

Heavy-duty screens handle fiber and system upsets

Challenge

During the fiberglass making process large volumes of water are used to cool the molten glass fibers. Small fibers accumulate in the water so that it must be cleaned prior to reuse. Adhesives are used to bind the fibers together. The binding material also ends up in the water making for a difficult separation.

A major fiberglass producer in Germany had used sidehill screens, (32) 10' wide screens to make this separation. However, the panels on the sidehill screens were being replaced every six months because of the abrasive nature of the materials.

Solution

The manufacturer tested and then installed (4) Parkson Rotoshear[®] screens, Model HRS60160, with .010" spacing. These units handle the cooling water and plant washdown

water. Each unit handles 800 m3/hr or 3522 GPM with a solids load of 1,000-5,000 mg/L (ppm).

During normal operation, the binders do not cause a problem. When there is a system upset and a large amount of binders are introduced to the screen, blinding can occur. The integral spray header effectively cleans the screen with the application of high-pressure water.

The Rotoshear[®] units are self-cleaning so they require little operator attention. The Rotoshear[®] screens are able to handle the abrasive solids with little wear. The original cylinders have been in operation for 4 years. Additionally, the Rotoshear[®] units can be enclosed which reduces odors.

The manufacturer is so pleased with the operation of the screens that they have installed them at two of their other plants.





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