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TECUMSEH'S TEC TANK

Tecumseh Industries Ltd. is proud to introduce our new concept in Solids Control technology.

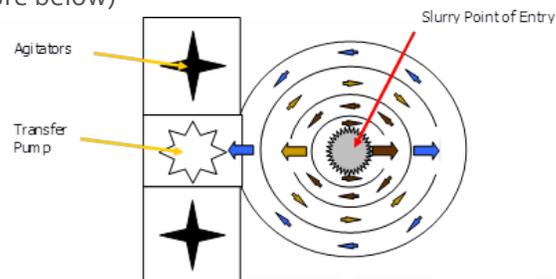
The reputation this system has earned for its efficiency and performance is attributed to the combination of Tecumseh's unique patented (US Patent # 7,135,107, #7,431,846) and Canadian patent (# 2,459,261, #2,635,663) concentration tank design, utilized with our superior Full Variable Speed centrifuges.



What makes our system so efficient is our patented concentration tank, designed and equipped with a sloped bottom along with a number of cylindrical baffles that circle the inside of the tank from the centre to the outside tank wall.

When slurry from the underflow discharge of the rig shakers is fed into the centre of the "TecTank" along with polymer or flocculating agent, these baffles direct the solids that separate or settle from a slurry stream directly towards the bottom of the tank where the centrifuge(s) suction is located.

As the solids settle from the slurry stream, the clean fluids flow away from the centre to the outside of the TecTank where a clean fluid or centrate compartment is located. This centrate compartment is equipped with a submersible transfer pump, which transfers the clean fluid back to the rig suction tank for reuse. This allows for the most efficient solids removal possible! (See figure below)



This solids concentrating process blocks most of the fluid in the TecTank from entering the centrifuge(s) through the centrifuge suction. This allows for mainly solids to enter the centrifuge(s), and is essentially what keeps the separation process so efficient.

Most of the processing is accomplished within the first three cylindrical baffles of the TecTank. This is what allows us to reduce water consumption by roughly 75% when compared to conventional water drilling systems.

Once concentrated in the TecTank, the solids enter the centrifuge feed pump(s) where polymer (flocculant) is injected into the solids rich slurry before it is introduced to the centrifuge(s) for final processing (polymer is only used on water based fluids).



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To assist in maximizing efficiency, the cylindrical baffle assembly of our patented design includes adjustable windows or "weirs" which direct fluid around the TecTank to achieve the most efficient processing possible. These windows are located in a sequence in select parts of our cylindrical baffle assembly, which causes the fluid to move in a way that achieves the maximum benefit from the flocculating agent and / or by increasing the amount of settling or retention time.

Our Tecumseh Solids Control System is so efficient, we have been able to reduce surface water volumes needed for processing down to as little as 1200 US gallons or 4.5m³(volume in TecTank only). This alone will greatly reduce water consumption, which equates to reduced disposal costs.

At Tecumseh, Safety is never compromised! Every piece of Tecumseh equipment is designed with the safety of our operators in mind. All Tecumseh equipment is engineered with stairs eliminating ladders and the need for fall protection. Adequate lighting is supplied along with anti-slip material to help prevent injuries. Emergency escape exits are also installed for an alternate escape route if the need arises.

TEC TANK BENEFITS

- Less water consumption (only 1190 US Gallons or 4.5m³ in TecTank required for water drilling).
- No vacuum truck required for clear water drilling.
- No crane required for rig-up/out.
- Ideal for multiple well pads.
- Centrifuges can ride on tank platform and never need to be removed.
- System will accommodate centrifuges of almost any kind (1 or 2).
- Shale tank, floc tank, and centrifuges are all part of system eliminating 2 loads on rig moves.
- Safety lights are installed on the system including in the shale tank.
- Floc tank has no moving parts (i.e. auger) to freeze up or bridge off with solids.
- Floc tank can be utilized on surface hole and the main hole mud sections to aid in solids removal and reduce tank cleaning when WOC and at the end of each well.
- 1-centrifuge rated for 265 US gpm or 1m³/min can be utilized on water sections pumping up to 370 US gpm or 1.4m³/min.
- System is equipped with stairs and handrails throughout reducing the risk of falling and causing injury.
- Feed pumps, and VFD's are permanently mounted on skid eliminating handling on rig moves.
- 2 – polymer injection tanks for proper chemical mixing and pre-hydration c/w agitators, pumps and mixing hoppers (always have a backup injection pump if one fails).
- Emergency escape ladder on back end of top platform providing an exit at both ends of the skid unit.