

FOR IMMEDIATE RELEASE

FLSmidth Offers Economic Options For Large Thickeners

Finding the optimal design and delivery solution for a large thickener at a remote gold mine in the West African state of Mauritania meant considering a complex range of technical, transportation and assembly options, according to FLSmidth senior account manager Ricus van Reenen.

The cost of transporting the components for the 50-metre diameter thickener was a key factor affecting the design, says van Reenen. He highlights that transportation of components to remote sites can comprise a substantial portion of costs, and that break-bulk shipping costs are significantly higher than containerised transport.

“Given that the thickener components needed to be shipped by sea as well as by road, containers were considered the most economical mode solution,” he says. “This requires that the plate sections be cut and rolled in dimensions that can be packed into containers for shipping to site. The structural support sections like the I-beams will be fabricated to final stage at our facility and just bolted on site, but the plates will need to then be welded by expert welders.”

While bolted thickeners are often more economical to construct, as they obviate the need for extensive on-site welding, this option cannot easily be applied to thickeners larger than 50 metres in diameter.

“For these larger designs, the support structure is erected on site followed by the welding together of the plate sections from one end to the other,” he says. “After the plate sections have been welded to the structure, the welds are sandblasted, primed and applied with a final paint coating over the welded areas.”

Certain cost-saving strategies can still be employed in these situations; for instance, the plates can be painted before shipping with the weld-strips left clean to facilitate on-site welding.

Van Reenen emphasises the importance of the documented assembly procedure – according to FLSmidth’s global best practice – that is applied when erecting these large thickeners.

“When supplying a thickener, part of our engineering deliverables includes an installation methodology for the site contractor to follow, to make sure that they implement each stage correctly,” he says. “FLSmidth also provides a technical installation expert from the most suitable of our global offices who visits the site at appropriate intervals to advise and inspect.”

He further emphasises that the forces demanded within large thickeners also makes the choice of gearbox drive much more important.

“Smaller thickeners can usually be designed with planetary gearbox drives – available from a number of OEMs,” he says. “With really large drives requiring higher torque, however, we prefer to use our own ring-gear Dorr Oliver drives which can reach much higher torque values than planetary drives. The ring-gear drives are also more able to handle axial and radial loadings on the rakes.”

OPTIONS PIC 01 : Ricus van Reenen, FLSmidth senior account manager for sub-Sahara Africa region.

OPTIONS PIC 02 : An FLSmidth tailings thickener installation.

OPTIONS PIC 03 : An FLSmidth high rate thickener installation.

OPTIONS PIC 04 : An FLSmidth counter current decantation thickener circuit.

OPTIONS PIC 05 : An FLSmidth concentrate thickener installation.

ENDS ... JUNE 2018

FROM : CORALYNNE & ASSOCIATES
TEL : +79 523 7422
EMAIL : communicate@coralynne.co.za
WEBSITE: www.coralynne.co.za

FOR : TERENCE OSBORN
FLSMIDTH (PTY) LTD
TEL: +27 010 210 4820
E-MAIL: marinda.kerr@flsmidth.com
WEBSITE: www.flsmidth.com