

Treatment of Emissions from Batch Pharmaceutical Manufacturing Plant

Why Choose MEGTEC?

Solvent Recovery & Adsorption plant specialists Sutcliffe Croftshaw, UK; Barnebey & Sutcliffe, USA; and Vara, USA; are all now part of MEGTEC.

We have been designing, building, installing and maintaining Solvent Recovery plants across the world for over 70 years.

MEGTEC also offer a range of thermal oxidisers and Biological systems for VOC control.



The Problem

- Highly variable flow of nitrogen from batch reactors, driers and vacuum pumps.
- 10 to 3,500 Nm³/hr.
- Concentrations of solvents saturated at 5°C giving rise to very high instantaneous loads of chlorinated solvents, but low average loads.

The Alternatives

Thermal Oxidation – Requires oxygen so plant has to be sized for dilution to less than 25% LEL resulting in a large system. Also scrubbing required to remove HCl from the vent gas. High capital cost due to exotic materials and large size.

Cryogenic Condensation – Difficult to meet the emission limit for dichloromethane. Water can be present causing difficulties in the low temperature heat exchangers.

Flare – Requires careful control to avoid tripping out, and can use significant amounts of gas in low average load conditions.



The Solution- MEGTEC Adsorption Skid

- Skid mounted steam regenerable adsorption plant.
- The system maintains nitrogen inerting so keeping the plant small.
- All organics adsorb on carbon including chlorinated components easily achieving emission limits.
- Energy cost is proportional to the amount of VOC delivered to the plant, so low solvent load means low running cost.
- Solvents recovered for reprocessing or disposal.

MEGTEC Skid Mounted Adsorption Systems

- Systems are individually designed and can take into account client specifications and preferred equipment suppliers.
- Skids supplied complete with PLC control system, or Functional Design Specification to allow control by the client's distributed control system.
- Factory Acceptance Test carried out prior to delivery to site, minimising start up times
- MEGTEC Environmental Ltd is accredited to ISO9001:2000

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