

HSP

Hitz

Information of Engine Parts

Ref. No. : HSP-B1601E Date of Issue : October 2016

Engine Type: Cylinder bore diameter more than 500 mm Cylinder liner inner diameter automatic measurement service

We start “cylinder liner inner diameter automatic measurement service”, which enables checking cylinder liner wear condition without cylinder cover overhaul.

In comparison with the previous measurement procedure, cylinder liner wear condition can be checked much easier and faster.

Feature of this service is as follows. See next page for outline of measurement method.

- Measurement without overhauling cylinder cover, by using the special measurement device
- Safe measurements that no man needs to enter cylinder liner.
- Time needed for measurement: 40 min. ~ 1hour per 1 cylinder ※1
- Mounting of this special measurement device and the measurement is done by our engineer※2
- Measurement results are recorded as digital data for easy analysis/management .
- Inside condition can be checked by a camera at the same time with the measurement

※1 Extra 2 hours are needed only at the first measurement for calibration and loosening cylinder cover.
(For 1 cylinder).

※2 As the preparation in prior to our engineer's attendance, please carry out overhaul of scavenging manifold and cleaning cover, remove indicator valve.

In case of the first attendance, we may ask loosening of cylinder cover.

With this easier measurement procedure, by facilitating more often measurements, more details capable to know wear progress condition. For example, cylinder liner condition can be checked easier at calling port before dry-docking.

For more details, please do not hesitate to contact our sales department below.

Hitachi Zosen Corporation Marine Machinery & SCR systems Business unit

Sales dept. Tokyo	TEL +81-3-6404-0142	E-mail: de-tokyo@hitachizosen.co.jp
Osaka	TEL +81-6-6569-0502	E-mail de-hzds@hitachizosen.co.jp
Shanghai	TEL +86-21-6887-2525	E-mail zixun_hitz@hitachizosen.com.cn
Singapore	TEL +65-6863-1490	E-mail de-sin-branch@mml.is.hitachizosen.co.jp

For technical queries, please also contact:

Service department	TEL +81-6-6569-0508	E-mail de_tech@mml.is.hitachizosen.co.jp
--------------------	---------------------	---

Measurement procedure

Wear Gauge

Inner diameter is measured automatically by pressing gauge on liner with a built in motor.

The measurement data is wirelessly transmitted.

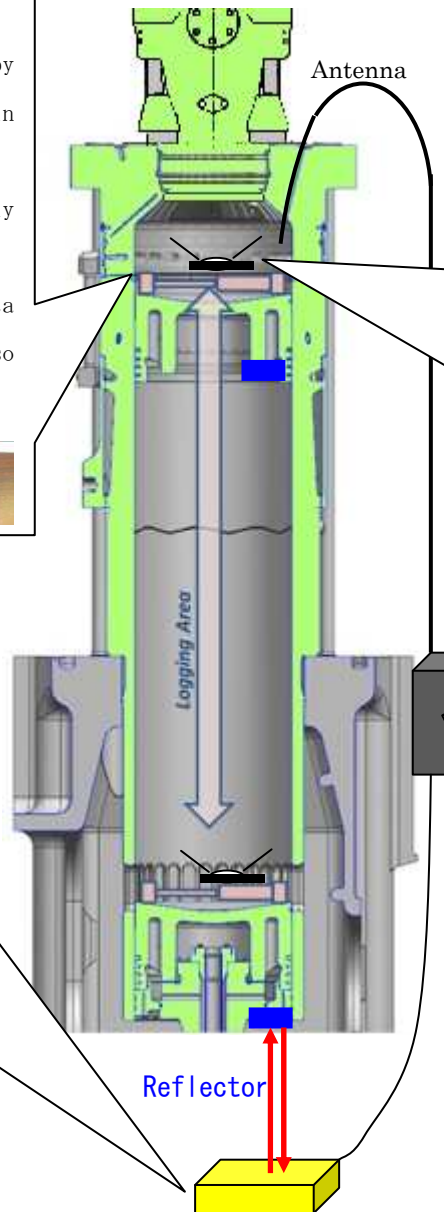
Wear gauge and liner wall temperature data measured by 2 thermometers are also transferred.



Depth Gauge

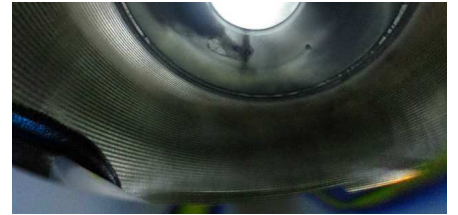
Fitting position: at the liner bottom

Position is measured by laser without touching piston by fitting a reflector to the piston crown.



Camera for photographing inside condition

Photograph liner inner wall condition, separately from wear gauge.



Controller

Transfer the data of depth gauge/wear gauge to the PC

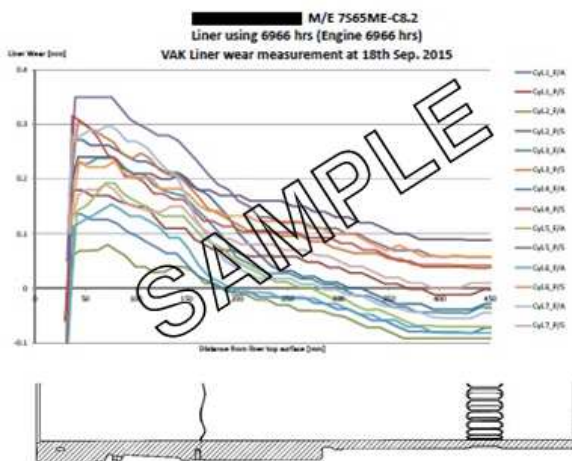


PC

Controller/Wear gauge:

Operating wear gauge and collecting measurement data.

Automatic correction function by temperature difference between liner/wear gauge is provided.



Analysis

Wear is calculated considering liner deformation due to cylinder cover tightening.

Expert advice is given by our engineer after data analysis and necessary correction based on wear amount • inside photographed data and cylinder condition.