

INTRODUCTION

The organic classifier is a furan lined steel box in a concrete sump designed to receive FeCl_3 , contaminated waste, process tank cleanings, and tar buggy and vacuum truck washings. It is sized to provide a one hour retention time during maximum loading. Maximum loading will occur when process tanks are being cleaned which results in vacuum trucks being dumped into the classifier at the rate of one per hour.

The classifier was designed for an internal working pressure of 5 inches of water, to be maintained by a N_2 pad. Whenever the internal pressure exceeds 5 inches of water, the pressure will be vented into a water scrubber. Two identical classifiers were designed with one interchangeable roof to allow cleaning of one bay without interrupting the operation of the other.

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CLASSIFIER OPERATION

For the initial start-up or after any cleaning, the classifier should first be filled with water to the 5 foot level. Even the spare classifier should have approximately 5 feet of water when not in use to protect the tank lining. The classifier roof should be installed next, making certain that all piping connections are made. The following should serve as a check list.

- ___ N₂ connection
- ___ Seal Water Connections
- ___ Scrubber Connections

After securing the roof, open water to the seal and observe the seal-water overflow. Once the water begins to overflow, adjustments should be made in the seal-water flow rate, so that only a trickle of water drains back to the classifier. This is to prevent the seal from being broken by evaporation losses. Keep in mind that operation of the classifiers requires large volumes of water and any effort to conserve will be helpful. Once the roof has been sealed, the classifier should be purged with N₂ until the scrubber vent is $\leq 5\% O_2$. A connection will be available for using an O₂ "sniffer" to sample the purge. The purging will be accomplished by activating the N₂ pad system and opening the vent control valve completely. When the proper O₂ concentration has been reached, the vent control valve should be returned to its normal controlling position (5 in. H₂O).

During normal operation, the liquid in the classifier will overflow into the overflow sump and from there be pumped to the API separator. The pump is activated by a high level of 5 feet in the overflow sump, and will continue pumping until the low level setting of 2 feet is reached. Should the level in the overflow sump reach 6 feet, a high-high level alarm will sound in the control room, notifying the operator that the level in the overflow sump has reached the weir. Should this happen, the operator should go to the site immediately, manually start the spare pump, and inspect the pump in service to determine why it failed. No dumping should be allowed until the level in the overflow sump is back under control.

Because the tar buggy material has a much higher solids content than any other material to be dumped into the classifiers, it will require a longer retention time for settling to occur. This will be accomplished by dumping a tar buggy only when the classifier level is at least 6 inches below the weir, preferably at the 5 foot mark. If the level is higher, water should be purged off the top using the upper skimmer nozzle. Before skimming, the overflow sump level indicator should

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be checked to make sure the level is at its normal low (pump suction). If higher, the pump should be manually started to bring the level down. Once this is done the pump control should be returned to automatic and the top skimmer valve opened. When the level in the overflow sump reaches the high level setting, the pump will automatically start and the skimmer valve should be closed. The volume of liquid required to fill the overflow sump to the high level setting is enough to lower the classifier level for one tar buggy dumping. If possible the tar buggy dumpings should be scheduled last each day to provide an extended settling time (overnight).

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