

Post Hydrogenation Catalyst Filtration with Steri Funda in Aniline Production

New Process – New Equipment

A chemical manufacturer in Texas was anticipating a plant expansion for the production of Aniline. This expansion required new catalyst recovery filtration equipment downstream of the hydrogenation reactor. The manufacturer reached out to Steri Technologies to help develop a solution for their catalyst recovery equipment. After evaluating the customer's needs and wants, Steri Technologies recommended a Funda Pressure Leaf Filter.

Based on their requirements Steri Technologies reviewed the range of catalyst mass and volume to be used per batch reaction and filtered at the end of each reaction cycle. The process needed to filter a solids volume of 150L of palladium on carbon catalyst over a 1 – 2-hour filtration cycle. To accommodate the filtration cycle time and cake volume, Steri was able to calculate the filter sizing required for the process expansion. A 5m² Funda Filter was recommended to be the ideal size to handle their system specifications and meet their filtration requirements.

The Build

Critical to the design and building of a filtration unit is the ability to customize it, as each process requires unique features. To satisfy the manufacturer's specifications, the 5m² Funda Filter needed to be designed and built of 316L Stainless Steel and "U" Stamped per ASME Code Section VIII Div. 1. The manufacturer opted for additional features such as NEC compliant motors and electrical components rated for Class 1 Div. 2, Group D area classification, along with customer specified double mechanical seal, automated valves, and a skid with a service platform and an enclosed ladder designed to their structural and safety requirements. The modular skid design of the filter allowed for quick and easy installation at the customer site.

Why Steri?

Steri Technologies has a long history of developing custom solutions for unique manufacturing challenges. A few key benefits offered by Steri Technologies:

- Exceptional technical support during inquiry and bid stages
- U.S.A based service department and in-stock replacement parts
- Completely custom design; tailored to the specific needs of the customer



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