

ELB ENGINEERING SERVICES

INNOVATE THE FUTURE

ELB Engineering Services, a subsidiary of The ELB Group, has been involved in a number of exciting projects over the past year.

The company provides innovative solutions to the mining, minerals, ports and industrial sectors. Its core platform is cooperation agreements with world-leading technology and knowhow providers.

ELB Engineering Services has four technology clusters in the company — Bulk Handling, Pneumatic Conveying and Associated Equipment, Modular Process Plants, and Life Extension Services. The demands from the global market on world-class expertise have taken their toll on the South African resource pool, and to this end ELB has opened a technology / engineering centre in Germany, providing machine and rebuild design capability backed by a design office. This office allows ELB to augment its in-house capability with the best machine design ability.

The Bulk Materials Handling group focuses on the provision of a total engineered solution from pit to process plant and back end of the process plant. ELB prefers to engage with the client at the conceptualisation stage, enabling the correct level of trade off studies and innovation to be implemented from Day 1. By doing this the client maximises the return on his investment. In the event a feasibility study is required, ELB offers this service through its associated company, ELBCON.

GERMAN CO-OPERATION AGREEMENT

ELB has successfully concluded an exclusive cooperation agreement with FAM of Germany for all its bulk materials handling requirements. FAM has over 100 years experience in providing bulk materials handling solutions



Portal scraper re-claimer in covered stockpile, with a gauge of 69m and a throughput of 2 000tph – installed in Taiwan.



Circular covered stockpile featuring stacker and bridge re-claimer with harrow rake.

to more than 60 countries. Its wide range of products and technologies covers stacking, reclaiming, ship loading, crushers, mills, apron feeders, pipe conveyors and total engineered projects. This technology is supported by its relationship with KoneCranes of Finland which is one of the world leaders in port handling equipment.

The Pneumatic Conveying and Associated Equipment group of ELB is predominantly focused on the provision of turnkey solutions associated with pneumatic conveying and silo technology. ELB has a grouping of staff each with individual experience of over 20 years in this area of expertise. The technology is supported by the German Group, Claudius Peters, which is a leader in the provision of knowhow and technology in the cement, ash, gypsum, lime and grinding sectors. Meijers says that the past year has seen ELB provide pneumatic conveying solutions into the cement, ash, magnesium dioxide, soap powder, fertiliser, diamond and zinc industries. These solutions incorporated dilute phase, dense phase and vacuum conveying systems. ELB considers its in-house design capability supported by Claudius Peters to be one of the leaders in Africa.

To augment the materials handling business, ELB has an exclusive relationship with Sedgman of Australia. Sedgman is considered the leader in the provision of total solutions to the coal industry. Its key area of focus is its world-renowned technology around coal washing plants. Due to the fact that a large portion of any design and construct contract is the erection, Sedgman has developed a methodology, combined with its 3D modeling, to minimise total erection time and costs. This methodology has proven itself on a number of recent



Coaling installation done in Germany, consisting of a slewing and luffing stacker in strata stacking mode with portal scraper re-claimer.

projects, says Meijers.

The Modular Process group of ELB focuses on the design and supply of a process solution, combining the licensed technologies with modularised engineering. This value proposition has been applied over the past year to the coal, chrome, manganese, gold and diamond sectors.

REPLACE OR RE-USE?

One of the challenges facing bulk materials handling users today, says managing director Dr. Stephen Meijers, is the decision to replace or re-use existing equipment. To this end ELB has initiated its Life Extension group focusing on the application of knowhow and engineering to rebuild bulk materials equipment. In order to provide the correct level of expertise, ELB has opened an office in Germany, ELB Engineering Germany, through which it provides significant analytical and structural machine expertise. Once a machine has been assessed by ELB's German engineers from a mechanical, structural and electrical / control basis, a refurbishment and / or upgrade strategy can be put in place.

This grouping of expertise providing the total solution is unique from a South African company perspective. Recently ELB has been involved in reconditioning conveyors, crawler stackers, bucket wheel re-claimers and ship loaders in the ash, coal, cement and iron ore industry. This service is not only supplied to ELB licensed equipment but to any make of machine supplied to the market.



Combined bucket wheel stacker re-claimer operating in fine coal – installed in Germany.

ELB has now been involved in over 30 exciting projects over the past two years. Recently the company designed and supplied a materials handling feed system to Pyromet for the IFM ferro-chrome furnace project. This project included a number of innovations which have allowed flexibility and reliability to be included in the solution.

At present ELB is designing and supplying the total materials handling system for a new diamond mine.

Once again, the innovation brought to the table by ELB has allowed the most cost-effective solution to be implemented.



A Claudius Peters Multi Extraction Cement Silo in 3D format.

GROWING NEED FOR INNOVATION

Over the past year ELB has supplied cement off-loading facilities to four clients. The novel design allows off-loading from rail tankers at a rate of 240 tph to be achieved.

As the mining, power and port sectors continue to expand, the need for innovative solutions grows. This innovation not only applies to the technology, but needs to be applied to the delivery process. As resources, fabrication capacity and erection capability become increasingly stretched the delivery process becomes critical to the success of the project. To this end Meijers believes that an in-depth delivery schedule needs to be debated and agreed upon with the client up front. In order to manage this process and the expectations of the client, in an over traded market, ELB has developed a number of practical and innovative commercial models which have proven to be very effective and attractive to clients.

Meijers says that the engineering fraternity is living in a world of excitement that has not been seen on a global scale for 30 years, if ever at all. This environment must be used to grow the industry, not only from a systems point of view, but more importantly from a capacity perspective. It is at times like these that the industry must aggressively train new blood so that the South African engineering base will be stronger into the future.

"At ELB we believe that the adage of 'The lifeblood of an organisation is the new blood' holds firm," says Meijers. "The level of competitiveness will increase on the back of globalisation, especially in Africa, and we as a country must be prepared for this," he concludes. **MRA**

For further information, contact
Dr Stephen Meijers, Chief Executive
ELB Engineering Services (Pty) Ltd
stephenm@elb.co.za
Tel (011) 772 1474