The ability to assure customers of its film quality has helped Spanish flexible packaging processor Envases del Vallés (EDV) Coex keep ahead of its competition.

Clients such as Danone, Kraft, Nestlé, Heinz, Oscar Mayer, and Ferrero today expect their vendors to check quality before delivery, rather than have their own employees perform the task.

That led EDV to install optical inspection systems on its five cast-film lines. These produce modified-atmosphere packaging film in up to seven layers, generally polyethylene/PET/EVOH combinations, or long-life, multilayer polypropylene film for thermoforming packages that can offer one-to-one-and-a-half-year freshness.

“Our customers didn’t ask us to buy a particular system: they just wanted a solution to problems of gels and black specs in their end product, which was affecting packaging equipment, printing, and package appearance,” says Andrés Carol, EDV production director.

The 160-employee processor, based in Llinars de Vallés, near Barcelona, is a leading producer of coextruded food packaging films with a turnover of €36 million from processing plants in Spain and Australia from which EDV exports globally.

Carol says regardless of how well you process or how good your operators are, from time to time films will have problem gels, black specs, fish eyes, holes, streaks, dust or dirt, insects, scratches, or other optical distortions that are all unacceptable to finicky customers. EDV solved the problem by installing web inspection systems from German producer Optical Control Systems (OCS; Witten), first on one line in 2002 and the others in 2004. EDV uses the quality assurance it gains from such systems as a selling point with its customers, says Carol.

“You can’t expect an operator to work a shift and constantly keep his eye on quality of the melt coming out of the die. However, the inspection units are impartial and insensitive to being tired at the end of a shift, having to check something else down the line, or wanting to take a break,” he says.

EDV decided on film inspection because it feared losing business, especially one customer that required confirmation that EDV’s coextruded film met...
its standards. The customer wanted a record of product quality, which online inspection provides. Carol admits operators initially were skeptical about inspection systems but says now they rely on and trust them.

Oliver Hissmann, OCS sales manager, says an optical inspection system can’t solve film defects, but it can locate them so a processor can cut out the offending section or simply label and document where, for example, a gel shower occurs so that a thermoformer can simply let that section run through its equipment without forming and start forming again once good film comes off a roll.

Such systems also reduce reaction time by alerting an operator immediately of problems, giving him the chance to adjust extrusion pressure or other settings; clean the die lip; or change a filter. This, says Carol, saves the company money by eliminating scrap.

EDV’s Technical Director Daniel Tudela says it can be difficult to determine payback time for such a system. “The important thing for us was to reassure our customers of the product quality they source. You can’t put a monetary value on that,” he says. “The worst-case situation for us would be a €50,000 loss because of black specs [where] a customer simply rejects an entire shipment if a problem is found in one roll. We would have to replace each roll of sheet—time lost for us in production and the customer’s loss as well, and there is a chance that future business with that customer could be in jeopardy.”

Tudela says such a loss could spread to other customers since they tend to talk among themselves. EDV has set the most demanding tolerance allowed by one of its customers as its standard for all its products. Types and sizes of defects are programmed into the control unit, which learns and remembers errors as they occur.

Setup and calibration of the web inspection systems in 2004, which included upgrading the original unit and software changes, took five days including mounting frames. Carol says only weekly cleaning of lamps and camera housings is necessary and this is integrated into general maintenance downtime.

Because EDV runs both pigmented and clear films at different times on the same extrusion lines, the company opted for dual-purpose inspection cameras set at different angles. Carol says the investment has saved EDV substantial time and money. “We don’t regret it one bit.”

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