



## PROCESS DESCRIPTION



### 4. FINE SCREENING

#### 4.1 Application

In this group slotted screens split the feed flow into accepted clean stock which passes through the slots of the screen and rejects containing the concentrated contaminants retained by the screen. The rejects from the first stage are fed to further treatment. The accepts are fed forward to the next process step, the Preflotation.

The Centriscreens are fitted with slotted screens having a high efficiency for the removal of cubical contaminants.

#### 4.2 Operation

Medium consistency stock (about 2%) is pumped consistency controlled out of the fine screen feed chest to the primary fine screen. The primary fine screen feed pump is interlocked with the primary fine screen drive and the Flotation Cell No. 1 feed pump, as well as the fine screen feed chest level. Primary fine screen drive is interlocked with the secondary fine screen.

The inlet flow to the primary screen is measured and controlled by the accept control valve to the production control setpoint. Accepts are fed to the Flotation Cell No. 1 pump to dilute it with clarified water to a suitable consistency for flotation.

To protect the screen against blockage, the differential pressure between inlet and accept is measured and controls the flow in an override function. Rejects from the first screen are flow controlled to a selected set point and fed into a fan pump arrangement pumping to the secondary fine screen.



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The secondary screen is controlled by differential pressure across the screen and accepts flow back to the fine screen feed chest. The secondary fine screen feed pump is interlocked with the secondary fine screen drive. Rejects are controlled the same way as the first stage and flow to the tertiary fine screen pump suction.

The tertiary stage consists of a Model 3 Axiguard and its feed pump. The third stage accepts are fed pressure controlled secondary fine screen pump suction. Tertiary fine screen feed pump is interlocked with tertiary fine screen drive. This stage rejects are purged on a timer to the sludge chest where it is mixed with the system sludge and is finally thickened and discharged.

The fan pumps of the system dilute the stock with clarified water from the first water loop. In all suction lines of these pumps are pneumatically actuated valves installed to prevent backflow of stock into the clarified water chest at shutdown or pump failure.

Timer operated on/off valves on the vents of the screens open with each start to bleed the air out of the system.

### Starting Sequence of the Group

The group has to be started in sequence with the preflotation, forward cleaner, reverse cleaner and the first washer (Vario Split No. 1). *See instructions at the end of Chapter 7.*

