



Royal Marines

Selected an environmental approach

The Dutch population keeps their feet dry by simply ensuring that the water remains behind the dike

But ...

The Royal Marines go even further...

She takes up her responsibility as seriously as was the case with the disaster which took place in 1953.

The sea must be given the same treatment as you would give your own land

Oil/Water Separation

This responsibility is undertaken by the Royal Marines and was taken up as an environmental directive and resulted in amongst others, the treatment of oil contaminated discharged water (so called bilge and pressure water) discharged from frigates and submarines of the Royal Marines. This waste water is collected in storage tanks in Den Helder.



In order to purify this water the very best technology was selected, in fact through membrane technology. Accordingly pilot tests were carried out on location.

Eventually the first section was realised. But just as with the erection of the dikes, this also appeared to be a learning process. During diverse testing projects it was discovered that the oil/tar contents present in the water was the cause of the breakdown of the biological life. A second (added section) is medicated and utilised.



Waste water treatment on board ships

Prior to the legislation regarding drainage at sea (NATO) the Royal Marines started tests in 2005 using a membrane bio reactor on board the transport ship HMS Rotterdam.



Results

In comparison with a conventional oil/water separation it would appear that the MBR is able to attain a much higher removal output. Next in line the installation is more compact.

The MBR technology would appear to be the most suitable option to purify the drainage of the wastewater found on board the ships. Hereby the drainage water objective which will be implemented in 2010/2015 will be achieved.



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