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Lubrizol gets more consistent additive blends with ABB variable-speed drives

A specialist manufacturer of additives for automotive oils is achieving greater consistency in its testing of new blends as well as improved energy use following the use of ABB variable-speed drives.

Lubrizol Ltd of Derbyshire produces additives for fuels such as diesel, at its new blending facility. These additives include detergents, lubricity and combustion improvers, rust and corrosion inhibitors and chemicals that aid fuel stability and winter operability.

The company recently invested in 11 fume cupboards for the blending facility, each with three workstations, allowing three blends to be produced at each fume cupboard. Additives are blended using an impeller that mixes the chemicals to the right consistency at an appropriate temperature for the blend.

Richard Chadwick, Senior Control Engineer for Lubrizol says: "Depending on the constituents of the blend, the operators will run the impeller at different speeds and may also use different sizes of blending vessels and impeller. Previously, for this type of application, we had limited speed control, so the operators would tend to run the motors at full speed to get the blend to the right viscosity. It was very much down to the experience of the individual operator.

"We wanted to save energy and get more consistency so we wanted to use variable-speed drives on the applications."

Lubrizol approached ABB authorised value provider Inverter Drive Systems (IDS) to supply and install the variable-speed drives.

IDS installed a total of 33 ABB machinery drives, each of 0.55 kW. The drives allow Lubrizol to accurately control the speed of each agitator. This can be done manually utilising a potentiometer or by pre-set speed using the inverter keypad. It allows the operators to run tests for pre-determined times at particular speeds.

Says Chadwick: "As well as using the potentiometer to alter the speed according to their own experience, the key pad will help operators by allowing them to enter a specific speed that matches that potentiometer setting, say 600 rpm. We can therefore translate their experience into actual speed settings, giving more repeatability and making it easier to train new operators."

In addition to the drives, IDS also installed safety interlocks on the fume cupboards, preventing the inverter from being started if a motor is not present.

"We have worked with IDS for around nine years and they provide us with good local service with excellent technical support," says Chadwick. "We try to use ABB wherever possible and they offer a keen price as well as equipment that is easy to learn to use. ABB also offers reliable products and we have had very few devices fail."

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