



A World Leader in Column Flotation and Sparging Systems

Since the 1980's CPT engineers have designed hundreds of successful column flotation-separation systems worldwide.

Our column flotation systems are used extensively to improve our clients' process economics, through optimized circuit design, sparger selection and importantly, our careful attention to key operating parameters.

We deliver the processing outcomes that our clients want: higher recoveries and higher grades at lower capital cost, lower maintenance costs and reduced reagent consumption.

We know how to design and engineer column flotation systems that work. That's why major

mineral processors, worldwide, consistently choose CPT flotation columns and sparging systems.

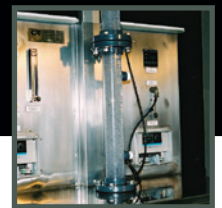
Benefit from our experience...

Our people are qualified mineral process engineers with years of process development and plant operating experience.

Benefit from our technology...

Our active development program ensures continuous advancement in flotation cell dynamics and air sparging technology.

Put our experience and technology to work for you.



PRODUCTS AND SERVICES

MINERAL FLOTATION

The concentration of minerals by column flotation is a key mineral processing technology. CPT has designed, supplied and commissioned over 500 flotation columns for cleaning, roughing and scavenging duties, worldwide, for metal and non-metal mineral processing operations.

ORGANIC RECOVERY

Used primarily in SX/EW (solvent extraction and electrowinning) circuits, CPT flotation columns recover the residual organic reagent (lixiviant) from rich electrolytic solutions prior to electrowinning.

OIL SANDS - BITUMEN

CPT, together with Eriez, is leading the development of advances in column flotation systems to recover bitumen in oil sands applications. CPT BitPro flotation columns are typically used in secondary and tertiary flotation stages, recovering valuable bitumen or returning cleaned process water.

OIL-WATER SEPARATION

Jointly developed with Chevron, the VOSCell® flotation column treats any petroleum effluent stream requiring a high degree of oil-water separation. Its vertical design and small footprint make it particularly suitable for offshore oil platform applications.

COAL

CPT has made remarkable advances in fine coal recovery with a column flotation and sparging system able to effectively float both classified and unclassified coal fines. CPT CoalPro flotation columns are used extensively in most major coal preparation plants in North America and are quickly gaining international acceptance.

MATERIAL HANDLING

The CPT rotating slurry powered distributor (RSP) accurately divides a stream of pulp into two or more equal and separate process streams, and is ideally suited for feeding multiple flotation columns or other process equipment. The 'no-motor', low maintenance design has made the RSP the distributor of choice for high flow, multi-stream distribution.

CPT SPARGERS IMPROVE COLUMN FLOTATION PERFORMANCE

Sparging determines the separation effectiveness of column flotation systems. The key is to generate the right number of bubbles of the right size at the right rate, and CPT spargers do just that in over 5000 worldwide installations.

CPT spargers are designed, engineered and optimized for each application to ensure the generation of the best possible bubble distribution pattern.

CPT provides spargers for a range of separation applications, including fine and coarse mineral flotation, liquid/liquid separation, oxygen service and air/water mixing duties.

SLAMJET®

CPT SlamJet® spargers are optimally suited for most mineral processing sparging applications, and are used not only on CPT flotation columns, but also as replacements for other less effective sparging systems. SlamJet® spargers are self actuating, adjusting automatically to supply pressure fluctuations and “slam” closed on loss of supply air.

CAVITATION TUBE

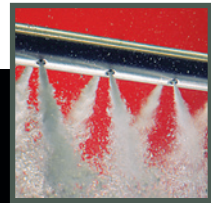
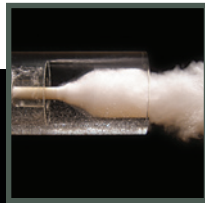
CPT cavitation tube spargers are externally mounted and use the principle of hydrodynamic cavitation, to generate pico-bubbles. Pico bubbles greatly aid particle attachment, substantially improving fine and coarse recovery of poorly floating particles while promoting lower reagent use.

POROUS METAL

Manufactured from stainless steel and available in a variety of configurations, these spargers are particularly suited for non-slurry applications like carbonation, aeration, oil-water separation, de-oiling, organics and gas-liquid recovery reactions. CPT porous metal spargers feature a uniform bubble size distribution at low pressure drop.

STANDARD AIR-WATER

Manufactured in thick wall stainless steel tube with tungsten carbide nozzle inserts, these robust spargers generate bubbles by mixing air or process gas with water in a common manifold. They are used primarily to add surfactants or other chemicals directly into the manifold resulting in optimum reagent usage.



Engineering and Consulting

Working with our clients, our team of qualified engineers is involved at every stage of the project and is able to expertly consult on:

- Metallurgy and process design
- Process flowsheet development
- Flotation column sizing
- Detailed process control development
- Application engineering
- Commissioning and training
- Maintenance and operating procedures

Mini Pilot Plant (MPP) System

The MPP is a laboratory sized pilot plant system more accurate than standard locked cycle tests, and has the processing power of a conventional full scale pilot plant.

Using only drill core samples a metallurgist can:

- Run continuous flotation test campaigns
- Simulate the continuous operation of rougher/scavenger/cleaner circuits
- Develop full circuit flow sheet designs
- Derive mass balances and circulating loads
- Produce full grade and recovery curves
- Test ore zone variability

Flotation Testing

In-Plant testing using columns ranging in diameter from 150 mm to 1200 mm is useful in determining flotation circuit design and performance, particularly the confirmation of key processing parameters including grade and recovery relationships, flotation kinetics, air loading characteristics and carrying capacity constraints. CPT offers a full range of testing equipment supplied as complete packages including test columns, pumps, control instrumentation, conditioning tanks and data acquisition systems.

The MPP system is modular, transportable and consists of:

- Batch Rod/Ball Mill
- Slurry Holding Tank
- Slurry Feed Tank
- CFM-12 Continuous Flotation Machine
- Flotation Column
- Regrind Pin Mill
- Reagent Dispensing System
- PLC-Data acquisition System

Design flotation circuits with confidence by extracting the maximum amount of metallurgical information from a minimum amount of ore sample.



The MPP Components



Canadian Process Technologies Inc.
Unit - 1
7168 Honeyman Street
Delta, British Columbia
Canada V4G 1G1
Tel: (604) 952-2300
Fax: (604) 952-2312



www.cpti.ca



CPT Brasil Ltda
Av. Afonso Pena
3111 Sl. 1500/1507
Funcionarios-CEP 30130-008
Belo Horizonte MG, Brasil
Tel: +55-31-3281-9108
Fax: +55-31-3227-6677