

The Customer

State of the art printing presses are used to apply solvent based inks in different colors and patterns on paper, plastic, film and foil substrates. Finished products include all sorts of wrapping paper, wall covering, candy wrappers, and flexible food packages.

The Process

The printing press consists of several stations and each station has at least one dryer. The web of material is pulled off an unwind roll and passed through rollers that transfer the ink to the web surface. The ink can contain mixtures of toluene, IPA, MEK and other solvents. The web moves through each station where it receives a different ink coverage, color or pattern. After the ink has been applied to the web it is run through a dryer to evaporate off the solvents. A final top coat may or may not be applied to give the product a semi-gloss finish. The product is then wound and readied for shipment.

The Challenge

Large amounts of heated air were being used to ventilate the dryers to keep the solvent vapor concentration below 25% of the LFL as directed by the NFPA safety code. The Company was looking to reduce these heated air costs without affecting their production rates or violating the safety directives.

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

After some investigation and education on the applicable NFPA codes, the Company chose to install PreVEx Flammability Analyzers on their dryers so they could run above 25%LFL. The PreVEx analyzers have the unique ability to accurately measure the total flammability of all the constituents in the process and are not susceptible to coating or poisoning by resins or other plasticizers or silicones.



They are fully heated to keep all the elements in the dryer atmosphere in the vapor state eliminating clogging and sample condensation. They feature fast response, failsafe operation, low maintenance and easy servicing.

The installation of the PreVEx analyzers allowed the implementation of several money-saving steps:

- A reduction of ventilation air without affecting existing production rates or violating the NFPA safety codes
- An increase in production speed without increasing existing air or fuel costs