Wet sizing silica sand using four wet screening machines

- Excellent oversize solids conveyance
- High fluid handling capacity
- Processes 167 STPH silica sand at 2400 GPM

Background

A silica sand producer required improved oversize solids conveyance and high fluid-handling capacity at a high feed rate. Size separation was required to handle the feed rate of 167 STPH at 2400 GPM.

Solution

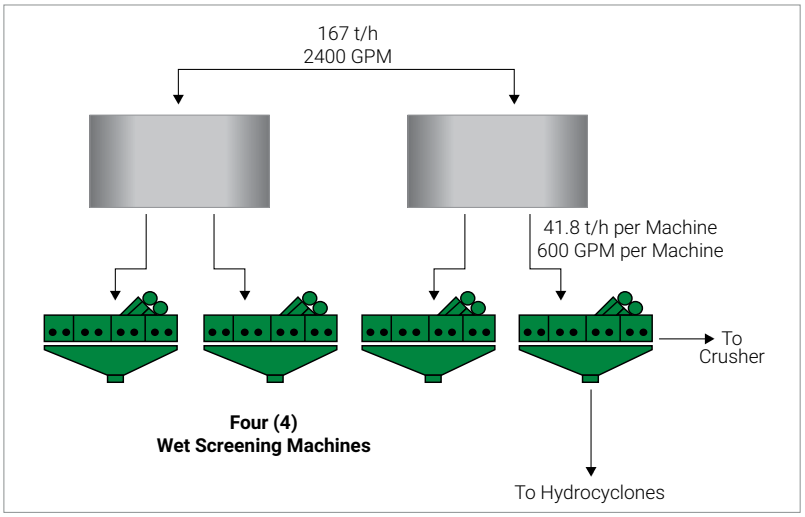
For optimum process efficiency, Derrick® installed four dual motor wet screening machines. The linear motion machines were fitted with high open area 25 mesh Polyweb® urethane screen panels. To increase fines removal, spray nozzles were incorporated into the design.

Silica sand is evenly distributed to the four wet screening machines, which make a 0.7mm size separation. Oversize is delivered to a crusher, while undersize is pumped to a hydrocyclone stage for further processing.

Conclusion

The wet screening machines effectively handle the silica sand feed rate of 167 STPH at 2400 GPM, meeting all customer expectations. Results include high accuracy in controlling particle size separation and classification efficiency; and low operating costs including water consumption, electric power, maintenance, and labor costs.

Linear motion machines fitted with high open area 25 mesh Polyweb urethane screen panels



New flowsheet with four (4) linear motion screening machines

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