Keeping a close eye on quality

A byword for quality in the extrusion sector, Breyer GmbH is one of Germany’s most established and forward-thinking businesses. Today, the company is recognised throughout the world as one of the leading manufacturers of systems for the processing of thermoplastics and has specialised in economically working extrusion lines.

With over 320 employees, Breyer produces an impressive turnover of approximately Euro 65 million; while export covers about 90% of the company’s business. We spoke to Joachim Bormann and Rolf Preuschoff.

PES: Welcome to the magazine. Would you first like to introduce your company and explain how you serve the PV market?

Joachim Bormann: Breyer is a family-owned company with about 320 employees. The machines sold by Breyer are developed, designed and manufactured by the company themselves. To ensure a perfect film, Breyer developed a special processing unit to combine a high output with minimum shrinkage.

Full support is offered, starting with TÜV-certified recipes, while a dosing system up to the winder completes the Breyer Machine program. Furthermore Breyer offers the manufacturing of EVA film on their production line for pre-marketing.

In this way, customers can make progress within the market before they start with their own production.

PES: How much of your organisation’s entire business is PV focussed? Is the sector a priority for you?

Rolf Preuschoff: About 20% of Breyer’s business is related to the PV market, and the thinking behind this is our high priority and high knowledge. Breyer has its own full-scale lab line and a fully-equipped laboratory that enables us to have test runs with customers. The products can be checked on site. Also, we have close relationships with several panel-makers that enable us to provide the best support to Breyer customers.

PES: Can you tell us a little about your operation in China and your plans for this region going forward?

Joachim Bormann: Actually Breyer has two lines installed in China. And in addition
to these lines, Breyer supports the customer with the formulation of Ultra-Fast-Cure Film, inline edge trim-feedback and a TÜV-approval assistance.

PES: And how important is Europe to your long-term plans? Is there a particular region that is more encouraging than others for you right now?

Rolf Preuschoff: Breyer works closely with European EVA manufacturers as well as manufacturers of alternative materials. However, at the moment, the main growing market is Asia. A number of the companies have transferred their business to China, while locating parts of the development process still in Europe.

PES: In the past, the production of EVA film has been complicated by shrinkage. How have you eliminated this problem?

Joachim Bormann: Breyer has developed a complete new machine – the so called “processing unit”. This unique machine, which is the heart of the line, enables the customer to run high output in combination with low shrinkage at a minimum power usage.

The processing unit has the highest flexibility to personalise the EVA-film in nearly all requested designs. The size of the machine, usage of power, flexibility and online recipe modification is unique. In addition, a high safety strategy is implemented on board.

PES: Similarly, this new extrusion line can be considered a ‘greener’ production method. Can you expand upon this?

Rolf Preuschoff: The processing unit does not need any annealing furnace or similar equipment. It is a closed system that just requires electricity at a low level. During production, only approx. 0.8kW/kg is required. And water is required just for filling the system.

PES: The company has a distinguished history that dates back to 1949. How have the demands of your customers changed over the years?

Joachim Bormann: In the beginning (1949) Breyer served the local industry with auxiliary tools. In 1959 the first screw for acrylic sheet production was manufactured. Complete machines followed. Breyer becomes a leader in manufacturing extrusion systems for crystal clear sheet mad out of PMMA and PC. Later on, film lines for manufacturing thermoforming sheet (out of PS, PP) as well as tube lines for the cosmetic industries followed.

The demands have changed in this way that the requirements for optical quality have risen. That came from the display industry which used the clear sheet as back light units in flat TV as well as LED lighting applications today. Also the requirements for film below 500 µm for optical applications was a challenge for the machine development.

PES: What kind of signals are you getting from further up the value chain (i.e. module manufacturers) regarding the current state of the market? Are we starting to ‘turn the corner’?

Rolf Preuschoff: The module maker is interested to run their machine with a trouble free encapsulant; an encapsulant which shrinks during the laminating procedure, wastes the complete module. Furthermore it should be produced in an economic way in order to match the target to lower the entire production costs of the modules.

PES: Quality standards at the manufacturing equipment and materials level are vital to the long-term success of the industry. What measures do you take to maintain high standards in your output?

Joachim Bormann: Breyer is known as suppliers of high quality extrusion systems. An in-house quality management as well as the use of only quality parts that are made in Germany ensures this standard.

A Breyer system allows the customer to serve their market for years with high quality products. An extrusion system is like a tool. Since the entire production costs of a single square meter of sheet resp. film is mainly related to raw material and not to the invest costs, it makes sense to invest in a sophisticated tool which guarantees perfect products and save finally plastic material and production costs.

PES: Can you tell us a little about the services you offer to support the life-cycle of your products?

Rolf Preuschoff: Because of the basic high quality of Breyer systems, a long life-cycle is secured. A regular maintenance programme that is carried out just once a year is sufficient to extend the life-cycle as well.

Since we use only components from well known and international suppliers, customers can help easily themselves to the parts they need. Furthermore, we provide remote servicing to our machines via internet connection.

PES: We note that the company’s extrusion products have recently been certified by TÜV. What does this mean for you and your customers?

Joachim Bormann: Breyer’s customers are assured by that mark. The products have been pretested and fulfilled all challenges, even from TÜV. There will be no delay for new starters. Breyer is able to show a full-scale machine at its own premises. So customers can come to test and have pre-production while the machine for the customer is still under manufacture. This reduces the time to market.

PES: What are your thoughts about prospects for the coming year with regard to your organisation, and the solar/PV industry in general?

Rolf Preuschoff: Breyer has a number of new developments in the area of extrusion and system technology for interesting applications.

Since the solar market is growing worldwide and every year several hundreds of MW are installed, we expect that the solar market – and particularly the production of modules – will permanently grow, and therefore also the requests for new machine installations will follow. Certainly, there will be a market validation where only the stronger and bigger companies will survive, especially among the makers of encapsulants.

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