Fluid Technology Roundup

Mixing Systems
Manual to Automated
Batching Systems
Open System

- Mixers for blending NPK products with Micros.
  1. Mixer on load cells.
  2. Products weighed in one at a time.
  3. Agitator with baffles.
  5. Dry additions by auger, eductor or over top.
Open System
Batching Systems
Closed System

- Mixers for blending NPK products with Micros.
  1. Mixer on load cells.
  2. Products weighed in one at a time.
  3. Agitator with baffles.
  5. Dry additions by auger or eductor.
  6. Closed mixer to control heat, pressure or pH.
Closed System
Closed System
When to Automate

- To speed up production.
- Load out and cold blend systems.
- Eliminate human error on blending.
- Help inventory control.
- Continuous system.
- Help cut back on overhead / labor.
- Run multi systems at one time.
When to Automate

- Automate to speed up production and load out.
  1. Install meters on individual products to speed up production.
  2. Install custody sales meter on load out.
  3. Cold blend directly to tanker trailers.
  4. Unmanned load out system.
When to Automate
When to Automate
When to Automate

- Eliminate human error.
  1. QA/QC control
- Inventory recording and control
  1. Tons manufactured recorded daily.
  2. Raw material usage recorded daily.
  3. Printed mix tickets showing required vs. actual weights.
When to Automate
When to Automate

- Continuous Batching systems – When does it make sense.
  1. Total volume needed.
  2. Time table / window of opportunity.
  3. Logistics of raw materials – rail vs. trucks.
When to Automate
When to Automate

- Reduce overhead / labor cost.
- Run multiple systems at one time.
  1. Unloading system.
  2. Loading system.
  3. Batching system.
When to Automate
Questions

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