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The use of CCTV cameras on ships

A number of visually recorded and well publicised maritime incidents together with anecdotal evidence of the value of such recordings when seeking to investigate and determine facts, has led us to consider the use of CCTV cameras on board ships. In particular the recordings obtained may help deal with the incidents occurring, or alleged to have occurred, during berthing operations.

CCTV footage can simplify such investigations as well as enhance the credence of any findings, although it must, of course, be recognised that such recordings may establish facts which are detrimental or embarrassing to Members' case. The benefit of knowing the weakness of a case at an early stage can however be advantageous.

At present CCTV is more commonly used on large passenger ships, cruise liners and ferries and it's purpose is predominantly for security issues and monitoring restricted areas. However, it can also be used on board cargo ships for:

- Man overboard detection
- Monitoring the ship's navigation, including close quarters manoeuvring and berthing / unberthing operations
- Monitoring cargo operations
- Accident and incident investigation

There are, however, potential issues with onboard CCTV cameras, such as:

- Local regulations or military sensitivities may preclude the use of photographic monitoring from merchant ships in certain areas
- Camera alignment – a protocol for testing and re-calibration is essential to ensure the required coverage is recorded
- Camera maintenance requirements – automatic wiper/washer systems are preferable to manual cleaning
- Recording/storage of data – regular testing to ensure data is being recorded and retained for the required period of time in accordance with the company data retention policy.
- Possible data protection issues, which also may drive the company data retention policy. Key issues to consider include how this data recording and retention applies in different jurisdictions, especially footage of other vessels captured alongside a berth
- Synchronisation of camera clocks with other systems, such as GPS time on the VDR which is generally the master clock
- Cameras need to be of a recognised marine standard and type approved to ensure performance and vibration, humidity, temperature, corrosion resistance, internet protocol (IP) and electromagnetic compatibility (EMC) requirements are met
- Possible cyber security considerations if CCTV footage can be downloaded or accessed remotely, given system integration and connectivity between shore and ship

Ships will typically have a CCTV display console strategically placed on the bridge. A good marine camera system will require substantial investment, with several cameras placed along the bridge wings and ship side, taking into account the hull shape, as well as the accommodation area (internally and externally) and mooring stations.

The use of onboard CCTV cameras needs to be carefully considered in terms of the ship's trading area and certainly only used when permitted. Deployment should only take place after a technical review of the suitability of the equipment to be used has been successfully completed.

Provided these criteria are met the benefit of clear, indisputable and contemporaneous evidence of the events leading up to and during an incident will be of significant value in any subsequent investigation and claims handling process.

The following are representative samples of images taken from a ship's CCTV cameras.