



ANTI-PIRACY

doesn't just concern the music industry

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www.arxmouldings.co.uk/evictor



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ANTI-PIRACY

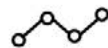
The earliest documented instance of piracy took place 3500 years ago in the 14th century BC when a group of ocean raiders called the Sea Peoples attacked ships of the Mediterranean and Aegean civilisations. Seaborne piracy remains a significant issue in the 21st century, with an estimated loss of US\$16 billion per year according to some sources.

In 2019, according to the ICC International Maritime Bureau (IMB) report on Piracy and Armed robbery against ships, there were 162 actual and attempted attacks on vessels. Chemical tankers, bulk carriers, crude oil tankers and container ships are the most likely to come under attack, accounting for more than 75% of all the attacks reported globally. Although the total number of attacks was down from previous years, an unprecedented number of crew were kidnapped from their vessels with 134 taken across 19 separate incidents. Many others were threatened, injured and in one instance the attack led to a loss of life.

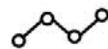
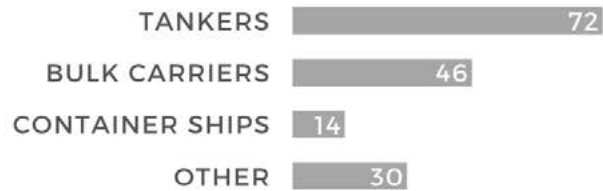
PIRACY IN FIGURES



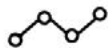
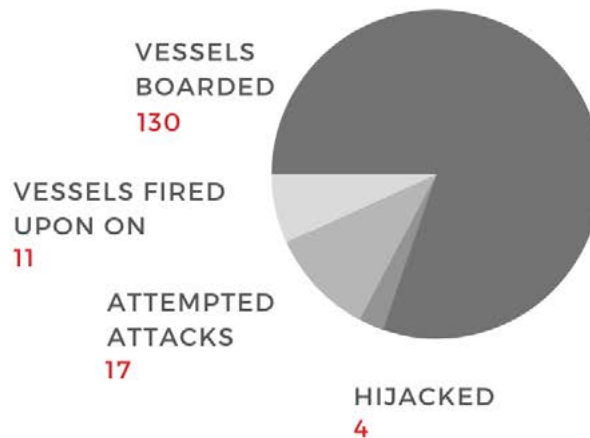
REPORTED TO
THE IMB PIRACY
REPORTING CENTRE



TYPE OF VESSELS ATTACKED



TYPE OF ATTACKS



TYPES OF VIOLENCE TO CREW





VESSEL HARDENING

Security threats can be split into two main categories:

- + Physical
- + Virtual

Virtual attacks are far more difficult to detect and cyber security training and implementation must form an integral part of any vessel's security programme.

Physical attacks; as stated above, are still a regular occurrence even in the 21st century.

The modern pirate typically uses small motorboats to attack and board ships taking advantage of the relatively low crew numbers on most modern cargo vessels and transport ships. To protect ships from pirate attacks, some nations use their naval forces to protect private vessels, others use armed security personnel, however other forms of defence exist and can prove extremely effective in the battle against maritime piracy in this modern age.



VESSEL HARDENING

The Oil Companies International Marine Forum (OCIMF), who consults with the International Maritime Organisation (IMO) refers to Vessel hardening as “the physical measures taken to improve a vessel’s security integrity.”

The OCIMF splits the first layer of defence into 2 categories – Managing legitimate visitors during normal operations and preventing unauthorised access by people who may wish to board a vessel for criminal activity. It is this second category – the prevention of piracy – where Knowsley SK can help, both whilst at sea or whilst in port or at anchor.

The OCIMF Guidelines to Harden Vessels (First Edition 2018) outlines several physical options to help prevent piracy including Razor Wire, Spikes etc and section 4.1.5 outlines Water and Foam Cannon Systems to deter or delay intruders trying to board a vessel. The guidelines state “....systems include water cannons that deliver water in a sweeping arc, or spray rails that create a curtain of water over the vessel’s side.”

The BMP5 – Best Management Practices to Deter Piracy and Enhance Maritime Security in the Red Sea, Gulf of Aden, Indian Ocean and Arabian Sea (version 5, June 2018) refers to the use of water spray monitors as effective in deterring or preventing intruders from illegally boarding a vessel.



EVICTOR

The Evictor fromis a direct development from the renowned and respected Knowsley SK Oscilla-ting Fire Fighting Monitor which has been providing fire safety globally for over 25 years. Following a direct re-quest from the shipping community and combining the unique Fire Fighting techniques and manufacturing capabilities of Knowsley SK, the Evictor meets the specific requirements from the commercial maritime industry in their fight against piracy. Utilising the ships fire main or other high capacity water supply, the Evictor provides an effective water shield.





EVICTOR

The nozzle design creates a water shield with a tremendous visual presence acting as a deterrent to any approaching pirate vessel. For those that venture closer the unhospitable atmosphere created by the water mist and sheer physical force of water will deter even the most determined pirate. The Evictor's standalone design ensures that once installed and connected to the ships water supply it will function without the need for ship personnel to be present, further ensuring their safety as this allows all crew to retreat to a safe area, as recommended by the OCIMF in their 2018 Guidelines to Harden Vessels.



The BMP5 and OCIMF guidelines both recommend water curtains to cover a larger area, the addition of baffle plates in front of hose nozzles to improve water coverage, or systems delivering water in an arc pattern to protect larger areas. The unique EVICTOR design accomplishes all 3 of the above in one unit, whilst being operated from a safe distance in full compliance of the guidelines outlined by OCIMF and in BMP5. Already installed and in operation on over 60 vessels operating globally, the EVICTOR is a proven effective deterrent to piracy and a perfect addition to any ship hardening programme.



EVICTOR IN DETAIL

EVICTOR is available in two flow capacities, base monitor and frame are common to both units but the stainless-steel twin 70° nozzles which operate in a 90° arc nozzles are available in high and medium flow options.

The high and medium flow options will enable the operator to select the correct EVICTOR to the relevant capacity of the ships water supply. As the high and medium flow nozzle tubes are interchangeable this will give the operator future flexibility if ever the EVICTOR is located to an alternative vessel with higher or lower water supply capacity.





EVICTOR IN DETAIL

The Evictor uses a standard Knowsley SK bronze Pelton wheel, which takes firewater feed from the monitor inlet stand driving the oscillation. The Pelton wheel is very effective using as little as 25lpm of fire water at 7 bar g. A Y-type strainer with flushing valve is fitted to prevent blockage of the Pelton wheel water feed nozzle to ensure years of problem free service.

Material selection is of vital importance in marine environments, the Evictor is constructed from corrosion resistant materials with this in mind.

- + Monitor Body: Gunmetal to BSEN 1982 CC492K-GS
- + Pelton Wheel & Gearbox: Bronze
- + Accessories: 316 Stainless steel

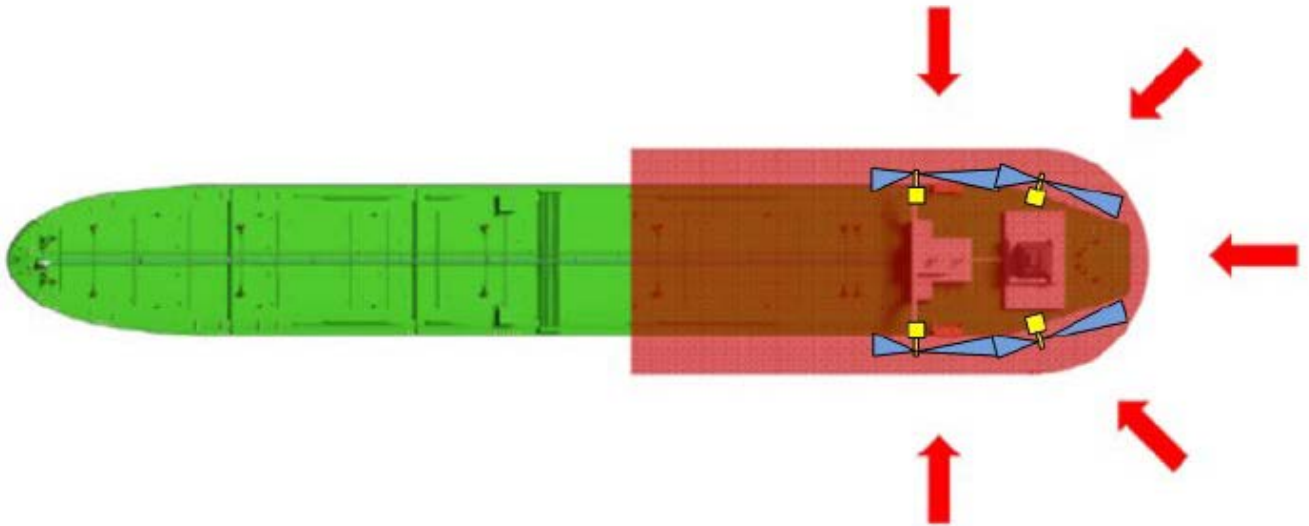




PLACEMENT

Recommended positions of Evictor at the stern of QMax Vessels.

Typically four Evictor are fitted for transit; one additional unit may be used to cover the stern when the ship is stationary awaiting entry into the port.





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