The following pressure gauges are to be calibrated and certified every five years by a recognized company.

- Boiler Master Pressure gauges
- Main Air Receiver Master Pressure gauges

3.2. The remaining pressure gauges should be checked at a 5-year period or whenever the machinery or equipment is overhauled, by comparing them against a calibrated reference gauge in dry dock. Pressure gauge inventory to be updated accordingly.

4. MICROMETERS

Repairs and maintenance performed on board by sea going personnel is done on a make to fit comparative basis. It is not essential to calibrate the micrometres other than against their supplied set test pieces, which must be done prior to use.

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[2] W 24 / 2022
[3] W 24 / 2022
[4] W 24 / 2022
[5] W 24 / 2022

5. OUT OF CALIBRATION

When critical equipment (e.g. main engine lube oil pressure gauge) is found to be out of calibration the Chief Engineer Officer shall access the potential for damage which may have resulted due to the out of gauge equipment.

6. IDENTIFYING EQUIPMENT

The Chief Engineer Officer or the Chief Officer shall ensure that each individual equipment item or tool that requires calibration shall be identifiable by means of a serial number or mark. If no such number or mark exists, then a unique sequential number shall be allocated by the Chief Engineer Officer or Chief Officer and engraved or marked with a permanent marker or paint onto the equipment or tool.