

Lumenera's Industrial USB 2.0 Cameras Protect Injection Molding Machines

Manufacturers Look to Carefully Maintain Costly Injection Molding Machine

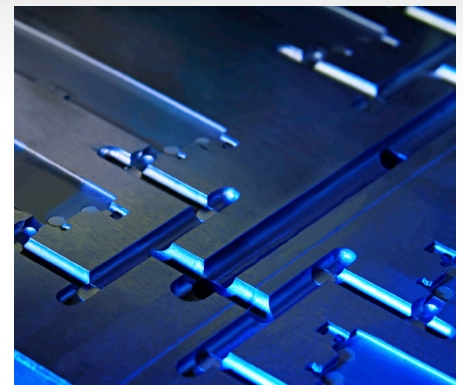
Injection molding is a widely used process for manufacturing a variety of parts from small components to an entire finished piece. Plastic material is fed into a heated barrel, mixed and forced into a mold cavity where it cools and hardens to the configuration of the mold. A plastic injection molding machine can cost an organization \$100K - over half a million dollars. Molding plates add anywhere from several thousand to over \$100K for a single design. As machines of high monetary and production value, manufacturers are keen to ensure they are carefully maintained and protected.

Lumenera's Lu105M USB 2.0 Industrial Camera Chosen to Prevent Damage

A well known mold inspection equipment provider has developed a machine vision system that utilizes Lumenera's Lu105M USB 2.0 industrial camera to protect these machines and parts from costly damage, lost production time and delayed deliveries. Lumenera's megapixel USB 2.0 cameras have been implemented to:

Ensure a Proper Seal: Lumenera's industrial cameras are used to detect any piece that remains between the two mold halves and prevents a proper seal. As the pressurized liquid polymer is forced into the improperly sealed mold, it will spray out from between the mold halves, possibly damaging moving parts within the injection machine and potentially causing harm to operators in the immediate vicinity.

Reveal Misaligned Inserts: Misaligned inserts such as the metal shafts on a screwdriver can also cause serious damage to the mold plates, and if the insert is substantial enough it may also damage part of the hydraulic system.



Highlights

- Plastic injection molding machines can cost an organization \$100K to over half a million dollars and need to be carefully maintained and protected.
- Lumenera's Lu105M USB 2.0 industrial cameras protect machines and parts from costly damage, lost production time and delayed deliveries.
- Using the Lu150M allowed an organization to prevent serious damage to the injection machine caused, reduce operator labor costs and reduce the potential for harm to operators.
- Other Lumenera cameras that are ideal for this type of application include the Lu175C, Lw235, Lm075 and Lm135.



Lumenera's USB 2.0 megapixel cameras take an image of the open mold. If a misaligned insert is detected, a signal is quickly issued to prevent the press from closing, avoiding the possibility for extensive damage to the molding plates and machine.

Detect Flash & Short Shots: Lumenera's USB 2.0 cameras are used to detect flash and short shots by taking images of the mold.

Flash is a condition whereby the liquid polymer is being forced out of the mold cavity into the space between the mold halves. If a flash is detected, the mold inspection machine is immediately stopped and the condition causing the flash can be remedied before too many defective parts are manufactured.

A short shot is a part that is not fully formed. Typically this is caused by an insufficient amount of liquid being injected into the mold. A blocked feed line may be the cause of a short shot. Detecting a short shot condition as soon as it occurs allows the machine to be shut down and the blockage cleared before too many defective parts are made.

Lumenera Allowed Manufacturer to Reduce Costs and Improve Efficiency

By integrating Lumenera's Lu105M USB 2.0 industrial camera into their machine vision system, this provider was able to:

- Prevent serious damage to the injection machine caused by non-ejected parts and misaligned inserts
- Reduce operator labor costs
- Reduce the potential for harm to operators
- Lower scrap costs by monitoring for flash and short shots
- Prevent damage by detecting non and partially ejected parts and misaligned inserts
- Reduce lost production time and delayed deliveries

Other Lumenera cameras that are ideal for this type of application include the Lu175C, Lw235, Lm075 and Lm135.

Lumenera's Lu105M Digital Camera



About Lumenera

Lumenera Corporation, a division of Roper Technologies, headquartered in Ottawa, Canada, is a leading developer and manufacturer of high performance digital cameras and custom imaging solutions. Lumenera cameras are used worldwide in a diverse range of industrial, scientific and security applications.

Lumenera solutions provide unique combinations of speed, resolution and sensitivity in order to satisfy the most demanding digital imaging requirements. Lumenera customers achieve the benefit of superior price to performance ratios and faster time to market with the company's commitment to high quality, cost effective product solutions.

For further information about Lumenera, please visit www.lumenera.com or call 613-736-4077.

