CROWN Disintegration Process

NEWEA/NEBRA
October 23, 2014
The Crown Disintegration System Enhances Anaerobic Digester Performance

- Better volatile solids reduction – less solids to haul
- Improved gas production – more CoGen potential
- Improved dewaterability – less wet mass for disposal
- Minimize digester foaming – less O&M issues

**Result:** more efficient digester operation with annual savings in power and solids disposal.

Value can be quantified to determine if the process is a good fit.
How Does the Crown Disintegration System Work?

- Mechanical system for shearing floc, rupturing cells, and releasing enzymes to solution
- For best performance, treat a segregated WAS stream after thickening and before digestion
- Steps in the process:
  - Homogenization
  - Pressurization
  - High shear mixing
  - Disintegration nozzle
  - Recirculation
  - Discharge back to digester feed
How Does the Crown Disintegration System Work?
Crown Disintegration System
Crown Disintegration System
Economics of the Crown Process Are Impacted by Specific Plant Criteria

- Target Plant Criteria
  - Plant Size > 10 MGD
  - Plants with existing or planned anaerobic digestion
  - Plants that will be beneficially re-using biogas
  - High sludge disposal costs
  - High power costs
  - Ability to treat separate thickened WAS stream
Pilot unit available

Good data collection is critical

Sized for 26 gpm which equals 126,800 gpd flow to digesters
Contact Information

• Tom Mangione
• Technical Sales Manager – Anaerobic Digestion Products

• 2607 N Grandview Blvd, Suite 130
• Waukesha, WI 53188
• 262-378-1297

• thomas.mangione@evoqua.com