Continuous production of PU-insulated pipes

KraussMaffei Berstorff is now offering complete systems for continuous production of PU-insulated pipes. The pipe, made of PE-HD, PE-X, PE-RT or PB, is produced on a conventional pipe extrusion line.

Optionally, a barrier layer can be applied. The pipe coming off the line is wound onto large steel drums. In the second production system unit, the pipe is unwound from the steel drums, heated if necessary, and fed under tension into a shaping conveyor.

A PU mixing head dispenses the polyurethane mix at the inlet throat. The aluminium shaping jaws define the outer diameter of the insulation layer by limiting the foam volume. A film prevents the PU from adhering to the aluminium shaping jaws. Once the PU insulation layer has cured, the pipe leaves the shaping conveyor and a PE outer sheath is applied, using a single-screw extruder with a sheathing die.

This outer sheath is cooled, the whole composite pipe is hauled off and wound on a drum. The system allows the integration of anti-diffusion barrier layers and/or wires to monitor leakage. Producing insulated pipe in a continuous process has the advantage that there are virtually no limits on the length of the pipe being produced.

The standard version of this production system can be used to produce pipe with an outer diameter from 20–110mm. For pipe diameters from 20–63mm, a complete pipe element usually contains two pipes (outflow and return pipes). The exterior diameter of the pipe element will then be between 75–180mm.

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