



TECHNICAL CIRCULAR No. 636 of 4th July 2020

To	All Surveyors/Auditors
Applicable to flag	All Flags
Title	Thickness Measurement Survey
Reference	CONARINA - Instructions

Thickness Measurement Survey

Prior to commencement of TM's, the Surveyor is to verify the following:

- Check type of equipment
- Calibration and validity of equipment according to recognized national/international standards
- Proper labeling of equipment
- Witness calibration appropriate for size and type of material
- Verify operator's skills and competence
- Ensure that the TM operator will be using instruments that utilize a pulsed echo technique (either with oscilloscope or digital instruments having multiple echoes). Single-echo instruments may be used on uncoated surfaces that have been properly cleaned.

The attending Surveyor shall determine the exact location and extent of TM's to be taken, only after the overall survey has been carried out.

The Surveyor is to control the gauging process and take into consideration the age and condition of the vessel. The Surveyor is not to be involved in the actual TM process (taking of readings) or in recording readings (inputting readings into a computer spreadsheet) or any other method of recording the actual readings taken. These tasks are the sole responsibility of the TM company personnel.

Thickness measurements shall be witnessed by the attending Surveyor to the extent deemed necessary to confirm the following:

- TM firm knows what it is doing and knows where TM's are to be taken
- TM's required by the Rules have been taken
- Areas of substantial corrosion have been identified and all required additional

TM's have been taken

*Customer Service Center
5201 Blue Lagoon Drive, 9TH. Floor,
Miami, Fl., 33126
Tel: 1 (305) 716 4116,
Fax: 1 (305) 716 4117,
E-Mail:*

joel@conarinagroup.com

*Technical Head Office
7111 Dekadine Ct.
Spring, Tx., 77379
Tel: 1 (832) 451 0185,
1 (713) 204 6380*

E-Mail: valbozen@hotmail.com

Control of gauging company and results:

TM results found in excess of the allowable individual plate wastage limits are to be addressed in the following manner:

- The Surveyor is to examine all areas with readings of substantial or excessive corrosion.
 - If substantial corrosion is found, photos of general area should be taken.
 - If excessive wastage is found, photos of before and after repairs are to be taken.
- Localized wastage and pitting is to be addressed to the satisfaction of the Surveyor and may require renewal.
- Wasted areas are to be repaired to the satisfaction of the Surveyor or noted as Conditions of Class in the survey report.
- Any areas that were repaired at the time of gauging are to be clearly identified on the TM report as "repaired" and the thickness of the renewed structure, if different from the original scantling, is to be recorded in the TM report. Additionally, repairs are to be reported upon in the survey report as per the section for repair Survey.

The Surveyor should have readily at hand during the survey the wastage limits so that as soon as the thickness measurements are known, additional measurements can be requested as necessary for marginal conditions or questionable measurements. This should be done also for adjacent or symmetrically opposite plates outside of the specified minimum thickness measurement locations, whenever excessive or serious areas of corrosion are found as well as when substantial corrosion is found.

Excessive wastage should not be based upon a single or a few readings. The Surveyor should take an expanded gauging pattern to identify if the plate is wasted. Area to be renewed must be decided based on readings of expanded gauging. If during expanded gauging pattern, the Surveyor finds some substantial corrosion and the Owner decides to stop renewal at the substantially corroded area, additional gauging is required to be taken.

REFERENCES:

- CONARINA – Instructions. Courtesy of ABS.

- ATTACHMENTS: No

kindest Regards,

Val Bozenovici
Naval Architect – Conarina Technical Director

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