

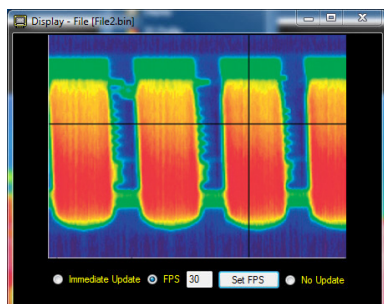
PET BOTTLE PRODUCTION



PET Bottle



Plastic preform parison for PET bottle production



Thermal image of a preform parison

The Opportunity

Today, polyethylene (PET) plastic is widely used as packing material in many industries. Especially in the food industry, PET containers come in many forms and shapes, some of which impose quite high demands on the production process.

Injection blow molding has established itself as the process of choice for the manufacture of hollow bodies such as PET bottles, for example. The temperature of the plastic parison is an essential factor in the production process. The preform parison is heated to about 250 °C, inflated to its final

shape by means of compressed air in the blow mould, and then normally transferred directly to the filling station.

If the parison is heated to long or too shortly during the first step, the material won't have optimum properties for further processing. For this reason a controlled heat-up process is indispensable. The use of a thermal imaging system is a major contribution to achieving this. It not only allows you to optimize your production process but also to realize cost savings on energy and materials.

Our Solution

MCL640 Thermal Imaging Camera – stationary solution for monitoring processes

- High resolution 640 x 480 pixel, long wavelength detector to optimize spatial resolution on even thin PET samples
- Acquisition of temperature values at a scanning rate of 50 frames per second

Real-time thermal imaging software LumaSpec™ RT

- Two-dimensional display of preform parison heat profile through continuous lines
- Recording of sequences in real-time and analysis and documentation of temperature values
- Real-time analysis of measured data, e.g. comparison of parison temperatures on the basis of user defined line profiles (across parison) or trends (critical areas)
- Automatic process monitoring based on measured temperatures by data transfer to main line control system

Your Benefits

- ✓ Precise measurement of preform parison during the high-speed production process
- ✓ Automatic process monitoring and control based on the temperature measured on the parison
- ✓ Optimization of production process
- ✓ Cost savings in terms of energy and materials used



For international contact information, visit advancedenergy.com.

sales.support@aei.com
+1 970 221 0108

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