



PPVR –Pollution Prevention Video Recording

The last decade saw a drastic change in the tolerance of various authorities to intentional pollution by ships.

If in the 60th and 70th pumping of bilge waters directly over the side was considered the norm, such incidents today are not tolerated and end in harsh verdicts. Jail sentences to personnel involved (Captains and Ch. Engineers) and extreme financial penalties to the owners are becoming common and we all heard about them. The owners of the container ship MSC Elena, for example, were fined USD 10M for pumping out sludge waters through a so called “magic pipe” that was installed by the crew to bypass pollution prevention equipment.

Naturally, owners started looking for means to ensure that such incidents will not happen on their ships.

As an answer to that, Totem-Plus have developed the PPVR, which stands for Pollution Prevention Video Recording System. The PPVR comes with several video cameras, located over pollution - sensitive areas in the machinery spaces, and a PC computer (located on bridge) that records the video data for up to one year. The crew has no access to the data, which is protected by the system, and the online monitoring is done from the bridge or from the Captain’s cabin by the PC monitor.

Motion detection algorithms are applied to the video frames, and the system will alarm on such motion or on losing connection to the cameras. Consequently the bridge will be informed on any engineer going to these

areas, or trying to disconnect the camera of this area.

Keeping history for one year allows replay of past incidents, in fast forward if necessary. Each frame recorded has a specific time stamp, showing date & time (UTC), ship name & camera number. The recorded data can demonstrate to authorities (e.g. USCG) that the ship’s personnel have not compromised or by-passed the pollution prevention equipment, and that the owners are keen on preventing such occurrences.