


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 post-project production optimization. ProProcess is a medium-sized enterprise, which services the chemical, metallurgical, petrochemical and related process industries. ProProcess also offers a number of turn-key, skid-mounted and containerised modular process unit operations, as well as process auxiliary equipment, for both pilot and full-scale operations.

A common operational challenge associated with solvent extraction (SX) plants is the effective on-line management of solids. Solids are often carried over from leaching circuits due to inefficient/incomplete solid/liquid separation. Alternatively they may be formed as a result of chemical precipitation within the SX circuits or electrowinning (EW) operations. Regardless of the source, solids in SX settlers and EW cells cause operational problems that impact on plant availability and reduce name-plate design capacity. Most existing crud and bottom solids removal systems are limited in their effectiveness and operations are often forced to take the impacted settlers off-line for complete removal of solids. These cleaning operations are hazardous, high risk, labour intensive and costly in terms of production downtime and organic reagent loss. Due to production pressures, operations are often reluctant to take settler units off-line, resulting in prolonged operation at below-optimum performance. This often compromises the final metal production rate, product purity and reagent consumption rates.

SOLUTION

The Crud Frogz™ is a solids removal system specifically designed for the on-line removal of entrained interface solids associated with hydrometallurgical SX processes. The system can be used for on-line SX-settler interface crud removal, eliminating the need to interrupt operation. Plants using the system, in conjunction with the Crud Forx™ SX settler bottom solids removal technology, have enjoyed prolonged periods of operation without the need to drain settlers for cleaning.

The Crud Frogz™ consists of a wide suction head mounted on a tri-wheel system. The crud suction head is custom mounted to always be positioned at the design operating interface level of the client's SX settlers. The crud suction head can either be connected directly to a removable flexible hose coupling, or to one or more modular lengths of rigid transfer piping. The Crud Frogz™ and accessories are available in a variety of materials of construction, suitable for use in most hydrometallurgical environments.

The Crud Frogz™ requires a typical crud removal positive displacement pump system generally included in most SX settler designs. The unit can be easily adapted for retrofitting to most crud removal positive displacement installations. This makes the units inexpensive to install and operate.



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.

