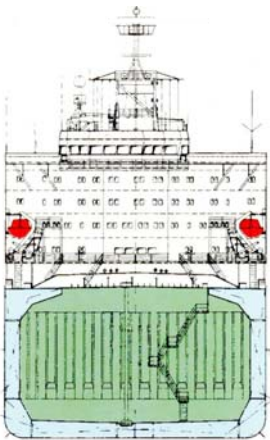
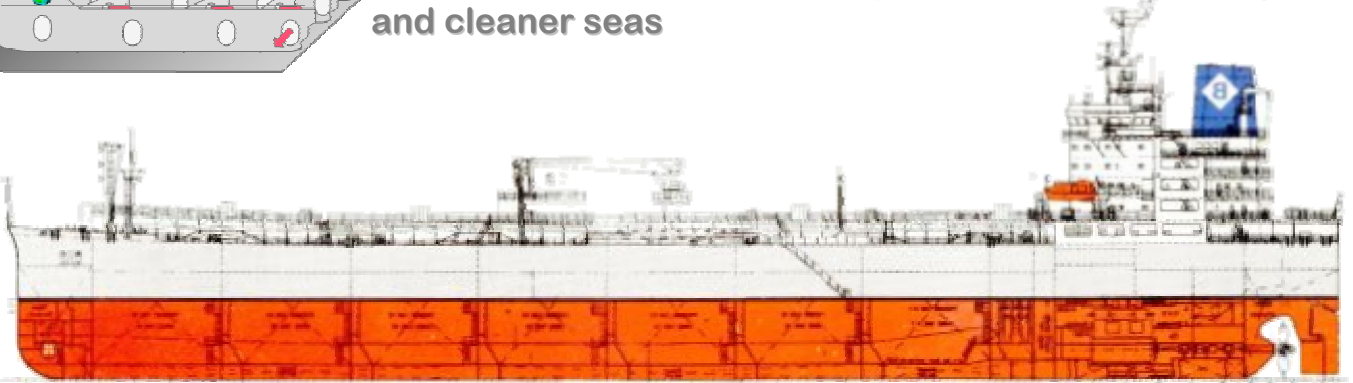


# ROTIS

## Remotely Operated Tanker Inspection System

Reliable & efficient tanker inspections for safer navigation and cleaner seas



IMO<sup>1</sup> regulations require tankers to be subjected to an enhanced survey programme of inspections, based on close-up visual inspection and steel plate thickness measurements, in order to evaluate and certify their structural integrity.

Ballast tanks, shown in the left drawing in light blue colour, give access to virtually all the structural parts of a double hull vessel

### Ballast spaces



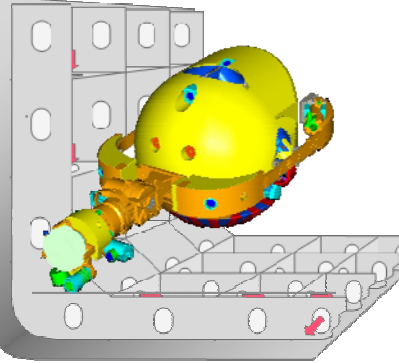
Prior to an inspection the ship must be made available at the harbour area and means of access provided to enable the surveyor to perform the inspections in a safe and practical way. This implies that all access spaces are made safe (de-gassed etc) and prepared accordingly, usually in a dry dock at a considerable cost and ship idle time.

ROTIS promises a significant enhancement of the vessel inspection process. It is based on a small ROV<sup>2</sup> capable of navigating inside the ballast tanks through the standard man-holes and openings and performing the close visual inspection and thickness gauging required.

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<sup>1</sup> International Maritime Organization

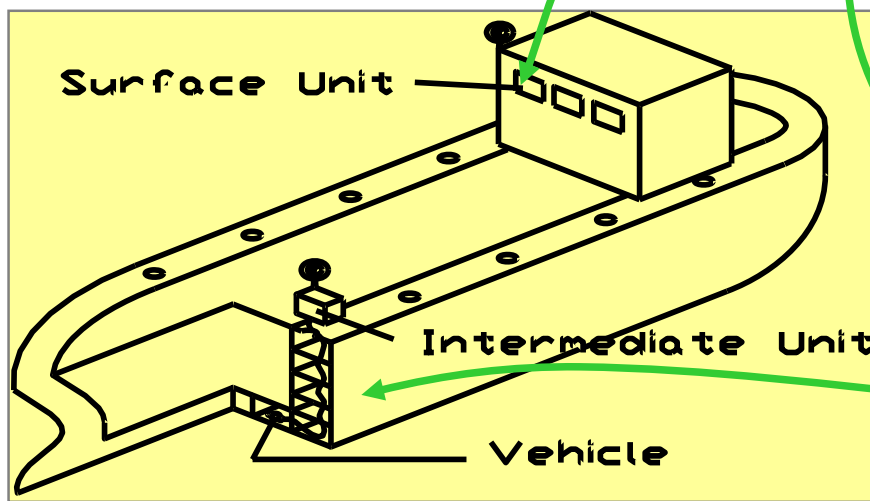
<sup>2</sup> Remotely Operated Vehicle



ROTIS and ROTIS II projects financed by the EC through the BRITE-EURAM and the Sustainable Surface Transport programmes.

JRC had a fundamental role in conceiving the system, mounting the projects and aggregating the consortiums. The coordinator and principal contractor is the Italian company TECNOMARE. JRC was responsible for the system requirements and specifications as well as for the preliminary tests and calibration.

ROTIS system is based on a compact ROV with a self-deployable tether, able to enter the flooded ballast tanks pass through the standard man-holes and openings and carry out close-up visual inspection and wall thickness measurements even while the ship navigates. It is remotely controlled by a safely placed operator (i.e. at the ship bridge). Specific safety constraints applied to the tanker vessels are accounted for.



#### CONTACTS