



Case Study:

(1) Petrobel (Egypt)

This was one of the critical litmus tests for the TTS process which was applied on crude oil tank #15, at Feiran site, affiliated to Belayim Petroleum Company (Petrobel).

The tank specifications were as follows:

Capacity	35.000m ³
Diameter	48 m
Height	16.5 m
Roof	Floating



This tank was destroyed during the Egyptian–Israeli war in 1967. The contents of the tank were burnt for 4 days and it was badly damaged by guns and missiles attack. It was being used as a storage tank for sludge removed manually from other tanks for many years (1967-1987). During the span of TTS operation 12,000 m³ of sludge was recovered and dissolved in different batches of fresh crude oil without changing the API specification.

(2) Tank#5 Petrobel

This is one of the biggest tanks at Abuoreedes in Fieran Terminal which project was recently completed in May 2008. Sludge to the tune of 1500 m³ had accumulated in the tank.

The tank specifications are as follows:

Tank number	5
Capacity	35.000m ³
Diameter	48 m
Height	17 m
Roof	Floating



After the application of the TTS-Process about 1300 m³ of oil was recovered (8200 bbl) which is almost 90% recovery of crude oil from sludge establishing our method as a commercial success.



(3) AL-Furat Petroleum Company (Syria)

Another major success was in Syria at Al-Furat Petroleum Company at Banias terminal. The tank had not been cleaned for more than 20 years.

The tank specifications were as follows:

Tank number	225
Capacity	40.000 m ³
Diameter	50 m
Height	16 m
Roof	Floating



The tank was cleaned by the same standard TTS-Process as used in the Petrobel case above. About 3500 m of oil was recovered which was of a quality consistent with accepted specifications of crude oil.

Petromaint API Skimmer – Feiran, Petrobel
Tank Battery 10 -1 Flotation unit
Desludging and cleaning for Petroco Separator
Desludging and cleaning of Raco Heat Exchangers 200 – HA – 101, E – H
Desludging and cleaning of El – Qura API
Desludging and cleaning of Raco Separator [1st Stage]
Desludging and cleaning of Raco Separator [2nd Stage]
Desludging and cleaning of Test Separator CL -13
Desludging and cleaning of Tank 27 A / R for Petrobel
Cleaning of Heat Treater at Abou Rezuks 10 -1 / Petrobel
Desludging and cleaning for Flotation C - Petrobel
Desludging and cleaning of the Drain Loop of Tank No.9 Petrobel





The TTS thermo-chemical method has been applied at numerous petrochemical companies as illustrated in figure 1 below. The efficiency and success of the method can be understood from the amount of crude oil recovered at various sites.

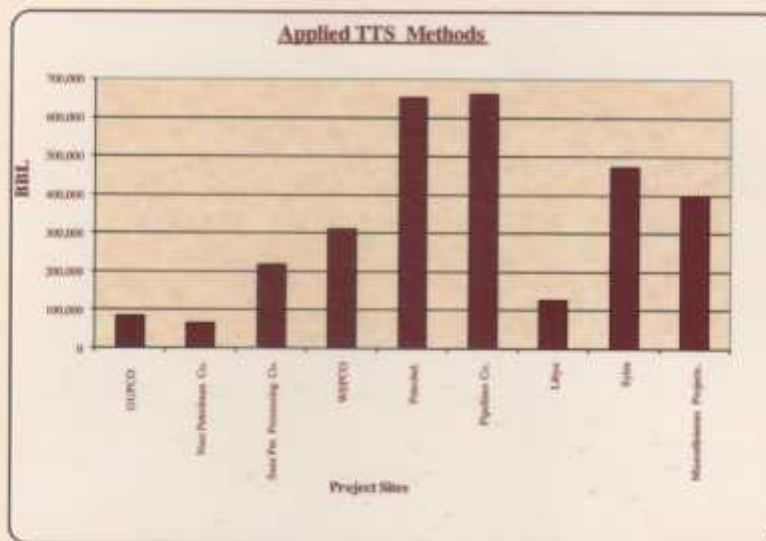


Figure 1: Some of the notable Projects undertaken by TTS

The TTS-Success story is a global one as our method and process is not limited to oil tanks alone but can be applied to a variety of equipment in the oil and gas industry such as vessels and pipelines as evident from

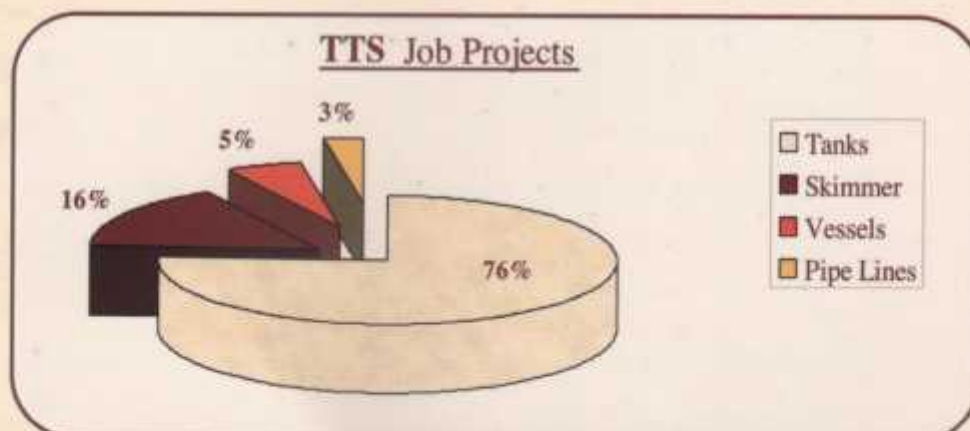


Figure2: Variety of projects handled by TTS