

► Mott offers two media types for refinery applications?

Process Filtration News

Refinery operations by their very nature are extremely demanding, and most filtration applications require a media that can survive harsh conditions over a long period of time. Extreme temperatures, high throughput, frequent fouling of the media – challenges like these require not only high-strength media, but also the design expertise and process filtration experience to ensure that everything works together, and keeps working day after day, year after year. For decades, Mott has qualified on all counts. Our **process filtration systems** offer proven performance, now with two distinct types of media, to meet the varied and harsh demands of today's petroleum refineries and petrochemical plants. They save time, cost and improve operations.

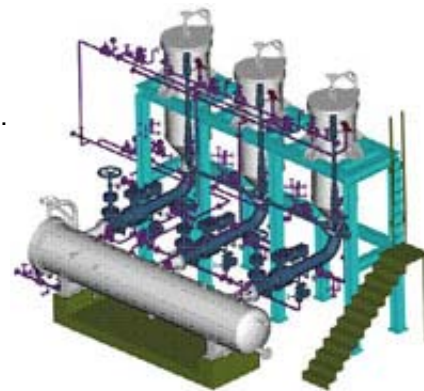
Refinery Filtration Update

Mott All-Metal Filtration Systems

Now developed with porous metal or fiber metal media

Meeting the demands of refinery and petrochem industries

A petrochem filtration system has to withstand high temperatures without compromise in reliability. That basically goes without saying. But that's just a physical requirement. There are economic considerations, too. Like the ability to operate continuously, to keep production at maximum levels. The ideal system should also be self cleaning, using environmentally friendly "permanent" filter elements which help reduce or eliminate disposal costs.



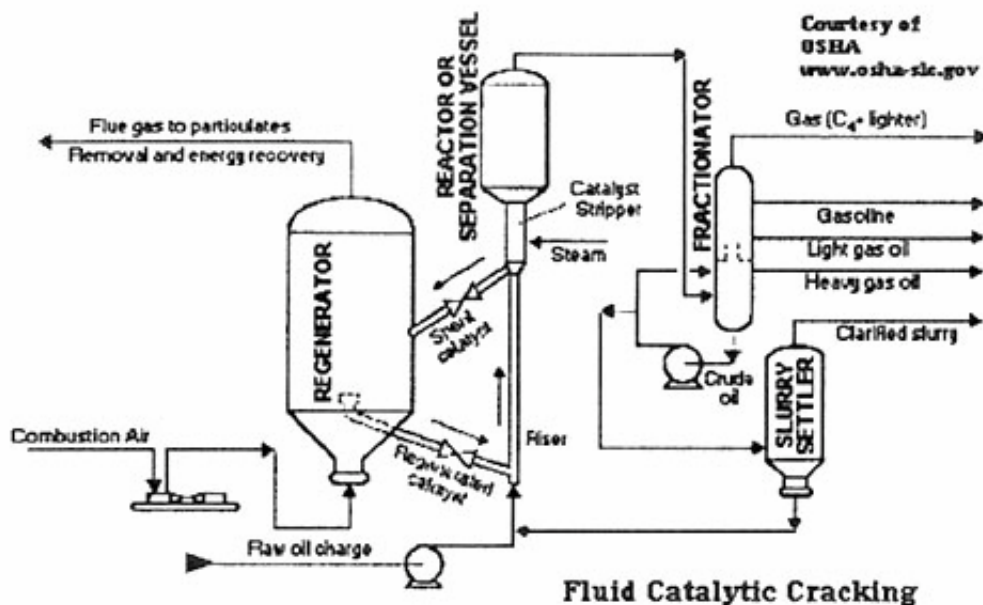
Since 1959, Mott Corporation has specialized in bringing these benefits to refinery and petrochem customers. Here are a few examples, showing how we solve filtration needs with turnkey, automated systems based on porous metal and fiber metal media.

Liquid filtration with Mott porous metal

Process-scale liquid/solids separation typically employs Mott porous metal filter elements made from sintered metal powder. Applications include:

- **FCC Slurry Oil:** Purify product for value upgrade
- **Heavy Coker Gas Oil:** Remove solids for increased equipment life
- **Hydrotreater Feed:** Protect catalyst bed from fouling
- **Amine Treater Gas Scrubbing:** Reduce foaming and fouling
- **Product Sampling Filters:** Provide clean sample to analyzers

A Closer Look: FCC Slurry Oil



Mott FCC slurry oil benefits

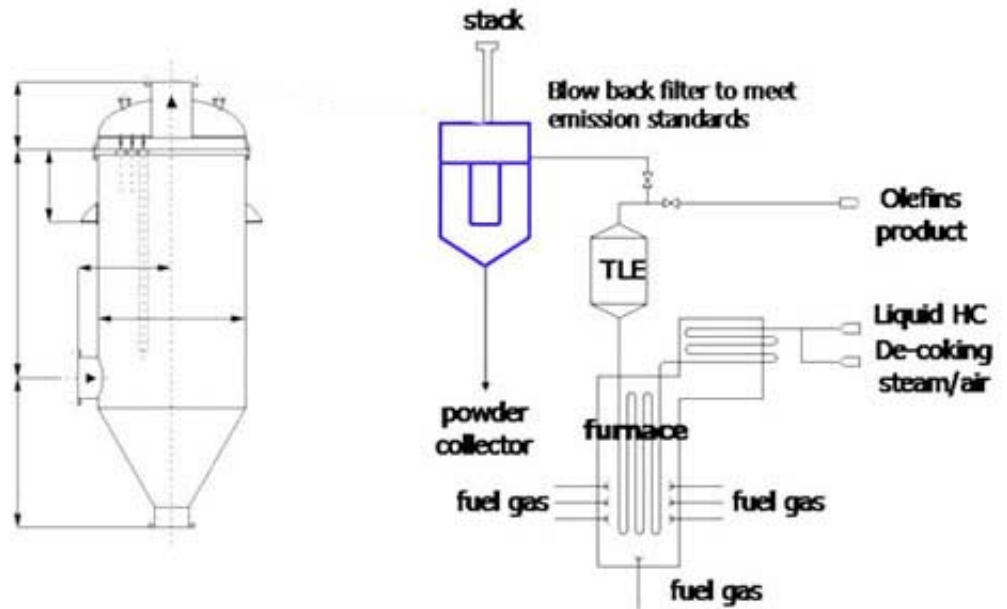
- Long cycle times (6-24 hours)
- Suspended solids of <50 ppm in filtrate
- Long on-stream life between element cleanings (>1 year)
- Temperatures up to 360°C (680°F)
- Reliable, automated operation
- Worldwide installations
- High product recovery efficiency (>98%) ppm grade filtrate quality
- Pilot filters available for testing on slipstream basis

Gas filtration with Mott fiber metal

Mott fiber metal media is the ideal choice for gas/solids separation, since it combines the high strength of all-metal construction with a low delta-P for maximum overall throughput. Applications include:

- **Steam Cracking**
- **Continuous Catalytic Reforming/Regeneration**
- **Fluid Catalytic Cracking**
- **Catalytic Dehydrogenation**

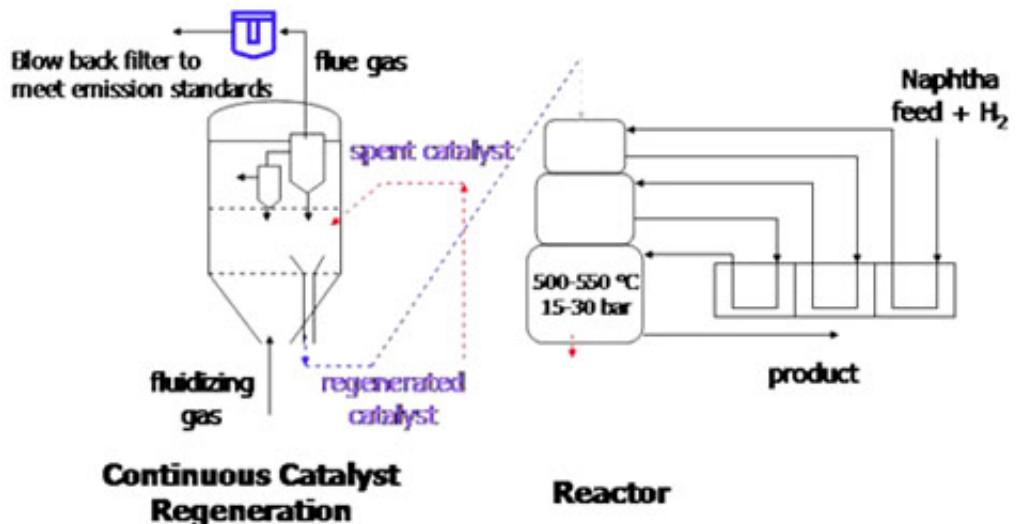
A Closer Look: Steam Cracking



Steam cracking process information

- Average plant production : 600 kt/yr
- Decoking operational mode:
 - 3% of total time
 - Decoking process introduces a non-continuous flow to cyclone
- Emissions: 50 mg/Nm³ over 4 hours
- Typical cycle time: 14-100 days
- Typical flow rate: 10800 kg/hr steam-air with 30 kg/h cokes @ 287°C (549°F) and 0.02-0.03 barg
- BB gas air @ 100°C (212°F) and 6 barg

A Closer Look: Continuous Catalytic Reforming



Simplified process flow scheme with fluid bed principle

Continuous catalytic reforming process information

This process converts low-octane naphthas into high-octane gasoline using very expensive Platinum-Rhenium containing catalyst:

- Reaction: dehydrogenation of naphthenes to aromatics + dehydrocyclisation of paraffins to aromatics + isomerisation + hydrocracking
 - Regeneration: coke burning + oxy-chlorination + drying
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For more information

Click on the images below to download our [12-page process filter elements brochure](#) or our [8-page fiber metal gas filtration brochure](#). You may also contact us at Process Systems Sales, Mott Corporation, 84 Spring Lane, Farmington, CT 06032, 1-860-747-6333 or Toll-Free 1-800-BUY-MOTT. E-mail: quest@mottcorp.com.

