

### Application Background

In gas phase processes for the production of polyethylene and polypropylene, there are several applications for porous metal, glass or ceramic blowback filters. These involve the recovery of polymer powder from the product discharge tanks and various gas vents in the process. In these processes, the polyethylene is formed in a fluid bed reactor. Once the resin particles have grown to a certain size, they are released to a discharge tank. *Blowback filters are used to recover the powder from the tank vents.* This operation step allows particle-free gas (mostly unconverted monomer) to be recycled back to the reactor. As an example, powder collected on the PSS® elements (a Pall porous metal blowback filter) is repeatedly blown back and recovered with the bulk of the plastic in the discharge tank.

In subsequent handling steps, there are lower pressure vents which can also be fed to a blowback system. This maximizes product yield and restricts atmospheric emissions to a minimum.

### Pall Product Recommendations

Pall Dynalloy® blowback filters for product recovery and catalyst preparation steps. Pall PSS filters for use on tank vents. Pall Claris® or Coreless Profile® disposable cartridge filters for reactor feedstocks.

### Mini-Markets

Polyethylene, Polypropylene

### References

GSS1 Gas Solid Separation System



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