

### INNOVATIONS IN PIPE EXTRUSION WITH KRAUSSMAFFEI BERSTORFF

## Success stories back up innovation leadership

**Munich, August 11, 2010** – In the pipe extrusion sector there's a definite trend away from single-layer standard pipe and towards multilayer pipe with the extra functional layers. Pipe producers around the world are turning to innovative concepts from KraussMaffei Berstorff, for example, to produce PP-R fiber-composite pipe or PP foamcore pipe. They're benefiting both from improved production processes and from cost savings.

In Turkey, KraussMaffei Berstorff is market leader in multilayer pipe extrusion systems. Companies such as Pakpen Plastik Boru ve Yapi, which is among Turkey's largest pipe producers, produce PP-R fiber-composite pipe on KraussMaffei Berstorff lines. The pipe has several applications, among them for hot water supply. Other KraussMaffei Berstorff customers producing PP-R fiber-composite pipe include some of the big Russian pipe producers, such as Politek Ptk or Politron, and Estonian pipe producer Gallaplast. All these extrusion lines are headed by single-screw extruders from the 36D series with multilayer tooling and material-specific calibration and cooling systems.

### Striking advantages

Three-layer PP-R fiber-composite pipe has some clear advantages over conventional hot water pipe; the hot water passing through them causes only minimal longitudinal expansion. This makes them far easier to lay, because the installer need not allow for expansion in his choice of connecting fittings.

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**PP-R glassfiber-reinforced pipe for hot and cold water applications**



**PP foamcore pipe**



**3-layer structure of a PP foamcore pipe: thin compact inner and outer layers, foamed middle layer**

In addition, the extra stiffness of PP-R fiber-composite pipe means that the fixing clips can be spaced further apart than in the case of unfilled PP-R pipe.

The 3-layer foamcore PP pipe used in domestic applications has weight and cost advantages over single-layer compact PP pipe with the same dimensions and ring stiffness. The lower density of the foam layer can result in raw material savings of over 20% compared with compact pipe. Considering that raw material costs can account for as much as 90% of the total manufacturing cost of plastic pipe, savings of this magnitude are highly relevant.

Pipe producers continue to rely on solutions from KraussMaffei Berstorff. One recent order came from a pipe manufacturer for an extrusion line to produce chemically foamed PP foamcore pipe to be used for domestic waste water.

#### *Photos*

*Photo Glasfaserverstärkt.jpg:*

*PP-R glassfiber-reinforced pipe for hot and cold water applications*

*Photo PP Schaumkernrohr.jpg*

*PP foamcore pipe*

*Photo Dreilagiger Aufbau 0710.jpg*

*3-layer structure of a PP foamcore pipe: thin compact inner and outer layers, foamed middle layer*

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### **KraussMaffei company profile**

In terms of sales, KraussMaffei is world market leader in machines and systems for plastics and rubber processing. With its three divisions – Injection Molding Technology, Extrusion Technology and Reaction Process Machinery – KraussMaffei is a premium partner for the plastics and rubber processing industries worldwide.

The group markets its products under the KraussMaffei, KraussMaffei Berstorff and Netstal brands. The KraussMaffei brand covers the whole spectrum of injection and reaction molding technology, while the KraussMaffei Berstorff brand stands for successful extrusion solutions. The injection molding machines of Netstal, our Swiss subsidiary, meet the highest of requirements imposed on process implementation, parts quality and production performance and are mainly used to make highly sophisticated technical and thin-walled plastic parts. With over 100 years' of expertise and know-how in machinery for plastics and rubber processing, KraussMaffei is today a major technology and process partner for industry. The group offers a wide range of solutions that includes specialized and fully integrated turnkey systems. Headquartered in Munich, the company operates a worldwide network of 140 subsidiaries and sales agencies, and deploys over 570 service technicians, ensuring fast response and closeness to customers everywhere.

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