Membrane Separation

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Membrane Separation Capability

ANSTO Minerals has undertaken a significant amount of work on membrane separation technologies. The majority of this work has been on nanofiltration, however, we have also dealt with microfiltration, ultrafiltration and reverse osmosis membranes, on a variety of very different feed solutions.

ANSTO Minerals has considerable expertise in working with different membranes on a wide variety of mineral related projects and has access to both laboratory flat sheet apparatus and a commercial scale spiral wound membrane pilot plant.

In all these projects, the recovery of permeates and concentrates has been demonstrated under different conditions. We understand what it takes to produce and analyse a variety of solutions, and acquire data to scale-up from the laboratory to an industrial size plant.

ANSTO Minerals has applied its considerable hydrometallurgy experience from the processing of uranium, rare earths, base metals and other specialty metals like lithium to develop alternative, economic processes using membrane separation technologies.

ANSTO Minerals has conducted a significant amount of process modelling and scoping level engineering to support our clients. We have developed detailed process models using Ideas™ (Limn™ and METSIM packages also considered) followed by techno-economic evaluation of processing options. These efforts have directly supported several NI 43-101 reports and preliminary and definitive feasibility studies.

About ANSTO Minerals

ANSTO Minerals has a 40-year track record of providing practical solutions and innovative technology to the mining and minerals processing industries. We are a team of 60+ professional scientists and technicians with expertise covering chemical engineering, metallurgy, mineralogy, chemistry, geology and radiation safety.

We provide review and consulting services, process development services as well as collaborative and contract research on uranium, rare earth and specialty metals processing, radioactivity control and management, novel flowsheet design and modelling, and scoping level engineering / cost estimates.