M-I SWACO
A Schlumberger Company

Premier Oil Reduces Total Pit-Cleaning Time by 90%, Slop Waste Generation by 56% Offshore UK

ATC automatic tank-cleaning technology improves efficiency while reducing personnel confined-space time, North Sea

CHALLENGE

Reduce personnel confined-space time, overall pit-cleaning time, and volume of wastewater created while cleaning the tanks of a semisubmersible rig in the UK sector of the North Sea.

SOLUTION

Deploy the ATC† automatic tank-cleaning technology.

RESULTS

- Decreased slop waste generated by 56%.
- Reduced confined-space entry time logged.
- Reduced total pit-cleaning time by 90%.

Reduce HSE risk and time requirements for tank cleaning

For performing pit cleaning onboard the *Ocean Valiant* semisubmersible rig in the UK sector of the North Sea, Premier Oil has historically used traditional tank-cleaning methods, including high-pressure washers and vacuum units to clean the rig tanks between changing drilling fluids. This process is not only time consuming but also heavily relies on personnel confined-space time and generates large volumes of waste washwater, which then have to be properly disposed of at a significant expense.

Comparing the slug pit before (top) and after (bottom) cleaning demonstrates that the ATC technology delivered a brine-quality cleaning job.

Deploy automatic solution for tank cleaning

After consulting with Premier Oil about its objectives, M-I SWACO recommended using the ATC automatic tank-cleaning technology, which comprises a skid-mounted washwater recycling unit and programmable tank-cleaning machines (TCMs) that can be deployed on hard-to-reach areas. The technology requires only 7 m^3 [44 bbl] of washwater, which is continuously cleaned and recycled throughout the cleaning process for reduced wastewater generation.

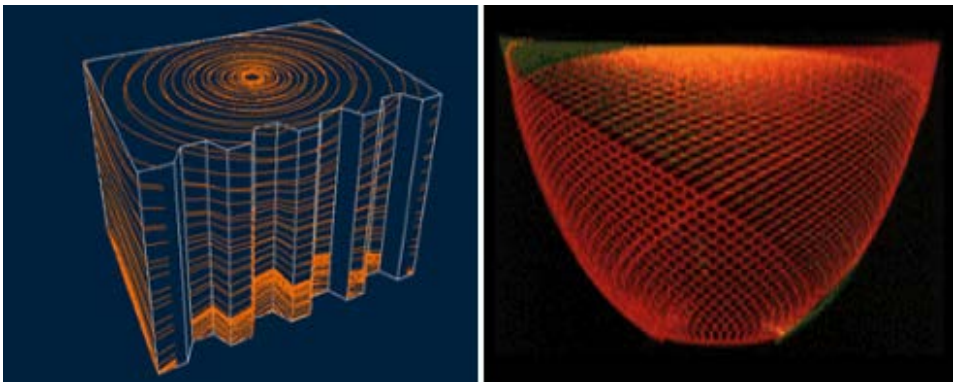
As a result, the technology delivers significant reductions in personnel confined-space time, overall pit-cleaning time, and the volume of wastewater and slop created compared with the traditional methods used in past pit-cleaning operations.

Significantly reduced slop waste and pit-cleaning time without compromising HSE quality

ATC technology was rigged up and cleaned six pits in 56 hours, representing a 90% reduction in cleaning time compared with previous operations using traditional tank-cleaning methods. Only one hour of confined-space time was necessary to place the TCMs in one of the tanks. A fixed volume of 7 m^3 of washwater with 1% surfactant was used during the cleaning job. By deploying the ATC technology, Premier Oil achieved a 56% reduction in wastewater generation compared with the cleaning method previously used.

	Traditional Cleaning Method	ATC Technology Cleaning Method	Difference
Generated waste	16 m^3	7 m^3	–56%
Total pit-cleaning time	216 h	21 h	–90%

ATC technology generated 56% less waste and reduced total pit-cleaning time by 90% while requiring less confined-space time by personnel.



The TCMs can be programmed to target hard-to-reach areas to break down and remove built-up solids in the tank bottoms.

miswaco.com/ATC

MI SWACO
A Schlumberger Company