

EGISA (Barcelona/Spain): Gluing of high-grade folding boxes thanks to Openair[®] plasma technology

On its Bobst Alpina folder-gluer machine the Catalan company EGISA produces high-grade boxes that are securely bonded by means of integrated plasma.

EGISA (Envase Gráfico Industrial SA) was founded in 1965 in a suburb of Barcelona (Spain) and today, for the second generation, is managed by the Labori family. The company is wholly owned by the family and employs 150 people. 40 % of turnover is generated from the export of products having a high value-added content. Its recipe for success is based on its aspiration for long-term quality and the fusion of "Art and Technology".

Accordingly strict, therefore, are the quality criteria along the entire production chain. The machine inventory is up to the latest state of the art and is maintained by trained specialists. At the same time the relationship between the company and its staff plays an important role and, like enduring customer relationships, is one of EGISA's highest priorities. The die-cutting machines (SP 102-EII, SP 142-E and SPanthera 106 LER) , the embossed film printing presses (SP 102-BMA and SP 126-BMA) and the Alpina folder-gluer machines with Gyrobox rotary module are sourced from the Swiss manufacturer Bobst.

TECHNOLOGY IN THE SERVICE OF ADHESIVE BONDING. EGISA seeks solutions for obtaining the desired high-grade production quality. "Only by using mature top-level technology can demanding production processes such as coating, counterfeit-proof coding of products, embossing, painting, hot-film embossing and gluing windows into place be carried out." The multifaceted process sequence ranging from printing to the adhesive bonding of the

boxes has prompted EGISA to implement new ideas. In the opinion of Carlos Labori, the company's General Director, the gluing process, despite its considerable potential for improvement, is very often neglected. Poorly glued boxes are worthless. The fact that in comparison with other processing materials, relatively low-cost adhesive when incorrectly used can wreck an order is another important aspect. Furthermore, in their countries of destination the boxes produced by EGISA must withstand extremely high heat and atmospheric humidity. Especially in the case of painted, laminated and metallised cardboard there is a risk here that the boxes will open. Thorough knowledge of the adhesives and their properties, use and proper processing are important advantages.

Thanks to Openair[®] plasma technology EGISA can now ensure that right up to filling its blanks are perfectly glued. Prior to application of the adhesive the gluing flaps of the box are cleaned with the aid of an ionised beam of air. In doing so it does not matter whether the boxes are made of acetate, PP, PE or painted material.

Organic residues are removed and the surface tension of the polymers is increased (water absorption capacity). When the surface tension is high the adhesive sticks strongly over the entire surface and forms a homogeneous and highly durable bonded joint. "Adhesive is not expensive but a poor glued joint ruins all the work, i.e. printing, gold film embossing, hot film embossing and die cutting.

The added value of the box here amounts to about 98 %. Accordingly, the adhesive must adhere perfectly to the box." declares Carlos Labori.

EGISA has been a customer of the Swiss manufacturer Bobst for many years. The company purchased the first embossed film printing press in Spain and with their Alpina folder-gluer machine the



Fig.1. Ramon Vera, machine operator of the Alpina folder-gluer machine + Gyrobox



Fig. 2 Carlos Labori, General Director, and Ramon Vera



Fig. 3 Carlos Labori, General Director, and Alfonso Mateo, Cardboard Sales Director

EGISA possesses the requisite technical know-how. The Openair® plasma technology which had already been put into service some time before increases the efficiency and quality of the manufacturing process. The Bobst Alpina folder-gluer machine with Gyrobox rotary module today operates with up to four ionised air beams and takes care of the processing of complex boxes in a single operation. With their aid EGISA can fulfil all the requirements of their customers and deliver products of outstanding quality. The machine operators also benefit from the advantages of this system. Since hitherto the results of their work were only evident at the time of filling the machine operators had to monitor the manufacturing process very precisely. The plasma treatment which increases the surface tension of the cardboard and hence facilitates the gluing together of the layers of material provides some relief for the machine operators who can now direct their full concentration at overall production quality.

hundredth Gyrobox module. As the exclusive representative worldwide of Openair® Bobst was also able to supply the latest plasma technology. With its investments in top-level technology EGISA is pursuing an integrated strategy: optimised quality assurance over the entire production chain.

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Fig. 4 M. Montoliu, EGISA Plant Manager, and Alfonso Mateo, Cardboard Sales Director, and Jordi González, SPanthera operator