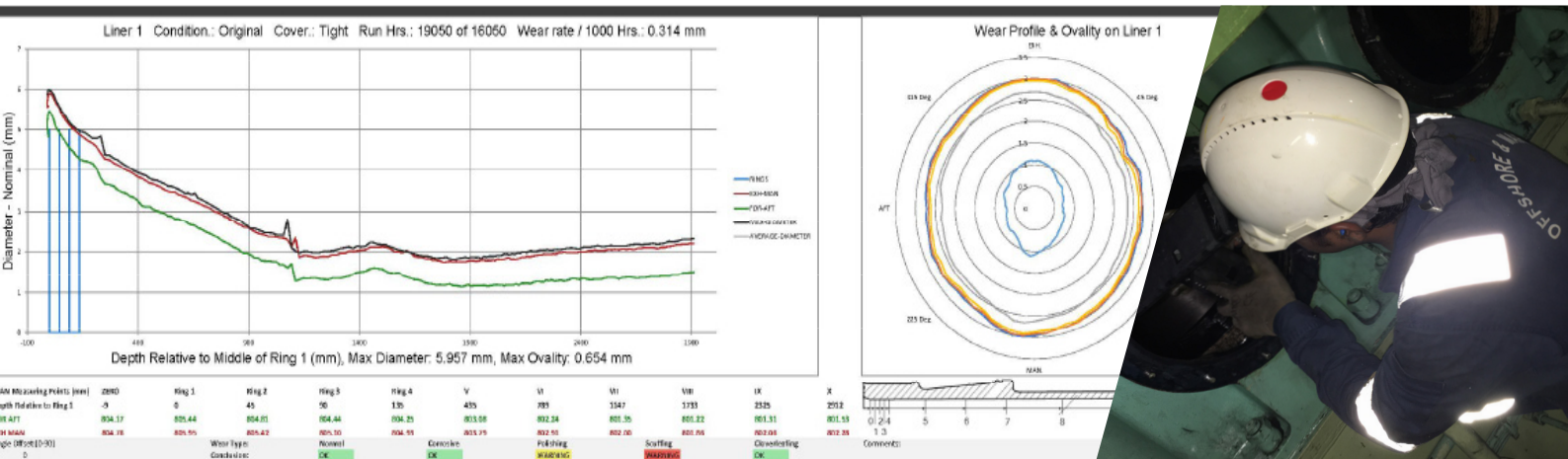




# AFLOAT REPAIRS



## 3D Liner Scan Inspection Prevents Critical Engine Damage

### Overview:

The client contacted CTS after experiencing problems with one of their engine unit's liners. The vessel was scheduled for a long voyage from Singapore therefore the owner wanted to ensure the engine was functioning properly before departure. The client had already planned for one of the engine's liners to be renewed but wanted a thorough health check of the engine before proceeding with the renewal process. The client requested that CTS complete a full inspection of the engine to determine if there were any additional damaged liners and to check for signs of deterioration.

The vessel was fitted with Main Engine Model-MAN 7G80ME, a 3D scan of the engine's liners was taken to analyze corrosion, the maximum diameter, wear rates and ovality. The scanning methods applied required no contact during the process which provided a more accurate result.

### Scope of Works:

- 3D liner scanning
- Provided photos of the piston & liners
- Maximum diameter report
- Analysis of ovality curves of liner
- Corrosion & wear rate analysis

### Result:

The project had to be completed as quickly as possible to meet the client's time constraints. CTS's team used advanced equipment to see to it that the project was completed with precision and on time. Although the client was already somewhat aware of the current state of the engine, CTS's report gave a comprehensive overview and concluded that 5 liners needed to be restored. The photos of the liners and piston ring indicated scuffing and confirmed that both the liner and piston rings were having micro-seizures. After receiving CTS's report details the client was able to take the decision to stop the vessel to fully repair the engine and order liner replacements.

**CLIENT:** Leading Oil Major

**VESSEL:** Oil Tanker

**DATE:** December 2019

**LOCATION:** Singapore

12

MANHOURS

2

PERSONNEL

1

DAY

0

ACCIDENTS

### Client Feedback:

"CTS helped us quickly determine the issues with the liners. The data provided enabled us to make a well-informed decision to delay the vessel's departure for repairs. It was a very useful service and saved us a lot of time."

- Technical Manager