

Syngas 2022

Breakout Session

Spent Catalyst Management

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There are a number of things to consider as catalyst changeouts are scheduled. This session is to discuss the management of the spent catalysts once they are removed from the vessels and tubes.

The catalysts that are used in Syngas operations are: HTS (FeCr), LTS (CuO, ZnO), Desulphurizer (ZnO), Primary Reformer (NiO), Secondary Reformer (NiO), Methanator (Ni) and Hydrotreating (CoMo). There can also be specialty catalysts like low Precious Metals (Pd, Pt, Ru) and others, including supports.

Factors to consider in preparing to manage these spent catalysts are: Volume, Packaging, Ship Class, Chemistry. Packaging issues can be a critical decision in this process. Once these are determined, it is fairly easy to define the path for recycle or disposal.

Although manufactured by a variety of companies, the characteristics in these catalysts are similar across the board. Certain catalysts will be self-heating and are removed under nitrogen purge, while others are non-hazardous and don't need special handling and some are in between.

It is strongly suggested that you work with a company that is very experienced in the management of all your spent catalyst to ensure limited liability and success in how and where these materials are sent. A company that can accept all spent catalyst types, all packaging types, has all necessary environmental and other licenses and can offer turn-key solutions, is your ideal spent catalyst management and recycling partner.