

Casualty Information

Information from DNV to the maritime industry No. 4-10 May 2010

Rudder trunk used for smuggling

Ship type: General cargo Size (GT): any Year built: any

Course of events

On more than one occasion, vessels have been arrested in port, after discovering cocaine (as much as 100–300 kg) and stowaways in the rudder trunk of these vessels. The void space has been accessed from sea level, by climbing up into the trunk from underneath.

Extent of damage

The vessels were detained in port and police authorities thoroughly interrogated the Master and crew. The ship's management team had to explain the reason for the void space and how it can be so easily accessible. The police became extra suspicious when it was found out that an air pipe continuously supplied the rudder trunk with fresh air, which gave the impression that the void space was custom made for smuggling of people.

Probable cause

The aft-ship design with open rudder trunks is a relatively old-fashioned design but still exists on many vessels. This opening is provided to allow the rudder stock of the old “dog leg” type to be able to move from side to side, when the ship is turning port or starboard.

With the creative imagination of a smuggler, the void space is large enough for a grown man to pass through and access the “platforms” higher up in the trunk. The space may be about 1.6 by 1.6 metres and with a height of about 2.5 metres. Cocaine, with or without accompanying smugglers/stowaways, can be hidden here during a sea voyage, for later pick-up in North America or Europe.

The design is made such that an air pipe is included to connect the rudder trunk with atmospheric air. The purpose is to equalise pressure built-up in the rudder trunk during rough seas (and not to provide fresh air for stowaways).

It is also experienced that vessels are designed with the “open and spacious” rudder trunk even if a concentric rudder stock is used. This is maybe to give the flexibility (for hull standard designs) of selecting different rudders and/or arranging for water access to the water lubricated neck bearing.

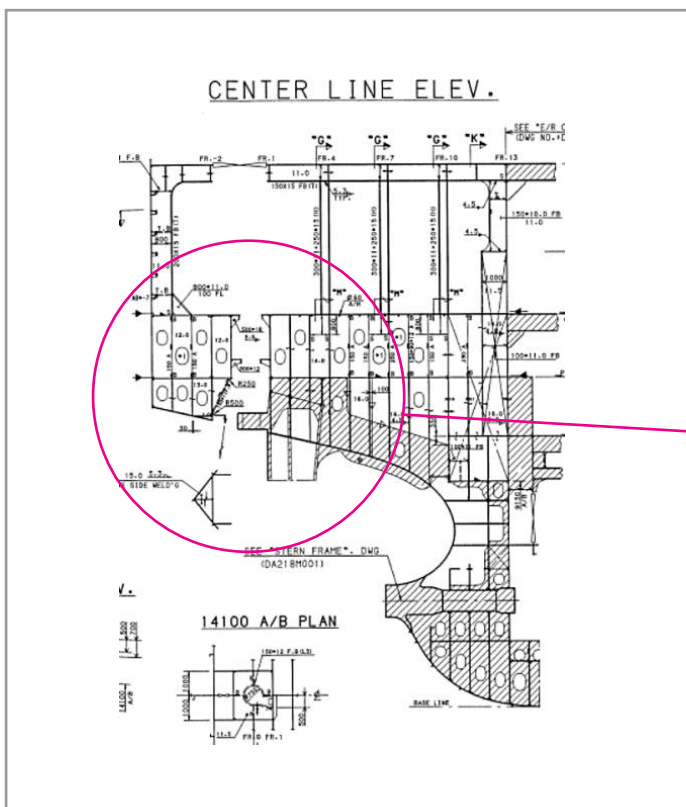


Fig.1: Example drawing of structure arrangements in the aft ship rudder trunk area.

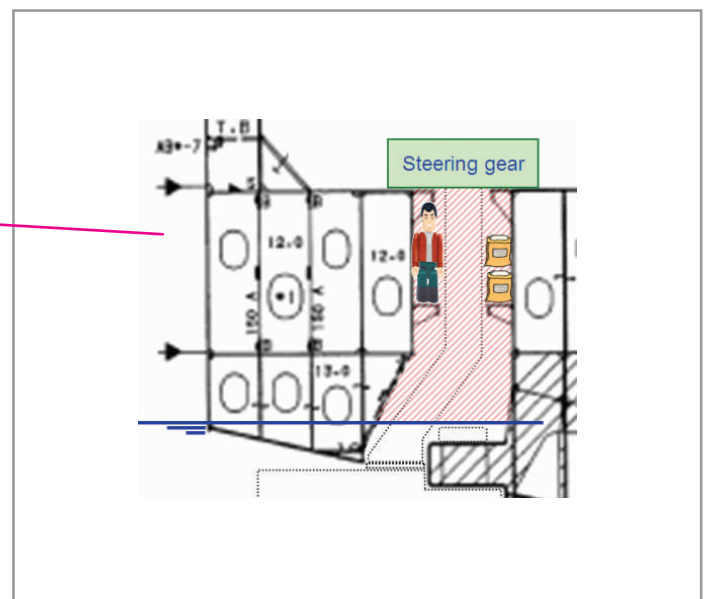


Fig.2: Illustration of the smuggler experience.

Lessons to be learned

- Shipowners with vessel having an open rudder trunk should consider means to prevent unauthorised access. This could be made by steel bars or grids covering larger openings and thereby put a stop to climbing access to get further up.
- Shipowners should consider mounting an inspection hatch in the steering gear room, with the possibility to look down into the rudder trunk. The purpose should be to be able to include the void space of the rudder trunk in the sometimes practiced “stowaway search” before departure. Before mounting such hatch, consult the Class surveyor to ensure compliance with watertight integrity and structural strength.
- Shipowners should consider any other void space available on board their ships as potential “smugglers’ cave” and take preventive actions to counteract illegal storage of drugs, merchants and/or people.
- Shipowners should consider seeking advice from their P&I Club, regarding stowaways and smuggling. In many cases the P&I Clubs have information material, suggestions for procedures and experience in risk assessment for these kinds of incidences.

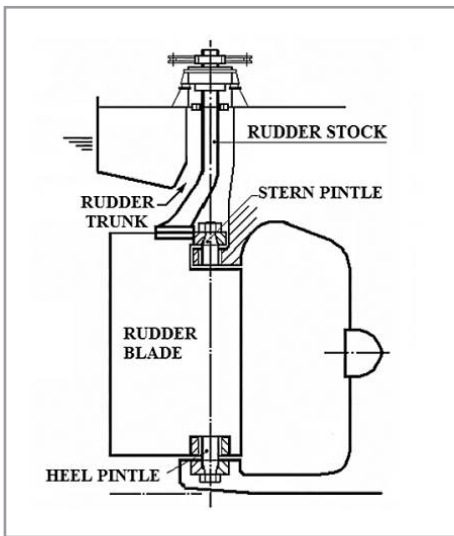


Fig.3: Principle illustration of a very old rudder trunk design with asymmetric rudder stock (dog leg type).

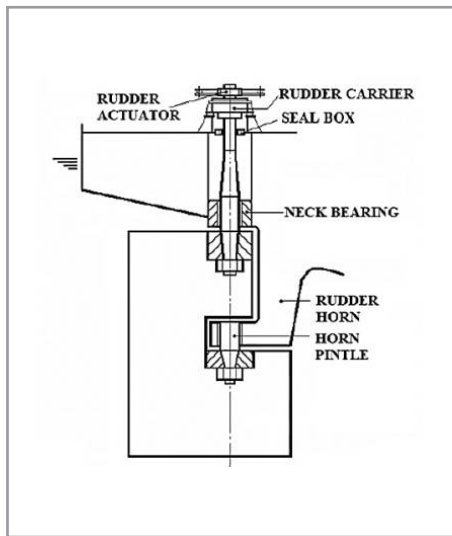


Fig.4: Principle illustration of a semi-spade rudder and the concentric rudder stock. This design gives no reason for an open accessible rudder trunk.



Fig.5: Picture from a port in Africa showing stowaways discovered in the rudder trunk (photo courtesy Zululand Observer).

A general reference is made to the Casualty Information published on the Internet:
<http://exchange.dnv.com/ServiceExperience/CasualtyInformation/CasualtyInfoTable.asp>

We welcome your thoughts!

Casualty Information is published by Det Norske Veritas, Classification Support.

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The purpose of *Casualty Information* is to provide the maritime industry with 'lessons to be learned' from incidents of ship damage and more serious accidents. In this way, Det Norske Veritas AS hopes to contribute to the

prevention of similar occurrences in the future. The information included is not necessarily restricted to cover ships classed with DNV and is presented, without obligation, for information purposes only.

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