

# Robotic Cleaning



## Efficient systems. Safe management.

In an industrial site, the importance of safely maintaining your equipment and facilities goes without saying. While manual labour was the go-to solution of the past, automated mechanical technology and robotic cleaning are the preferred solution, particularly for cleaning industrial tanks or as a part of a site's sludge management planning. Not only is it often a more cost-effective and time-efficient solution, but it minimises personnel exposure and eliminates or reduces the need for manned entry.

**INDUSTRIAL SERVICES**

## ROBOTIC CLEANING

There are many options available in robotic cleaning, including manway cannons, hydraulic dozers, centrifuges and specialised pumps. However, when required, all manned entry is carried out under strict confined space and inert entry procedures, using the latest in safety and breathing apparatus.

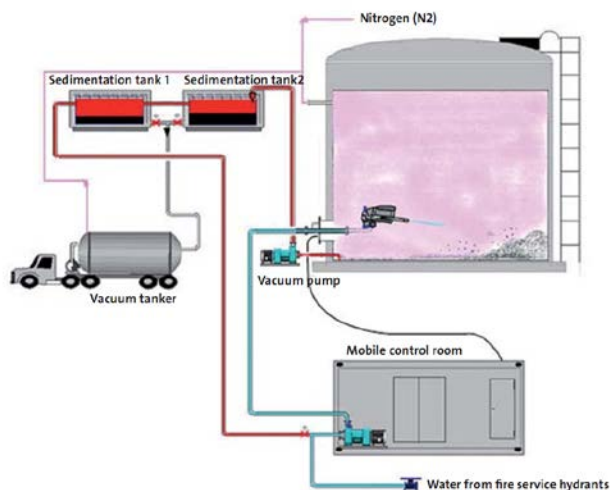
## ROBOTIC TANK CLEANING SOLUTIONS

**Manway Cannons:** The Manway Cannon method developed by Veolia is the safest, most environmentally friendly solution for the internal cleaning of storage or crude oil tanks of any size.



### BENEFITS

- **Increased workplace safety** – Minimising personnel exposure and reducing the need for manned entry with internal cleaning.
- **Downtime is minimised** - The latest in technology and our highly trained operators deliver improved cleaning times.
- **Improved efficiency** - Keeping equipment clean and contaminant free through the latest technology ensures optimal operating conditions.



The Manway Cannon forms a unit consisting of a cleaning nozzle, infrared lenses, video camera and searchlight, mounted in a cleaning opening of the tank. Controlled from a mobile control room with a self sufficient energy supply, the flexible cleaning cannon can flush out any point in the tank with water or some other medium. A hydraulic pump generates the required pressure.

**Hydro Dozer:** The dozer is a hydraulic driven small dozer which can be easily disassembled and used in a number of applications. This robotic application, with remote control station, allows the tank to remain online whilst sludge removal occurs and is ideal for removing slurry and bulk product inside a tank, open top tank or pond area; is very effective in a submerged state; and negates the need for manned entry and human exposure to sludge. Together with a progressive cavity pump, the Hydro Dozer is capable of harvesting up to 90m<sup>3</sup>/hr. of sludge.

**Centrifuge:** The state-of-the-art centrifuge application is generally applied to the recovery of oil from crude oil tanks. The centrifuge works by spinning a stainless steel drum whilst simultaneously introducing the contaminated oil, and within this spinning, gravity is increased 100 times. Aided by the possible heat and flocculants, the oil and water become separated.

Want to learn more about how we can support your business goals through Robotic Cleaning, please contact us on:

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