Continued demand for TAKRAF Africa's range of technologies from across the commodity spectrum

South Africa (Johannesburg), May, 2019 - Key equipment supplier, TAKRAF Africa, part of the global Tenova TAKRAF group, is handing over a complete woodchip conveying package as part of an expansion to a specialized cellulose production facility in South Africa. The facility produces Elemental Chlorine Free (ECF) dissolving wood pulp, mostly for the export market.

The fast track contract covered the design, engineering, installation and commissioning of 24 trough conveyors, 3 Redler en-masse chain conveyors, transfer towers and related systems.

The TAKRAF Africa conveyors were integrated into both current and new lines to handle the increased production made possible by the expansion, with the conveyor system comprising 3 stockpiles fed by shuttle conveyors. With the new system, woodchips are conveyed from the existing and new chipping lines to the relevant stockpiles and then, using reclaim and associated conveyors, conveyed to existing infeed digester conveyors.

A number of new and/or unique features were designed by TAKRAF Africa and incorporated into the conveying package, including reversible belts to ensure that material could be conveyed to both stockpiles from the different chipping lines. All the chutes were designed and assessed using Discrete Element Method (DEM) technology as woodchips tend to exhibit airborne behavior when they reach certain velocities. In addition, stockpile stacking is to be conducted through automated zone control, using a combination of

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instruments and sensors to ensure equal spreading of the different

wood species.

Various bypass systems have been planned and provided for,

including that from the stacking route to the reclaim conveyors in the

event that a reclaim machine is undergoing maintenance or unplanned

downtime. The bypass conveyors are based on a self-supported design

requiring no intermediate trestle support. In addition, a bypass plough

mechanism diverts material temporarily from the existing chipping

line to a newly supplied conveyor.

A set of Redler conveyors were installed for the conveying of fines

generated by the screening system, which greatly assists in dust

control. "The Redler conveyors were selected for a number of the

benefits they offer, including their ability to fit in with the current

layout of the screening building, as well as space constraints within

the plant," says Richard Späth, General Manager – Technologies,

TAKRAF Africa. "The Redler conveyor also boasts multiple

discharges, facilitating the building of a "cone-shell type" stockpile,

while also assisting in loading a truck evenly."

Another uncommon feature designed and installed by TAKRAF

Africa is the 4-conveyor walk-in type gallery, with some of the

conveyor gantries being required to span between 45 m and 50 m due

to space constraints and existing infrastructure.

Since this was a brownfield project, the system was required to be

installed in an operational plant where certain tie-ins had to be

completed during limited shutdown windows. In addition, the fast-

track nature of the contract called for precise and tight planning of the

in-house engineering, which was complicated by the challenges of

interfacing with new and existing services on the plant. In order to

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best mitigate associated risk with such a complex project, TAKRAF

Africa split the detailing and fabrication of steelwork amongst various

fabricators.

"In total, structural steel of approximately 1,700 tons was required to

be designed, fabricated and installed within a 12-month project

duration, which included mechanical installation, commissioning and

handover, without compromising at all on safety and the quality of the

equipment provided," says Späth.

Continuing demand

This recent contract highlights the continuing demand from a wide

range of industries, from the mineral processing to biomass sectors,

for TAKRAF Africa's material handling expertise, notes Späth.

TAKRAF Africa attributes its continuing success to a comprehensive

and evolving product and service offering that is ideally suited to the

operational realities that local industrial operations face.

"Our commitment to innovation has meant that, while we offer the

best of global technologies, we have tailored them to operate

efficiently in local conditions, as well having developed products

specifically for the African market. This has enabled us to

continuously advance our technology offering and remain ahead of the

curve," says Späth.

The Redler en-masse conveyors and elevators are one such example.

Proven over decades, Redler machines convey a wide range of solids,

including wood chips, sand, lime, cement, fly-ash, sunflower seeds,

maize, wheat, flour, grain, coal and much more. They convey

particulate solids cleanly, gently and economically by inducing

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material to move like a liquid through dust-tight casings. As a result,

these low maintenance systems ensure minimal product degradation,

while the dust tight casings protect the conveyed material and the

environment from mutual contamination.

A recent in-house innovation by TAKRAF Africa has resulted in new-

design Redler Chain Conveyors, 6 of which have already been

supplied to a major Fast-Moving Consumer Goods (FMCG)

manufacturer. Combining the proven Redler brand with a lighter,

more cost-effective design of the casing, the conveyors utilize the high

quality Redler chain housed in a structure manufactured from laser-

cut, relatively light-weight plate-work. This unique fabrication

approach has eliminated the expensive and time-consuming welding

process, enabling the delivery time to be reduced by up to 4 weeks.

Furthermore, laser-cut plates eliminate boilermaker tolerances and

ensure a perfect fit on site. In addition, TAKRAF Africa is now able

to assemble the conveyors utilizing its in-house capacity, providing a

valuable upskilling opportunity for its employees.

TAKRAF Africa is the exclusive license holder/supplier in Southern

Africa of the trade-marked Redler range of equipment, and has

supplied more than 5,000 Redler en-masse conveyors and elevators

throughout Southern Africa over the past 40 plus years.

Long-established business relationships

"TAKRAF Africa's association with the industrial sector stretches

way back into the past century when, as part of the Bateman group

before it was acquired by Tenova in 2012 and integrated into Tenova

TAKRAF, it established a firm foothold both in the mining, the power

generation and the FMCG sectors, amongst others," concludes Späth.

"Such long-term business relationships underscore TAKRAF Africa's

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ability to service its products over their complete product lifecycle, even installations from more than three decades ago."

For further information, visit: www.takraf.com

TAKRAF, a Tenova Group company, is an integrated solutions provider to the global mining, bulk material handling, minerals processing and beneficiation industries, offering innovative technological solutions as well as process and commodity knowledge along the industry value chains. With the integration of the well-known DELKOR and Tenova Advanced Technologies (formerly Bateman Advanced Technologies) brand of products into TAKRAF as specialized product lines, our portfolio for the minerals processing and beneficiation sectors has been considerably enhanced.

Tenova, a Techint Group company, is a worldwide partner for innovative, reliable solutions in metals and mining. Leveraging a workforce of over three thousand forward-thinking professionals located in 22 countries across 5 continents, Tenova designs technologies and develops services that help companies reduce costs, save energy, limit environmental impact and improve working conditions.

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Image:



Image ID: TAKRAF_Redler_Coal_Elevators.jpg

Caption: The Redler conveyors were selected for a number of the benefits they offer, including their ability to fit in with the current layout of the screening building, as well as space constraints within the plant.

Source: TAKRAF

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