



TECHNICAL CIRCULAR No. 674 of 6th March 2021

To	All Surveyors/Auditors. All flags
Title	Underwater hull repair
Reference	CONARINA class

Underwater hull repair

A tanker suffered erosion damage in the grey water tank. A ship repair company was contacted by the owner to perform on-site repairs.

Damage

- A small damage is created over time because of the recurring impact of the instance water on the exact same spot repeatedly.
- This damage occurred regularly in the ballast tanks under sounding pipes as was this case.
- If the damage is caught before hull plates are perforated, clad welding can be used to fill up the area.
- This is also a permanent repair that will avoid a condition of class. The hole had formed in the hull plating.

Repairs

- The divers started by installing a cofferdam on the waterside of the affected plating.
- Next they removed the sounding pipe covering the area on the inside. They could then safely remove a plug which had been installed as a temporary solution.
- The damaged plating was cleaned and prepared for the operation.
- As agreed with the classification society, an area measuring 300x300mm was cut away.
- The edges of the hole were prepared for the insert and the positioning of the new plate.
- The insert was then welded following the Hydrex class-approved procedure using a full penetration weld.
- The independent inspector carried out ultrasonic testing and the repair was approved by class surveyor who attended the operation.
- The sounding pipe was re- installed, and the cofferdam was removed.

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-A small round double plate was installed under the pipe to prevent the new insert from eroding again.

REFERENCES:

- CONARINA instructions and Hydrex

ATTACHMENTS: No

Kindest Regards,

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