



## Charged Air Flotation

**Enprotec's** design experience and expertise has allowed it to develop the **NEW** Charged Air Flotation (CAF). The concept is similar to the use of froth flotation but under the CAF concept there is a much more sensitive control of the froth through the use of **Enprotec's** designed fine bubble diffuser. The fine bubble diffuser has a small amount of chemistry added to the bubbles to change the polarity of the bubbles that in turn enhances the particle attachment as the bubbles are introduced to the skim tank and float to the surface.

***"Enprotec's NEW CAF flotation technology has significant benefits"***

- *Treatability studies*
- *Analysis*
- *Capital and operating cost preparation*
- *Design*
- *Build*
- *Complete skid mounted/modular treatment systems*
- *Installation*
- *Parts management*
- *Client satisfaction*

- Proprietary 20-25 psi flotation air bubble generator
- The generator makes fine bubbles that compared to DAF pressurized recycle are:
  - More tolerant of process shifts
  - Less likely to coalesce - repel each other
- Bubbles are formed with a positive or negative surface charge to enhance attachment and coalescence with particles
- No coalesced or wasted air – all air used to float solids
- CAF captures particles too small for DAF. As a result there is greater tolerance of waste stream variation
- CAF floated solids are more stable than DAF and therefore do not have tendency to re-subside as the bubbles stay attached to the solids
- Total capital cost is less than conventional DAF
- CAF footprint is 10 – 60% of DAF
- Simple, automatic operation with immediate startup – **“ a significant advantage over DAF”**
- 25-75% less power consumption than conventional DAF
- CAF can be easily retrofitted to existing DAF'S to increase flow and/or efficiency

4465 Limaburg Road  
Hebron, KY 41048

Phone: 859-689-4300  
Fax: 859-689-4322

Tim Courtney  
tcourtney@enprotec-usa.com