


CHALLENGE

ProProcess is a process-focused engineering firm, able to contribute to a project at any stage of development, from conceptualization throughout the project life cycle, up to implementation and production. ProProcess is a medium-sized enterprise, which services the chemical, metallurgical and petrochemical industries.

A common operational challenge associated with solvent extraction plants is the effective on-line management of solids introduced from a variety of sources. Solids in SX settlers and EW cells cause operational problems that impact on plant availability and reduce name-plate design capacity.

Most competitor SX settler crud and bottom solids removal systems are limited in their effectiveness to handle high total suspended solids influx into SX circuits, and operations are often forced to take the impacted settlers off-line for complete removal of contained solids. These cleaning operations are often hazardous, high risk, labour intensive and costly in terms of production down-time and organic reagent loss.

SOLUTION

The Crud Forx™ is a solids removal system specifically designed for the on-line removal of entrained interface and bottom solids associated with hydrometallurgical SX processes.

The Crud Forx™ system can be used on-line, eliminating the need to interrupt production. The Crud Forx™ has proved to be especially effective for bottom solids accumulated in SX settlers. Plants using the system have enjoyed prolonged periods of operation without the need to drain settlers for cleaning, even during major crud-runs as a result of poor upstream solid/liquid separation.

The Crud Forx™ system consists of a multi-piped slurry suction head, which is partially or fully immersed. The slurry suction head can either be connected directly to a removable flexible hose coupling, or to one or more modular lengths of rigid transfer piping. This allows the system to be adapted for most applications in SX settlers and can be readily tailored to client-specific requirements. The Crud Forx™ and accessories are available in a variety of materials of construction, suitable for use in most hydrometallurgy environments.

The Crud Forx™ uses a unique combination of “air lift” and “back-pulsation” technology that only requires low pressure compressed air infrastructure for operation. This makes the units inexpensive to install and operate, and intrinsically safe for use in SX applications. The Crud Forx™ technology ensures that solids removal and solids mobilization is extended beyond the immediate deployment zone of the Crud Forx™.

The correct operation of the Crud Forx™ system ensures minimal organic loss, since the solids are removed from below the organic-aqueous interface in the SX settler. Solids are removed in high density slurry. Downstream crud treatment operations are reduced.



VISION

ProProcess is synonymous with process excellence within the industry.

MISSION

ProProcess provides smart, world-class, cost effective process engineering solutions to its client base.

CORE VALUES

ProProcess puts the client first and understand the issues from their perspective. We work with clients and partners to achieve their goals. We seek innovative, yet cost effective solutions for clients and partners.

OUR COMMITMENT

We work in close collaboration with our clients, ensuring that tasks are clearly defined and understood. We address current and future needs, through the delivery of value for money solutions.

“ProProcess: engineered with passion, executed in excellence.”

COMPANY PROFILE

ProProcess is a dynamic engineering and design company. We consult and provide design and implementation services to the following industries:

- Mineral processing
- Hydrometallurgy (Base metals and PGMs)
- Acid Mine Drainage
- Petroleum and Petrochemical
- Waste to Energy
- Fine Chemicals
- Food and Beverage

As a multi-disciplined organisation, ProProcess strives to meet clients' objectives by drawing upon expertise in chemical process engineering; research and development; instrumentation; controls; and process analysis.

ProProcess takes pride in its ability to offer a high level of personal attention to all its clients. Clients can depend on speedy, cost effective solutions to their requirements, while maintaining control over project expenditure.

In this way, the investment becomes a joint venture with great benefits in terms of time, expertise and expense for the client.

ProProcess is committed to conducting its business in a safe, socially and environmentally responsible manner. We are an equal opportunities employer and do not discriminate on the basis of race or gender.

ProProcess employs Professional Engineers registered with ECSA (Engineering Council of South Africa). All our designs are produced, checked and approved by a registered engineer prior to construction.

The ProProcess Principal Engineers have post-graduate qualifications in Chemical Engineering, with extensive experience in the field of chemical, metallurgical and petrochemical processing and each have more than 15 years' experience in project engineering.

