

IBA GmbH: Combined PE-Xa and PE-Xb pipe in a one-stage production process for the first time

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IBA GmbH has again underlined its position as important stimulus in the extrusion industry. iBA is the responsible Engineering Partner for the **first project worldwide** of its kind featuring a **PEX pipe extrusion line for the production of a combined 5 layer PE-Xa and PE-Xb pipe**. The customer has specific requirements in view of the production process because the floor heating pipe to be produced is composed exclusively of EVOH and PEX layers. The specific feature of this kind of pipe is that the **EVOH layer is protected outside by a PE-Xb-layer**. This is an additional quality feature. Technically, the production of such a pipe is **based on the onestage PE-Xa extrusion process by iNOEX**.

A **peroxide conveyor station** adds the necessary peroxide quantities to the process. The dosing station exactly tunes measurement, conveyance and mixing. A **twin-screw extruder** is used to obtain optimum melt properties. For cross-linking the pipe, the extruded product is led through an infrared oven. Measurement of cross-linking degrees is controlled afterwards to check whether results conform to set parameters. **During the successive co-extrusion process**, an **adhesive agent** is added first, followed by the **EVOH layer** which is impervious to oxygen, then again by an **adhesive agent**. Subsequently, the **PE-Xb layer is added**.



On top, two differently coloured stripes are extruded into the PE-Xb layer. Finally, digital ultrasonic measurement records the overall geometry of the product. All measuring data is documented and provides detailed evidence on quality features. **In total, 7 extruders produce a 5 layer product including 2 colour stripes**. The overall management of this project is with iBA. Special know-how on the optimization of existing processes and process engineering or as in this case on the definition and execution of completely new production engineering. The present example requires **innovative process engineering** in order to comply with the customer's requirements for the product. The customer's advantage: he has got only one management to contact for all components which gives him the opportunity to fully concentrate on his production process.

iBA GmbH which was founded almost **30 years ago** sees itself as a trendsetter in the extrusion industry. Globalization, new process solutions, new products and innovative technologies keep the extrusion market in motion. **iBA ensures that these trends set companies in the extrusion field into a positive swing**.

Increases in efficiency, technology transfer, quality assurance and market expansion are close to follow.

IBA which was the base for the foundation of iNOEX in 1985, offers expert know-how in process engineering, products, engineering and moreover, a distinctive competence in systems engineering. Established processes are examined for optimization and consultancy is provided for setting up complete new production lines. **iBA sees itself in line with Newtons law of linear momentum**: pulses which are set must not fade away but need to transfer impacts of the same energy. In this case impacts are positive results and an interesting return of investment.

Contact: www.iba-extrusion.de, info@iba-extrusion.de, jutta.kleinmanns@inoex.de.