

Reduce Ventilation Air Costs

The Customer

The Company is a manufacturer and supplier of coated and laminated films & adhesive products. These include polyester, polyolefin, polyethylene, and vinyl films and a multitude of acrylic, rubber and silicone performance adhesives. Their products are sold worldwide and used in such industries as aerospace, automotive, and advertising to name a few.

The Process

During the manufacture of the Company's products different inks, adhesives and coatings are applied onto a wide variety of surfaces including films, non-woven, felts and rubbers. The solvents in these materials are evaporated off in a heating process.

The Problem

The company was looking to reduce ventilation air and fuel costs without affecting production rates or violating the NFPA safety directives. They were using large amounts of heated air to ventilate the dryers to keep the solvent vapor concentration below 25% LFL as directed by the NPFA codes.



However, the codes allow a substantial reduction in air in cases where a continuous solvent vapor analyzer is installed. When such instruments are installed to continuously sample the exhaust of a dryer zone, the vapor concentration in that zone is allowed to rise as high as 50% LFL.

The Solution

The company chose to install PreVEx Flammability Analyzers on their dryers so they could run above 25%LFL. This allowed them to reduce costs while maintaining safety and production levels as well. They chose the PreVEx because they change their ink mix regularly and they did not want to have to recalibrate each time they did. With the "Universal Calibration" capability of the PreVEx, they don't have to recalibrate when these changes occur. This allows them to continue production and avoid downtime associated with re-calibration. The PreVEx gives consistent and reliable readings with multiple or changing solvent concentrations. The analyzer features fast response, failsafe operation, low maintenance and easy servicing.

After this successful installation, the Company has been adding analyzers to their plants worldwide.

Analyzer Placement

Each dryer on the printing press requires monitoring to detect the possibility of increased solvent vapor buildup in the dryer atmosphere due to reduction of ventilation air. The PreVEx Analyzers are mounted directly on each dryer to get the best representative sample with the fastest response time. The sample probe is placed in the duct for complete "duct-mounting".