Tilt Mixer VFD control

Erie Strayer Company

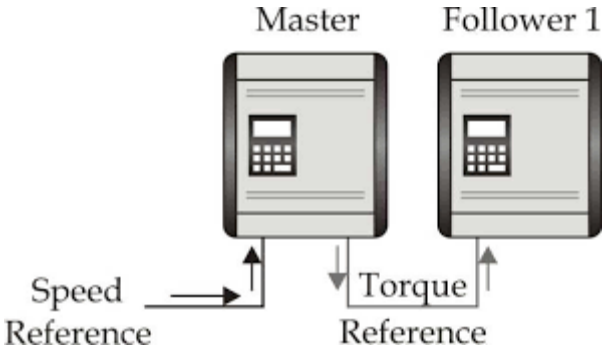
1851 Rudolph Ave.
Erie, PA 16502

(814) 456-7001 phone
(814) 452-3422 fax

TECHNICAL SERVICE BULLETIN ESC020120

ERIE Strayer is proud to offer the Tilt Mixer VFD controller for the ERIE tilt mixer. This control system provides the plant operator with adjustable mixer drum rotational speeds along with precise load sharing of each mixer drive motor. The mixer speeds are configured via a durable HMI interface that displays live mixer information along with a mixer load (slump) meter. The heart of the VFD system is the two ABB ACS880 VFD units that work in a master / follower configuration. The ABB ACS880 is the only VFD available that offers DTC (Direct Torque Control), this feature performes true motor load sharing, monitoring the motor load & speed continually. This in turn reduces power consumption along with increasing the longevity of the mixer drive components.

ABB ACS880



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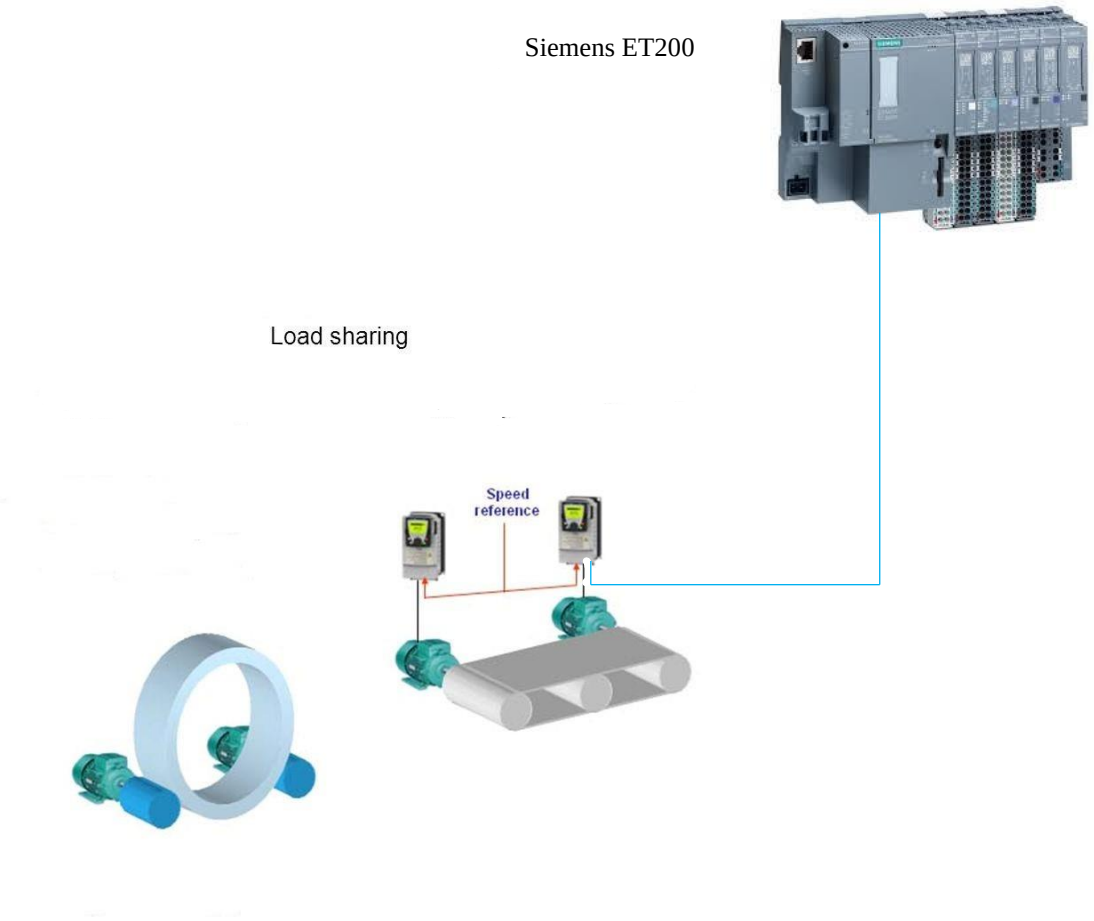

Using a Siemens ET200 PLC controller, the plant operator has the control to infinitely adjust four separate mixer drum speeds. Charging, tilt, discharge, and idle. With the adjustable speed controls, the tilt mixer speed can be slowed during tilting to minimize the amount of splatter around the discharge area. This aids in the cleanliness of the plant along with having a more controlled drum discharge. When the mixer drum is at full tilt, the drum speed can be adjusted to full speed to ensure all of the material exits the drum. Lastly, when the mixer sits idle for a set amount of time the drum speed will reduce to a power saving mode. This feature saves on power consumption, wear, and ultimately less maintenance of mixer components. As soon as the mixer drum receives a discharge signal from the plant control system, the drum speed increases to the set charging speed.

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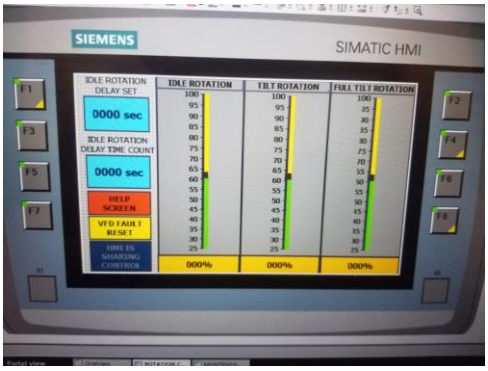
Speed Reference



Mixer Load Meter

The ERIE Strayer Tilt Mixer VFD also has two bypass modes built in to keep your mixer operational. The first bypass mode bypasses the PLC controller and allows the operator to use the VFD's in a stand-alone mode. This is useful if a failure with the PLC happens. The second bypass mode bypasses the VFD unit and operates the tilt mixer in across the line mode. This uses the motor starters to keep the tilt mixer operational if a failure with the VFD occurs.

Mixer Bypass Contactors

Mixer VFD Units

Contact sales@eriestrayer.com or service@eriestrayer.com for more info