



**TECHNICAL CIRCULAR No. 830 of 6<sup>th</sup> June 2024**

To	All Surveyors/Auditors. All flags
Title	<b>Longitudinal strength of oil tankers</b>
Reference	Enhanced Survey Program, SOLAS

**Longitudinal strength of oil tankers of 130 meters in length**

The longitudinal strength of oil tankers of 130 meters in length (as defined in the International Convention of Load Lines in force) and upwards, and over 10 years of age, is to be evaluated using thickness measurements taken, and any renewals and/or reinforcements as may be necessary, as a result of the special survey and reported in accordance with the table below, "Transverse Sectional Area of Hull Girder Flange."

The number of transverse sections where the longitudinal strength is to be evaluated and reported increases with the age of the oil tanker in accordance with the Enhanced Survey Program (SOLAS and resolution A.1049(27), as amended). This is summarized as follows:

1. Two transverse sections if the renewal survey is commenced (first visit occurs) after the 10th but on, or before, the 15th anniversary date of delivery.
2. Three transverse sections if the renewal survey is commenced (first visit occurs) after the 15th anniversary date of delivery.

The table below, "Transverse Sectional Area of Hull Girder Flange," is to be annotated with "n/a" for the transverse section in which the longitudinal strength has not been evaluated.

Upon receipt of the submitted thicknesses, the CONARINA Head Office Review office shall determine the as-gauged transverse top and bottom sectional flange areas and, provided the calculated diminution does not exceed 10% of the as-built area, shall prepare a table reporting the transverse sectional area of the top and bottom hull girder flanges in the following format:

6505 Blue Lagoon Dr. Suite 455  
Miami, Fl., 33126  
Tel: 1 (786) 558 5288,  
Fax: 1 (786) 325 0200,



### Transverse Sectional Area of Hull Girder Flange

		Measured (cm <sup>2</sup> )	As-built (cm <sup>2</sup> )	Diminution (cm <sup>2</sup> ) ( %)
Transverse section 1	Deck flange			
	Bottom flange			
Transverse section 2	Deck flange			
	Bottom flange			
Transverse section 3	Deck flange			
	Bottom flange			

For the purposes of this table, the top and bottom flange areas are to be determined as follows:

**Top flange:** Deck plating including gunwale radius plate together with deck longitudinals.

**Bottom flange:** Bottom shell and bilge plating together with bottom and bilge longitudinals.

Upon completion of calculations, if the measured area diminutions are < 10%, the CONARINA Head Office Review office is to inform the attending Surveyor that the structure, as gauged, is satisfactory for continued service and the completed table is to be forwarded to the surveyor for inclusion in the condition evaluation report.

If the measured area diminutions are > 10%, the CONARINA Head Office Review office shall forward full details of areas of deficiency to the attending Surveyor. If the corrective action is to renew or reinforce the deck or bottom flanges so that the actual sectional area of each flange is not less than 90% of the as-built area, revised transverse section readings are to be submitted to the CONARINA Head Office Review office for preparation of the table for inclusion in the condition evaluation report. Alternatively, the actual SM of the transverse section of the hull girder may be



calculated using the as-gauged scantlings; the SM so calculated must not be less than 90% of the required SM.

It is essential that the CONARINA Head Office Review office carrying out the calculations, respond to the survey office in a timely manner since the thickness measurement survey cannot be considered complete until a response has been received, indicating that the as-gauged structure is satisfactory for continued service.

REFERENCES:

- SOLAS and resolution A.1049(27), as amended

ATTACHMENTS: No

Kindest Regards,  
CONARINA Technical Office

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