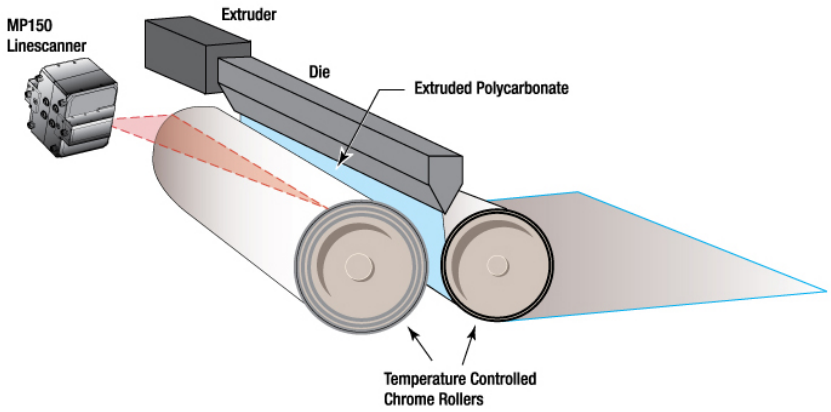
SUCCESS STORY 69

WEB MONITORING OF EXTRUDED POLYCARBONATE



Q How can you control the film thickness in a polycarbonate extrusion process?

A

Situation and background

A customer wanted to monitor and control the polycarbonate film thickness by controlling the pressure and temperature of chrome rolls used to extrude polycarbonate sold to customers in the electronics (CD) and construction (high grade plastics) industries. The difficulty was that he wanted to measure the temperature of the chrome roll, which was very shiny - making accurate infrared measurement difficult to achieve. After further discussion, it was determined that the polycarbonate product temperature could be measured with a Raytek® ES150 process imaging system. The output from the ES150 could be used as feedback to control the pressure of the chrome rollers, which is what the customer was ultimately trying to achieve.

The winning solution

- At the present time, the customer is using the scanner in a monitoring mode. He is looking for a temperature profile, since the proper amount of pressure is correlated with temperature in the heated chrome roll. If a temperature deviation of 5-8°C/10-15°F occurs, the customer will make adjustments to chrome roll pressure parameters to influence the process.

Savings made

Using the ES150 system, the customer can save on extrusion material costs by minimizing thickness variations in the film through optimized chrome roll pressure during the extrusion process.

KEY FACTS

Industry
Construction and electronics

Customer's End Product
Semi-permeable film manufacturing

Process Temperatures
200-300°C/392-572°F

PRODUCT AND BENEFITS

RAYTES150-P31

- Production cost and quality improvements with limited thickness variations