



TECHNICAL CIRCULAR No. 060 of 12th June 2012

To: All Surveyors/Auditor

Applicable to flag: All Flags

Subject: Annual Class Surveys

Reference: CLASS – HULL SURVEY

ANNUAL HULL SURVEYS

The Annual Survey of Hull is essentially an equipment and operational examination and the conduct of the survey should be so directed. However, all accessible parts of the hull in particular those which are normally subject to rapid deterioration shall be included within the scope of the survey. Suspect areas include all areas of the hull with due attention to areas with limited accessibility and areas prone to wastage due to hull configuration or water collection. In addition, saltwater ballast tanks may be required to be internally examined at the time of the Annual Survey based on tank coating condition and cargo holds based on age of vessel. The Conarina Surveyor may broaden or restrict the scope based on his evaluation of the vessel but the intent of the Rules must be complied with.

A Surveyor usually commences the Annual Survey of Hull (dockside-to) by sighting the vessel's name and port of registry, bower anchors, condition of side shell plating, rudder stock, rudder plating and propeller blades as far as can be seen afloat. By verifying that the load line marks, including the deck line, are properly marked and painted in prior to boarding the vessel and introducing himself/herself to the vessel's Master and/or Owner's representative. Subsequent to review of and familiarization with the vessel's Load Line Assignment and the General Arrangement Plan, the Surveyor carries out an examination of structural arrangements relative to the maintenance of the watertight or weather tight integrity of the hull and enclosed superstructures and the protection of the crew, fittings and appliances, including closing appliances for hatchways, machinery casings, scuttles, ventilators and air pipes. Also guard rails, bulwarks and lifelines, to ensure vessel's continued compliance with Classification and Load Line requirements.

Ventilators and air pipe closing devices are to be randomly opened out and condition verified at the annual survey as required by the Rules. Random examination is to include a representative selection based on the external condition noted. Survey is to be expanded to include additional internal examination of air pipes and ventilators whenever deficient conditions are found. There have been cases where recently installed air pipe heads have been found defective and wasted.

It is important that Surveyors satisfy themselves at the time of Annual Survey with all of the above, and

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in addition in particular, as to the condition and efficiency of hatch covers and the ability of the hatch covers to be made weather tight. This may require arranging surveys to the convenience of the Owners, so that steel hatch covers may be observed in both the open and closed conditions. When there is evidence that the weather tightness is in question, a hose test or other means of confirming seal contact should be required to ensure the ability of the hatch to withstand the weather, and suitable repairs carried out, if necessary. The Surveyor shall also satisfy himself by examination at the opening and closing of hatch covers as to the absence of excessive wastage of hatch cover and coaming plating.

The following suggestions are offered with a view to improving survey coverage of hatch covers: Though wear-and-tear structural repairs to steel hatch covers can usually be handled at the Special Survey, maintenance items such as rubber replacement, seal-lip dressing and locking-dog renewals may require attention at any Annual Survey as well.

Damage affecting the tightness of the hatch covers requires immediate attention; however if suitable permanent repairs are not immediately possible, properly battened and lashed tarpaulins may be considered as a temporary measure.

The seal tips or bars that bear on the rubber must be kept in clean and smooth condition to prevent leakage and damage to the rubber. To aid this some operators have used stainless steel for these bars, others rely on special coatings; otherwise build-up and re-dressing to original profile may be necessary.

The rubber seal strips will usually remain effective even though permanently set-down a considerable amount in way of the seal-bar contact, providing the rubber is still resilient and there is smooth continuous contact. For reference, compression of the rubber with the hatch cover dogged down metal-to-metal is usually about 3 to 5 mm (1/8 - 1/4 in.) in the new condition. Satisfactory sealing can be maintained under the conditions noted above even though the compression becomes considerably diminished by permanent set. The average life of the rubber under good maintenance conditions has been reported as 5-6 years. However, with poor maintenance of the seal bar or severe working conditions, renewals might be necessary in half this length of time.

Exposed steel hatch covers shall be examined to confirm structural integrity and capability of maintaining weather tightness. This includes hinge joints.

To meet the weather tightness requirements and prevent water which has passed the compression bar/rubber seal interface from falling onto the cargo in the ship's hold, drain channels are provided along the perimeter and the cross joints of the hatch covers. Drain openings are arranged at the ends of channels to drain out the accumulated water and these openings are provided with efficient means of preventing ingress of water from outside, such as non-return valves or equivalent.

Fire hoses fitted to the channel drain pipes are not to be accepted as a permanent fixture to drain the water from the channels and act as a non-return valve. Fire hoses may be accepted only as a means of temporary repair. Specially designed scupper tubes may be accepted, provided these are standard supplies when the vessel was delivered and details of such fixtures have been reviewed by the Conarina technical office. Any future replacement of such scupper tubes must be that of the standard supply and not replaced with fire hoses. Ball type drain valves are one of the more commonly accepted automatic non-return drain valves.

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An alternate means of proving the tightness of hatch covers is the chalk test. A fairly new method of testing is ultrasonic tightness testing of hatch covers.

Hatch coaming and hatch cover cross joint drain arrangements have frequently been found ineffective due to accumulation of dirt or debris. Drains shall be examined and cleared as necessary at each hatch cover survey.

Wear and wastage repairs to steel hatch covers are based on maintaining tightness, the structural strength (as with deck plating), and the effectiveness of the securing arrangements via clips, lugs, cleats, etc. Where steel renewals are required, alignment control will probably be necessary to restore proper contact. This, in turn, may necessitate the use of heat straightening and additional stiffening.

If portable wooden hatch covers are fitted, they shall be examined, and worn, split, or weakened hatch boards renewed. Also, at least two good tarpaulins with necessary battens, cleats, wedges and cross-battens shall be verified for each hatch.

Hatch coaming corner deck connections should be examined for possible fractures of deck plating. Also the coamings, horizontal stiffeners and deck brackets should be examined for wastage or damage and effectively repaired.

REFERENCES:

CLASS – HULL SURVEY

ATTACHMENTS: No.

Kindest Regards,
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