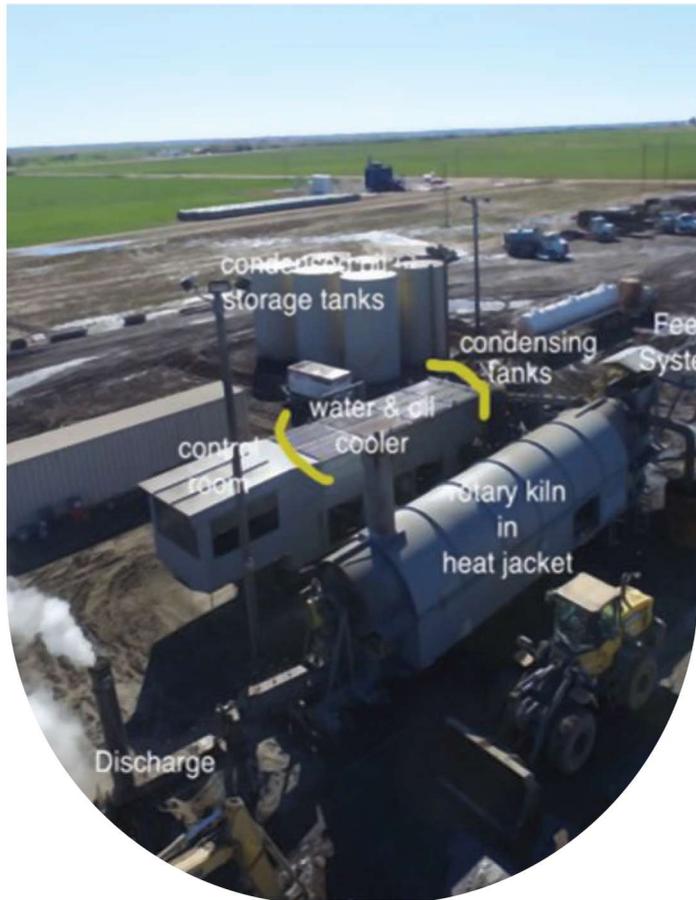


OILY SLUDGE MANAGEMENT

ON-SITE LAGOON & PIT DESLUDGING SYSTEM AND ROUTINE SLUDGE CONTROL FOR CRUDE OIL STORAGE



INNOVATIVE INTERNAL DESIGN

Specifically for treatment of oily sludge wastes, our system is designed for on-site operation in remote locations.



SAFE & SIMPLE OPERATION

Safe and simple to operate and maintain. All maintenance items are easily accessible. Zone I rated.



FAST, HEAVY DUTY

Fast processing rates, up to 10 - 15 cubic metres per hour of oily sludge waste. Heavy duty, capable for extended operation periods.



MINIMIZE WASTE

Reduces sediment in recovered oil to less than 0.5%. Maximises hydrocarbon recovery and minimizing waste for off-site disposal.



SYSTEM REQUIREMENTS FOR ON-SITE LAGOON & PIT DESLUDGING SYSTEM

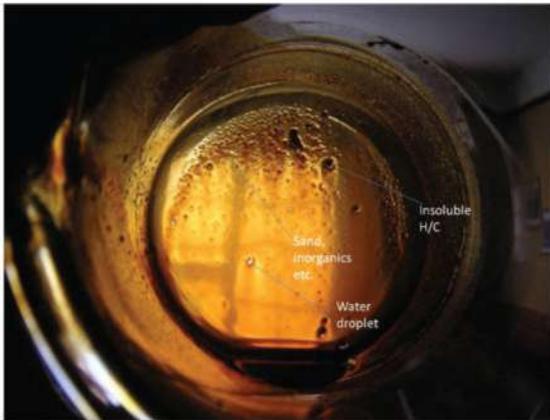
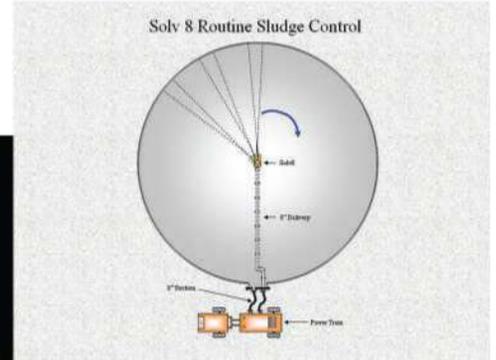
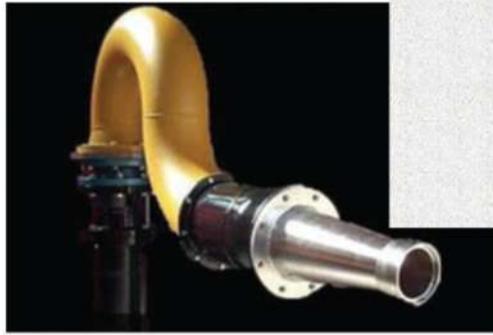
IESB's complete package includes:

- Complete set of sludge removal equipment
- Complete set of Oil Recovery equipment
- Complete set of Water Treatment equipment
- Complete set of Thermal Solids Treatment equipment
- All interconnecting piping and cables.
- All chemicals and fuels as required.
- Holding and treatment tanks – 30-80m³ capacity each.
- Miscellaneous storage tanks for cutter stock, gasoil, demineralised water and chemicals as required.
- Skid for the collection of solid residue from the treatment processes.
- Vacuum trucks to transfer sludge from the pit to the treatment site.
- Personnel transport to and from site.
- Technicians and operators for the safe and efficient operation of all equipment on site.
- Appropriate PPE for all site personnel as well as safety and emergency response equipment.
- Portable offices, stores and mess facilities.
- Steam supply (3,000kg per hour @ 10 bar pressure @ 180°C).
- Electricity supply (500 kVA portable generator).
- Compressed air supply (350 cfm).
- Accommodation and food for all IESB personnel.
- Testing and approval, in a timely manner, of recovered oil, recovered water and solid residue prior to transfer or disposal to designated locations.
- 45 Ton crane for the equipment for the duration of the site set up, relocation of equipment and demobilization of the site.
- Electric light towers.
- Scaffolding as required.

ROUTINE SLUDGE CONTROL FOR CRUDE OIL STORAGE

A device for directing a submerged jet of crude oil across a pre-programmed area of the bottom of a crude oil storage tank. The jet of crude oil, periodically introduced, is designed to dissolve and re-suspend sludge which has deposited during storage.

A tank fitted with the Solv8 sludge mitigation system can be maintained in a sludge-free condition throughout the storage cycle.



The topographic survey shown here illustrates sludge deposition in a crude oil tank where no shell mounted mixers have been fitted. Sludge deposition is predictably fairly even across the entire tank floor. The position at which the inlet and export lines penetrate the tank shell reveals significantly lower sludge deposition at this point.

Where the oil lines enter and leave the tank, there is periodic turbulence as the tank is filled and emptied. The energy created by the filling and emptying process has the effect of resolubilising the sludge at this point into the fresh oil – we know this phenomenon as Sludge Resuspension.

It follows that if we could direct this turbulent energy across the entire tank floor, then all of the sludge on the floor of the tank could be resuspended into the overhead oil.

Regular resuspension or Routine Sludge Control, will maintain your tank in a sludge free condition throughout the entire storage cycle.

BENEFITS

- A tank guaranteed clean to hot-work standard at the end of the storage period.
- Tank cleaning becomes a predictable maintenance expense rather than a lottery at the end of the storage cycle.
- Sludge deposition will be monitored on an annual basis throughout the storage period (topographic survey).
- Complies with the principals of IPC (Integrated Pollution Control), which while not yet applied to the oil industry, can be only a matter of time in coming.
- Life Cycle cost benefits in terms of material loss control
- Significantly reduced costs for tank cleaning and sludge treatment/disposal.
- Reduced Environmental risk.
- Improved Health and Safety for personnel in preparing the tank for internal inspection.
- Hazardous waste minimisation.
- Tank downtime reduced significantly during maintenance outage.
- 100% tank utilisation throughout the storage period.
- Improved crude oil dewatering.
- Eliminate the problems associated with 'Boil-over' should a fire occur.
- Efficient product homogenisation.
- Minimise internal corrosion.
- Allows you to get on with more important issues while we take care of sludge management in your crude oil tanks.



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