Enviro Process



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EMS Ram pump installation

EMS Ram pump is awarded to provide for the replacement of the existing Sludge Feed Pump. EMS (UK) Ram Pump model VRH350-10-800 including One PLC control panel for pump and Two(2) nos.

The pump is a Ram type reciprocating piston pump which is driven by a separate electrically powered hydraulic power unit. The pump and hydraulic power unit form a single integrated simplex pump set.The pump body and the valve boxes are one piece castings made from high quality, close grained cast iron. The sludge ram is manufactured from chrome alloy and is finished in a chrome oxide/cobalt coating with a hard wearing surface hardness in excess of 60°Rockwell. The sludge seals are maintenance free chevron rings that are replaceable as a service item without the removal of the sludge ram.





EMS Ram pump test run in Tai Po STWs , Hong Kong



Existing Limitorque L120 actuator retrofitting to other valve applications

Limitorque

Offer design, manufacture, installation of industrial valve and automation solutions



Over 200 sets Limitorque actuators supplied to Hong Kong and China Gas Tai Po plant during the conversion to Natural Gas firing. And after the project, certain locations were considered no necessary to have valve port. Thus we offer retrofitting the existing Limitorque actuator to other locations, employing extra bevel gear to change the gear ratio and torque loading.

We provide technical support and solution for the reuse of Limitorque actuators to other locations and it creates reuse value of Actuator.

Limitoque MX Series with IP68 protection and non-intrusive set uр,





Position setting for mechanical L120 Series (prefer for high temperature application)



Immediate actions against Odor issue at Tai Yuen SPS

The rising main at Package 3 Sewage pumping station (大元泵房) in Tai Po development is under

maintenance . A regular access recently to the rising main area due to the cleanup of the temporary sewage transfer pumps and removal of debris. The action leads to the leaking of odor from rising main chamber and during the washing up of the pumps and removing the debris.

Negative pressure was designed for immediate measures which this negative pressure uses an isolation technique to prevent odor dispersion from the

背景:

大埔一些地區的污水本經汀角路地下的污水 管排走,但因有水管滲漏而停用,渠務署須 在怡雅苑旁的大元泵房,裝建多台臨時水泵 應用,但每天挖起和清洗污水泵的沉積物, 引發惡臭。受影響的民居,以大元泵房旁邊 的怡雅苑及新興花園,其中圍繞 泵房的四棟大廈、共1,200戶首

當其衝. 估計影

Current temporary enclosure Venting out to creat negative pressure Routing the odour air to screw pump pit Overall view

Problems and remedy plan

It is found that during maintenance period when the enclosure is opened, the negative pressure effect is diminished, the foul air diverting via axial blower and while it is transferring the odour foul air from chamber to another discharge point, odour is emitted to outdoor. The concentration would be as high

For remedy actions, they are enlisted :-

- 1. To enclose the access area such that odour source cannot leak to the outside when the mobile crane is accessing to the rising main chamber for lifting the pump and cleaning debris.
- 2. While the air is taken up from the chamber to create negative pressure, the foul air must go through an activated carbon tower for deodorization process.



- 3. The treated air after the deodorization, will be forwarded to the upstream screw pump area which is also enclosed to ensure there is no chance of leaking of the residue to the outdoor.
- 4. A proper management of access of chamber and ensure negative pressure.

Enviro Process Technology

Comprehensive Influent Characterization Study for the existing wastewater treatment plant



The wastewater characteristics investigation was undertaken into two 5-day periods. This study is to investigate the influent and effluent characteristics in order to determine the waste water treatment plant process capability in the phenol treatment performance. Although there are various advanced technologies available for phenol removal, the current hydrogen peroxide oxidation in a batch wise reactor is still proven to be effective nowadays in HAECO plant.



Phenol- bearing wastewater though considered as the major waste water stream being treated by the

plant, no record shows the current technology of phenol removal is out-dated.

Moreover, the oxidation reaction via H2O2 is proven to be effective on phenol removal. Several technologies as alternatives is discussed in the studies and H2O2 generator is considered to be one of the possible solution to avoid excessive storage of H2O2.

