

Process & Scale Up Engineering Guiding You Towards Commercialization

The Xerox Research Centre of Canada excels at driving chemical processes from the concept stage to commercialization. We have expertise that you can use to move your ideas through any stage of the development cycle.



What We Offer

If you have a material or chemical process that has been developed to the limit of your current capabilities, we can help you advance to the next level.

Give us a challenge...

Bench Engineering

- Design of custom chemical materials, reactors, and processes
- Sourcing of raw materials and development of specifications
- Maximization of process/material sustainability
- Process optimization for reproducibility and repeatability
- Cost-down of new or existing materials or processes
- Small scale sample supply

Pilot Plant

- Prototype manufacturing process design
- Fabrication of custom bench- and pilot-scale processing equipment
- Demonstration of process manufacturability at pilot scale
- Realistic determination of process yield, efficiency, and cycle time
- Large scale sample supply
- Materials supply

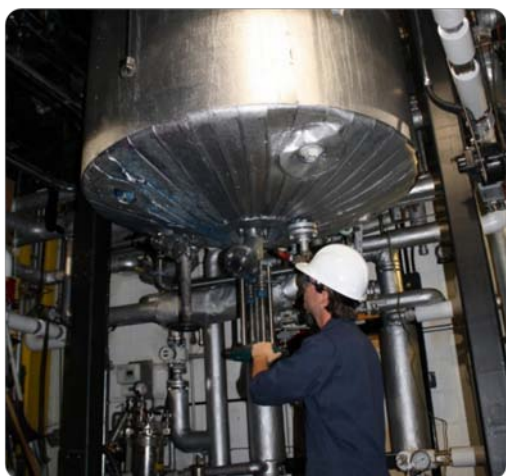
Pre-Manufacturing and Technology Transfer

- Process economics and production cost estimates
- Large scale vendor identification
- Technology transfer to vendor

Process Engineering at the Xerox Research Centre of Canada

Facilities

- 10,000 ft² of bench engineering laboratories
- 24,000 ft² of pilot plant area; Class I Div. 1 and Class II Div. 1 capabilities
- Flexible and modular for simple equipment rearrangement and process customization
- Bulk chemical and storage facility
- Model and machine shops for custom equipment fabrication
- Fully equipped analytical laboratories with access to all major material characterization techniques



Equipment

- State-of-the-art process control systems
- Wide range of chemical reactors
 - Vessels sized from 0.5 to 2000 L
 - Stainless steel, glass lined, plastic, PTFE
 - Temperatures from -25 to 350°C; Vacuum to 700 psig
- Extensive processing equipment for:
 - Fluid, bulk, and melt mixing: High-shear batch and in-line homogenizers, tumbling mixers, batch and continuous extruders, bulk blenders
 - Powder dispersion and milling: Batch and in-line powder dispersers, ball and attrition mills, media mills
 - Size reduction: Mills, crushers, pneumatic jets and classifiers
 - Product separation and purification: Centrifuges, continuous and batch filters, batch distillation, chromatography columns, sublimation
 - Drying: Vacuum, spray, fluidized bed, flash and freeze dryers



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Our Commitment to You

We can help you realize the commercial capabilities of your material or process.

We offer the expertise of Chemical Engineers, Chemists, and Technologists along with support staff in the areas of mechanical fabrication, electrical, instrumentation, process control, and analytical services.

Our projects are administered using the Lean Six Sigma methodology, ensuring that you will acquire rigorous, accurate and fast results.

Bring us your challenges and we will help you uncover the solutions.

