Hatch Covers Related Cargowetness

One of the most frequently encountered damage items in general cargo and bulk carriers in maritime insurance is undoubtedly the issue of cargo wetness. Cargo quality/quantity related claims take the first place among the cargo claims (corresponding to 1/3 of the total P&I damages) followed by cargo wetness, however at the end of the day, the highest amount claims are occurred through cargo wetnesses by huge difference. Of course, the major cause of these defects is the deformation of the hatch covers.

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Upon graduation from Maritime Academy in 1990, Capt. Pamuk joined Zihni Shipping and worked more than 18 years as Master Mariner on board in various size of bulk carriers/tankers for 12 years, and as ISM Manager/Ship Operations Manager/General Manager at shore management for 6 years, respectively. In 2008, he joined as a Marine Surveyor to Kalimbassieris Maritime which is being acted as marine consultants and P&I correspondents of IG Clubs. In addition to overseeing P&I claims and correspondency for Clubs along with his regular loss prevention/damage related surveys, he also attended on various casualties in Turkey, assisted to salvage/towage issues, investigated pollutions and human injuries/loss of life. Then he acted as Head of P&I Department in same company from 2009 until his fall in with Türk P&I Sigorta family as Technical Manager, in the beginning of 2014.

In fact, the main discord between the Owners/Managers and even the crew is the difference of perception in the segregation between the seaworthiness attributed to the vessel by the Classification Society or any local authority and the cargoworthiness of the vessel. Considering a ship certified by the Authority and having a Load Line Certificate is actually "suitable for trade “is one of the biggest errors encountered.

Because the cargoworthiness is the subject that nearly all different authorities in maritime are unfamiliar in terms of the regulations and practices and thus the insurance companies are obliged to be the party who needs to perform the most detailed practices with this regard.

The most important reference here is of course whether the hatch covers tightness is sufficient or not. The tests that we basically request and prefer in connection thereto are the ultrasonic tightness tests. Because the data of all other known methods show different results, for example the chalk test is rather performed to see the correct alignment of the hatch covers after the repair or shipyard period. Hose test is mainly used to see the contact of rubber packing with retaining channels or hatch coaming tables, but ultimately ultrasonic testing is a test to see advanced level of ***sufficient compression and pressure*** rather than sealing, so we can say that it is the most reliable one for sure. It

should be kept in mind that international conventions, organizations and class authorities demand that the hatch covers of a vessel be not "watertight" but "weathertight".

However, these tests cannot be applied to all insured vessel as this is not possible in terms of time and logistics unfortunately and it is also true that the result of the one-time test (during P&I Condition Survey) is not likely to be the same when applied at other times when the ship continues to trade. For this reason, we would like to share some issues with you as advice / information about hatch covers related cargo wetness.

As an exception tarpaulin type hatch covers are available, even if Cargo holds are closed with hatch covers as known, and various measures can be taken with regard to tarpaulins which are the main protection material for cargo here. For example, the most common of these is the use of at least two layers of tarpaulins on the cover, placing the newer and robust one absolutely below, preferably holding of a set of unused tarpaulins on board and an additional wire lashing on the top tarpaulin layer.

The most important wetness points in known covers are statistically the rubber packings. Routine problems encountered are these rubber packings being bigger or smaller size for the retaining channels, they become dysfunctional due to over compression, misalignment with hatch coaming table due to structural deformations on the panel, detached parts or gaps between rubber packing, termination with end pieces, which are not suitable for the original corner ends and cut shorter than 1 meter.

In cases where permanent repair solutions to these problems are not performed instantly, the addition of small rubber packing known as “backing strips” is the most common way. It should be noted that these are only short-term and temporary solutions, however, it is recommended that additional packing not exceeding 5-10 mm should be placed between the existing packing and the retaining channels if an application is to be made.

It is not necessary to wait serious deformations only in order to renew rubber packings. Particularly, it is preferred that it is maximum 25% of the structural thickness of the packing, but any rubber packing which has been exposed to excessive compression and has collapsed by 50 percent must be renewed. It should not be forgotten that a hatch cover, settled as the result of over-compression, may not be moved. It should be noted that cargo wetness risks may present on cargo hold manhole entrances on the main deck, just like the hold cover rubber packings and compression loss of maximum 5 mm in these rubber packings is enough for replacement.

It is a well-known fact that some ship-owners perform foam application on the hatch covers. This application can be considered as an additional precautionary measurement when the sealing is applied on hatch covers, but it should never be considered a permanent solution. It should not be forgotten that in high seas and strong winds, these foams may become ineffective, may break, and may also block drain channels, especially in aft corner hatch coaming tables.

Another problem of wetness caused by the hatch cover mechanism is the structural problems arising from the hatch coaming tables on which the covers settle. Especially steel corrosion starting from the corner points may become pittings and progressive cracks and it is frequently encountered that crew members focusing only on hatch cover maintenance, overlook these areas.

One of the equipment for hatch cover leakage is the drain valves. The absence of balls in these channels or keeping the fire hose-style extensions short may increase the risk of wetness from this area. In addition, the absence of fire caps may also cause oxygen contact to continue in case of fire

inside the hold, increase the existing load / fire risk and also may affect cargo fumigations performed after loading operations.

Some of the movable hatch cover equipment other than fixed equipment are securing mechanisms such as quick acting cleats and securing pins. It is important to use the originals in the same size as much as possible, which ensures that the cover is aligned and it is particularly important that the number of side acting cleats and rubber washers is the same. It is important that the cross joint wedges; form a banana shape, are firmly flush with slots in which they are located or completely free, and that they do not cause not cause structural damages to the adjacent hatch cover panels' top plates.

It should be remembered that hatch covers are mechanisms that age faster than the vessel because they are frequently used operationally. For this reason, we believe that all ship-owners should implement a hatch cover maintenance program, whether or not they are under the control of any class organization or in an ISM system.