nuova saimar srl
BONIFICHE E MANUTENZIONI INDUSTRIALI

TANKS CLEANING WITH COW SYSTEM

Exctept from the water contained in it, the most of the sludges that accumulates in the large crude oil tanks is composed of materials that can be reused.
Taiho industries has developed a completely new system for cleaning sludges from the interior of these large oil tanks.
The Taiho Crude Oil Washing System, or Cows, offers great savings in safety, time, and manpower.

The dissolution and removal of the accumulated sludges is one of the most perplexing and time consuming of problems.

Besides the amount of downtime required to clean a crude oil tank, conventional cleaning methods also mean that very little oil is recovered from sludges, and this creates both wastage and environmental problems.

Taiho industries introduces a new era in this type of works with a single systems resolve all problems of manpower, time, safety, and effective utilisation of resources connected with the dissolving and cleaning of a crude oil sludges.
This is the Taiho Cow System.

With the Taiho Cow System the tank is filled with inert gas.
Hartened sludges accumulated in the tank in then dissolved with wash oil from the taiho jet washers.
As the sludge is dissolved it goes to another tank via the t sludge injector system.
Powerful jet of hot water than remove any oil still remaining.

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The operation takes only about 30 days to complete and because noone needs enter the tank during the process it requires very little manpower and provides a high degree of safety.

Practically all the oil contained in the accumulated sludges is collected, which contributes gratelly to the reutilisation of resources

Now let's take a look at the steps involved with the taiho crude oil washing system

First, the necessary number of deck supports are removed from the tank to be cleaned and the taiho jet washers is installed.

The taiho sludge injectors system is then installed beside the tank to be cleaned.

The system is decentralized one in each oil transfer and recovery operations proceed automatically.

Next to the injectors system, its wash oil supply pump is installed.

Piping is laid to connect all the equipments in the system.

A liquid nitrogen tank truck and an evaporator will supply inert gas for the tank interior .

This operation can also be performed with different types of inert gas generators.

Next, a system is installed to monitor the levels of oxygen and hydrocarbons inside the tank.

This monitoring system records the composition of atmosphered gases in

the interior, and gives an alarm should something untort take place.

With the cleaning equipment in place the actual cleaning operation begins with the inert gas being introduced into the tank.
The inert gas is used to make sure that static electricity inside the tank will not cause an explosion.

To ensure complete safety the atmosphered gasses inside the tank are held to less than 8% oxygen content.

With the inert gas in place the taiho jet washers go into action breaking down, dissolving, and washing away sludges accumulations with high pressure wash oil.

The jet water nozzles moves automatically to ensure that the entire interior is cleaned there are no deadspots.

The dissolved sludges is recovered by the taiho sludge ejector system and sent back to the wash oil supply tank.

The ejector system uses vacuum pumps whose negative pressure quickly sucks oil and sludges from the drain nozzles of the tank being cleaned and sends it on its way to the wash oil tank.

Once the oil has been drained from the tank being cleaned, the tank is rinsed with hot water from the Jet Washers.

The ejector system sends the mixture of oil and water now obtained to a separator system for recovery of the oil.

The sequence of operations from the oil wash to the hot water rinse form the most significant feature of the taiho cow system.

The final cleaning takes place once the tank has been opened and vented.
The entire process takes about 30 days a dramatic saving in time.

Here are some of the reasons why the taiho cow system the world's first oil storage tanck cleaning system is unique:

- The entire operation takes place without anyone having to enter the tank while cleaning is going on.
- This means that the process is completely safe.
- The fact that the operation takes place in an inert gas environment also means that there is no danger of static electricity causing an explosion.
- The link to the cleaning process is not varying. no matter how much sludges are accumulated in the tank.

This provides great advantages in general costs and tank operations efficiency.
The system provides a dramatic increase in both the quantity and quality of the oil recovered from sludge and wax.

As you can see there is practically no oil in the sludge remaining inside the tank.
The Taiho Cow system offers a degree of efficiency and economy in the utilisation of natural resources, impossible with conventional tank cleaning methods.

The Taiho Cow system also responds to the concerns of more company in recent years, of personal safety and environmental protections

Since the hot water wash over eliminate sludge there is no harmful influence on the bodies of workers inside the tank.

The environment is protected from air pollution. The emission of hydrocarbon gasses is minimized during the cleaning process.

In this process the sludges is not disposed off, and petroleum products are extracted from the water used in cleaning, leading to reduction in industrial waste.

The taiho cow system represents a new era in the oil tank cleaning, preserving personal safety, avoiding pollution, and providing highly efficient recycling of resources.

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