

Examples of Industries Served

- Centrifuge Manufacturers
- Pellet Mill Manufacturers
- Heavy Machine Manufacturers
- Irrigation Equipment Manufacturers
- Tool and Die Manufacturers
- Food Service Companies
- Medical Equipment Manufacturers
- Medical Researchers



Case Study

Opportunity:

A large wax manufacturer had a new idea. The company manufactures wax used for molding processes and receives a large amount of the used wax in return. Instead of disposing of this wax they wanted to separate the solids and reuse the wax. If the used wax could be processed and re-used it would greatly reduce their disposal costs as well as increase their profits. They approached a centrifuge company to create a solution. The centrifuge company then contacted Controlled Motion Dynamics with a request for controls to a centrifuge that would complete the wax manufacturer's goal.

Solution:

The controls needed the following equipment:

- Four Baldor VFD's (a 40hp main, a 20hp conveyor and two 5hp pumps)
- Two STI ultrasonic level transducers
- Two Bijur automatic bearing greaser systems
- Allen Bradley SLC5/05 plc
- Allen Bradley Panelview Plus operator interface

The operator has control of the centrifuge from the operator interface which includes, but not limited to, the speed of the main drive, the speeds of the two pumps, and the alarm levels of the solids and liquid output tanks. The speed of the conveyor is calculated in the program based on the main drive speed. The plc program constantly monitors the speed and torque of the main and conveyor motors and automatically adjusts them in order to maintain operator parameters. The centrifuge bowl and bearing temperatures are monitored for alarm conditions. The bearing greasers are controlled and monitored for low grease levels. The solids and liquid tanks are monitored for alarm levels.

Controlled Motion Dynamics helped to create one of the few systems in the country that reclaims used wax to reduce waste.

Overview of Centrifuge



Automatic Bearing Greaser

Control Enclosure



Holding Tank
Ultrasonics