

## ADVANTAGES

- Improved engine performance and condition
- Improved cylinder condition
- Extended time between overhaul (TBO)
- Detection of early warning signs (eg. cold corrosion and build-up deposits on piston rings)

Ship-owners choose us because they benefit from our unique specialist experience within the field of cylinder lubrication.

## Cylinder condition optimisation programme

**Improve engine performance through a cylinder condition optimisation programme from HJ Lubricators**

In addition, the program offers correct feed rate setting, improved cylinder condition, extended time between overhauls, reduced cylinder oil consumption, and detection of early warning signs (eg. deposits build-up).

### THE PROGRAMME INCLUDES

The cylinder condition optimisation programme with HJ Lubricators consists of four parts. These parts are used to give clear recommendations on improving cylinder condition for your vessels:

- Port Inspection Picture Evaluation
- Scrape Down Analysis
- Fuel Reports
- Filled in Questionnaire

NO. OF INSTALLATIONS

&gt; 20000

REDUCE OIL CONSUMPTION

up to 60%

SINCE

1917

## SCRAPE DOWN ANALYSIS (SDA)

The SDA will give a clear indication of the cylinder condition. The SDA includes eg.:

- Iron level
- TBN level
- Chrome
- Copper
- Cat fines

Our SDA programme is on demand by ship-owners because it is important to combine the SDA result with the actual cylinder lubrication equipment installed o/b the ship.

## Port Inspection Picture Evaluation

Through photos taken by the crew of the piston rings, piston skirt, cylinder liner wall, cylinder crown, and piston top land engineers from HJ Lubricators will examine the photos and evaluate the following:

- Cylinder condition
- Feed rate
- Condition of combustion
- Potential abnormal situation
- Evaluation of lubrication system
- Engine cleanliness
- Condition of piston rings and coating

In cases where a port inspection photo evaluation and SDA show signs of increasing cylinder liner and piston ring wear, a cylinder liner measurement can be very helpful in pinpointing the reason for the wear problem.

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