

ROYMEC TECHNOLOGIES' EXTENDS IT'S SOLID LIQUID SEPARATION EXPERTISE

“Roymec Technologies’ offers an extensive complement of solid-liquid separation equipment. The depth of our products range spans reverse osmosis through to coarse screening”, says MD, Malcolm Royal. “Our product portfolio includes Vibrating Membrane technology, Thickeners, Vacuum Belt Filters, Filter Presses, Continuous and Fixed Bed Ion Exchange systems, SX Dual Media filters and Horizontal Belt Screens, amongst others. Our emphasis is to offer customized solutions to our clients, which extends from laboratory and pilot plant testing, design assistance around core equipment, through to installation and commissioning.”



“The recent license agreement with Waterex of Australia for Pin Bed Clarifier (PBC) technology has enhanced our product range and gives us the ability to provide an effective proven solution to all polishing and clarification applications”, says Malcolm. “We see an increasing need for such technology on final effluent disposal plants, metal plating processes and treatment of particularly difficult precipitate and hydroxide streams where Waterex units come into their own.”

Waterex Pty Ltd. is an engineering company with diverse expertise in hydro-metallurgical, liquid process, water treatment, effluent treatment and solids/liquid separation plant and equipment. The founding company Water, Rail & Power Engineering was established in 1959. Waterex Pty Ltd was formed in 1978, the Australian company opening in 1991.



The Waterex range of clarifiers is broadly divided into the following types of units.

- ❖ **Pin-bed Clarifiers.**
- ❖ **Clariflocculators**, as deep cone or flat bottom tanks supplied for extended conditioning or prolonged stepped chemical addition applications.
- ❖ **'Jet-sweep' Clarifier**, flat-bottomed clarifier providing a cost effective clarifier for bulk liquor, low contamination waters, or liquors, which contain light flocs.
- ❖ **Deep cone types** with or without floc cylinders.
- ❖ **Conventional Bridge Clarifiers.**
- ❖ **Inclined plate Clarifiers.**



Waterex's expertise is complemented by their long association with leading companies in America and Europe and they have supplied their products and technology internationally.

Roymec Technologies has received the first orders in Africa for the supply of three Waterex PBC units from DRA for the Nkana Calcine Leach project in Zambia, due to be commissioned in December 2006. Our Australian principal Rob Pannell says, "The Waterex PBC possesses features that will enable it to out perform any existing floating media filter technology in the market at the moment. Our current design is a result of research and development started in the mid 1970's, on High Rate and Ultra-High Rate Clarifiers."

The Nkana units will be fabricated in stainless steel and will be supplied with Waterex's multi-media filter bed and counter-flow baffle feedwell designed to reduce the overflow suspended solids level to below 5 mg/litre. Each unit treats up to 275 m³/hr of low grade and high grade pregnant solution from the leach counter current decantation circuit, prior to solvent extraction and metal recovery.

Further references of the Waterex technology include:

- ❖ Clarifiers for Oxiana Resources, Sepon, Republic of Lao. Stripping 8-12% by weight ultra fine oxide clay.
- ❖ Flue gas de-sulphurization circuit. Dual alkali process and stripping of fine pin head gypsum flocs without the use of polymers or coagulants. Cadbury Schweppes.
- ❖ Treatment of river water to potable standard for mine site and camp use. Kalamantan, Indonesia.
- ❖ Rod mill spray water clarification. Risco.
- ❖ Radian Corporation, recovery of chrome liquor at large plating shop for the automotive industry. Detroit, USA.
- ❖ Tails treatment and clarification for mine water recovery at Navoria Gold Mine.
- ❖ W.A. Water Corporation for the stripping of colour tannin precipitates.

Roymec has laboratory and pilot plant facilities for the sizing and selection of the PBC units, and testwork conducted can be used as the basis for performance guarantees.