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Main image: The 30m long ProTec LFT line installed at the Suzhou plant of Chinese compounder Suzhou Hechang Polymeric Materials (HCJH)

China's HCJH targets LFTs

*Suzhou Hechang Polymeric Materials (HCJH)'s recent investment in a ProTec LFT production line is helping it meet the demands of local automotive firms, writes Karin Luxem**

Chinese-based compounder Suzhou Hechang Polymeric Materials (HCJH) manufactures a range of engineering and LFT compounds at its production plant at Suzhou, in Jiangsu province. The company, which was established around 25 years ago and generates sales of more than RMB610m (€80m), has been running an LFT production line supplied by ProTec Polymer Processing for the past 18 months supplying to customers in the automotive and appliance industries.

The focus of the HCJH compounding business is on custom solutions for specific customer applications. It holds 35 patents and around 60 of its 220 staff are employed in technical roles, many in its on-site R&D centre. "We compound polymers to create novel, high quality materials which are innovative and environmentally friendly", says Vice General Manager Shi Yaoqi. "At present, we are focusing on lightweight and heat-resistant materials and long fibre reinforced plastics."

The company installed the ProTec line to increase its LFT production capacity. Commissioned in the spring of 2017 and in full production by the late summer, the 64-strand line has a throughput of up to 1,000 kg/h, depending on the recipe, and has near doubled HCJH's LFT produc-

tion capacity. It was supplied with a Somos Gramix gravimetric dosing and mixing system, also supplied by ProTec, and was integrated with an existing extruder.

HCJH is currently using the line to produce PP/glass fibre LFTs primarily for automotive sector customers producing structural parts such as front-end modules, instrument panel carriers and sliding roof frames. Fibre lengths correspond to the pellet length, which is typically 10 to 12 mm, and the line can handle glass fibre contents of up to 65% (HCJH is currently producing 30, 40 and 50% commercial products).

"We were looking for a line capable of combining high speed production with good pellet quality", says Yaoqi. "Top quality is crucial on the Chinese LFT market, in particular for our customers in the automotive and household appliance industries."

As standard, a ProTec LFT line consists of a creel unit that holds and simultaneously unwinds a number of fibre bobbins, a chucking

Right: HCJH Vice General Manager Shi Yaoqi: focusing on lightweight compounds and LFTs



the customer and to the dimensions of the production shop in Suzhou where the approximately 30 m long line was to be set up. The dosing unit was mounted on the extruder using a special flange to save vertical space.

ProTec integrated the existing extruder control into the line controller to enable retrieval and direct adjustment of rotational speed and temperature via the touch panel.

The controller also stores the extruder parameters for each formulation, which simplifies operation. "The line is very simple to operate and is extremely reliable", says Yaoqi, who emphasises the uniform fibre impregnation it is achieving and the flexibility in formulation and possibility of fully automated operation.

While the line is currently being used to predominantly produce PP LFT grades, HCJH's ongoing R&D activities include development of products based on PA, ABS and PBT matrix resins. > www.sp-protec.com

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device with combs for guiding and tensioning the fibre strands, and an extruder for melt preparation. In addition, there is a die for impregnating the fibres with the polymer melt and a water bath for cooling the coated strands. A puller drive unit conveys the fibre strands, which are chopped to length in a pelletiser.

A central control module with touch panel regulates the individual components of the line, for example automatically coordinating them in the event of a variation in line speed or change in pellet chopping length.

The LFT line was adapted to local circumstances at ProTec, for example to the extruder provided by

Above: An automotive front-end module produced in LFT-PP

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