

PROELL TECHNOLOGY CENTRE

Dr Hans-Peter Erfurt at Proell GmbH, reports on the capabilities of the company's Center covering R&D, testing and customer experience



Dr Hans-Peter Erfurt, Manager – Technology, Proell GmbH

Proell was founded in 1938 in Bavaria, Germany. The company is a medium-sized enterprise employing 150 people worldwide. There are 105 colleagues who work, develop and produce innovative printing systems in the Weissenburg headquarters. Proell is an R&D-driven company. Its core business is the development and production of customised chemical products for printing plastics, glass and metals.

Proell's innovative UV-curing, solvent and water-based screen-printing inks – as well as pad-printing inks – are used for industrial and graphic applications.

Industrially customised printing applications are the company's core competence.



Backmolded Center console part

TECHNOLOGY

In the film-insert-molding (FIM) sector (Technology), a wide range of ink systems, adhesion promoters, dual-cure protective lacquers and non-conductive black-screen printing inks are available. These are used for the decoration of automotive interior

parts and display panels for household appliances.

Proell screen-printing inks show excellent printing properties, high formability and very good back-molding performance. This is the case, even as a one-component ink such as NORIPHAN HTR N.

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Proell Center in Weissenburg /Bavaria



High pressure formed film, different printing design



Screen printed PC film (left), high pressure formed film (right)

NEAR-SERIES DEVELOPMENT

The Proell Center in Weissenburg (Bavaria, Germany), stands for near-series development work along the entire process chain. Construction of the centre began in 2021 and was gradually put into operation the following year.

Here, too, Proell stands for continuous development and expansion of possibilities. In addition, the increasing demands of customers and the company's own drive for future-proof ink and lacquer-system developments are considered.

“Proell is an R&D-driven company”

EQUIPMENT AND PROPERTIES

The centre is located in a large production cell directly adjacent to Plant II at the Proell headquarters in Weissenburg, Germany. Covering an area of around 250m², the centre has a comprehensive range of technical equipment at its disposal. This includes a computer numerical control (CNC) milling machine and a cutting plotter for preparing the printed films for forming. It also has a Niebling high-pressure forming machine, a film-punching machine and two injection-molding machines. This equipment can be used to perform all relevant process steps in technology.

Equipment at the Proell Center:

- Zünd cutting system
- Niebling SAMK 400 high-pressure forming machine
- Niebling Eccentric Press NT
- 350 to SmartPower Wittmann Battenfeld, plus robotic-handling system
- 110 to Allrounder 470 S Arburg injection-molding machines, plus robotic handling system

QUALITY CONTROL

Proell's experts use state-of-the-art technology. A significant advantage of the centre is the ability to check the quality of the ink-layer structure directly on site with customers from the supply chain. Thanks to fast processes and flexible design of relevant influences, the customer's development times can be reduced.



Proell Center – Niebling high pressure forming of screen-printed films

“The response from the industry has been very positive”

Plastics processing is optimally supported here by the company's own printing department. Its comprehensively equipped printing centre has half and three-quarter automatic screen-printing machines with maximum format sizes of 70cm x 100cm. Water-based, solvent-based, UV-curing and dual-cure ink and coating systems can be printed, dried, cured and tempered.

“Proell's experts use state-of-the-art technology”

SERVICES OFFERED

The services offered by the Proell Center include supporting development departments with ink property testing, addressing specific customer issues and testing new film types and injection-molding granulates.

The target group ranges from innovative customers to internal parameter reviews. Additionally, crucial support is provided for future product developments at Proell. This test platform is already a valuable building block for success.

INDUSTRY RESPONSE

The response from the industry has been very positive. Both training courses and technical services are in high demand. Customers and partners use the Center specifically for training purposes. For example, to test different ink-layer structures, forming processes at different temperatures or low-melt, injection-molding compounds that can minimise ink washout.

Film, printing ink and granulate are considered as a single unit at the centre, in line with customer applications.

CONCLUSION

In the long term, at the Proell Center, the industry benefits in particular from the opportunity to test problems and ink systems directly. In addition, the centre can help to develop solutions under optimal production conditions. ■

Dr Hans-Peter Erfurt is Manager IMD/ FIM-Technology at Proell GmbH

NORIPHAN is a registered trademark of Proell



Proell Center in Weissenburg /Bavaria

Further information:

Proell GmbH, Weissenburg, Germany
tel: +49 914 190 636
email: hans-peter.erfurt@proell.de
web: www.proell.de