

Efficient and environmentally friendly tank cleaning

A successful tank cleaning operation at sea, applying revolutionary environmentally friendly and economical technology, was recently developed by Global Concept GmbH in Brake, Germany. The company offers an alternative and innovative tank cleaning method which separates oil and water while producing no hazardous residues.

The normal tank cleaning processes using chemicals produces a substantial quantity of the world's carbon dioxide in the disposal of mineral oil and the resulting residues while a significant quantity of raw material resources is wasted which could otherwise be used to meet energy demands. In addition to being environmentally friendly, the process, called Cytoclean, dramatically reduces owner/charterers decontamination costs.

Contrary to all traditional processes, the Cytoclean process does not combat the mineral oil itself, but the adhesion, which is one of the main problems in cleaning up mineral oil. By using this process ships can carry out decontamination of their tanks while at sea thereby avoiding the cost and loss of earnings of having the work done at a shipyard. Global Concept has assembled a team especially for decontamination measures at sea and which is available globally 365 days a year.

Initially, the company's consultants receive photos and documentation from the ship owner allowing a detailed insight into necessary steps to be taken and equipment required by the decontamination team. The team subsequently board the vessel at the next port or anchorage where material and equipment are delivered by barge and the vessel then proceeds to its next destination.

After setting up the necessary equipment, the contaminated tank walls are treated with Cytoclean taking care to coat the adhering oil completely. After an hour the oil becomes dislodged and the process is completed by gently spraying the tank surfaces with any kind of water available at low pressure. The resulting oil/water mixture is then pumped into empty containers



This photo gives some idea of what a contaminated tank looks like



Clean tanks after only one cleansing cycle with the Cytoclean process

stowed on deck.

After a very short time, the separation of oil and water inside the containers can be observed and shows that the water does not contain any oil and can be recycled without additional and cost intensive treatment such as separators. Because the structure of the recaptured oil has not been damaged by Cytoclean, it can be used as bunker or as a source of energy without further treatment.

In times of high energy costs, ever increasing pollution of the environment and rising costs of hazardous waste

disposal, the Cytoclean process provides an impressive and convincing way to clean ships tanks in an environmental friendly and cost effective manner.

The Cytoclean process became available in 2008 and has already been carried out on several ships. Six vessels belonging to German shipowners Beluga, Ahrenkiel and Briese have so far used this process of which five were carried out during voyages in the Mediterranean Sea. One vessel had the work done at a shipyard when the crew could not finalise the job and the decontamination team was called in.