

PRESS RELEASE

FDC pipe extrusion line delivers ultimate flexibility in diameters and wall thicknesses

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“battenfeld-cincinnati was the only machine manufacturer able to meet our requirements in terms of full automation and ultimate flexibility”, is how Kenn E. Byllemos, COO of Emtelle Denmark based in Sønder Felding, explains their decision to work with the German-Austrian extruder specialist. For about one year, the plastics processor has been operating a complete extrusion line from Bad Oeynhausen, Germany at its plant in Denmark, which produces 4-layer pipes with diameters ranging from 200 to 800 mm according to SDR classification (DIN 8074), as well as in special customized sizes - and all of this with minimal changeover times and scrap quantities. With its extremely flexible machine components, battenfeld-cincinnati optimally meets the market demand of its customers from the pipe industry.

Emtelle ranks among the global players in the telecommunications industry. It produces pipeline communication network solutions worldwide, as well as micro and mini cables which can be blown in, thus combining under one roof the core competencies of developing and manufacturing plastic pipes with the production of blown-in fiberglass cables.

Emtelle continuously expands its product portfolio, for example at its Danish plant in Sønder Felding, where pressure pipes for water transport are currently also produced. To be able to fill all of its customers' orders promptly and without large inventory, the pipe manufacturer decided to purchase a complete FDC pipe extrusion line from battenfeld-cincinnati to replace an existing, less flexible line.

“The greatest advantage of the new line is its enormous flexibility”, is how Kenn E. Byllemos expresses his satisfaction with the pipe extrusion line, which was installed about a year ago. This line is a 4-layer co-extrusion line with four extruders and a co-extruder for color stripes, which also includes two FDC calibration sleeves and a complete set of FDC downstream equipment. In this way, diameters ranging from 200 to 800 mm can be handled by a single line, which is unique in the industry. The smaller of the automatic calibration sleeves handles diameters from 200 to 355 mm, the larger diameters from 400 to 630 mm. Diameter ranges from 710 to 800 mm can be handled with standard calibration sleeves.

“In contrast to competitors' products, our calibration sleeves are made of a cylindrical, rolled metal sheet that comes close to a standard calibration in its design. The pipe dimension can be

changed during production – seamlessly and fully automatically. Both standard and customized sizes can be produced with our calibration sleeves, not only in terms of external diameters but also in terms of wall thicknesses, which may vary for example between 6.3 and 57.2 mm”, explains Brigitte Diekhaus, Project Leader at battenfeld-cincinnati.

“The fully automatic dimension change was a very important consideration for us, since we have more and more customers demanding customized sizes, for example cap pipes. These must combine a very small wall thickness with a relatively large external diameter”, Byllemos adds. “In practice, changeover to different pipe dimensions takes us 20 min at most and changing to a different automatic range – e.g. from 200 – 355 mm to 400 – 630 mm can be effected within one shift. Another decisive advantage is that only very minor quantities of scrap are produced during dimension change”, are further reasons given by Byllemos for his decision to choose the FDC system from battenfeld-cincinnati.

“For a color change during production, we have scrap quantities of less than 500 kg”, Brigitte Diekhaus emphasizes. To achieve this, the line operates with an adjustable melt gap after to the pipe head, instead of a die-mandrel combination, which would have to be exchanged for a dimension change.

For better results in color change, a radial distributor for the outer layer is integrated in the adjustable melt gap, so that the color change can be carried out quickly and with relatively little material for purging the outer layer channel.

Automatic dimension change and consequently the high flexibility of the line as a whole is finally also ensured by the FDC downstream components, which are also a unique feature in the industry. The vacuum tank operates with a pipe support system covering 180° of the pipe’s circumference and is steplessly adjustable over the entire dimensional range without modifications. This also applies to the haul-off and cutting device, which can be adjusted automatically during dimension change as well.

In close cooperation between the processor and the machine manufacturer, the haul-off has been designed to prevent deformation of customized pipes with small wall thicknesses. “The joint development work with battenfeld-cincinnati functioned perfectly, and we are very satisfied with the result”, Kenn E. Byllemos praises the venture. To achieve the automatic changeover without any problems or human intervention, the battenfeld-cincinnati specialists have also extended the extruder control system in an optimal way, so that the changeover of all components can be effected at the push of a button. This type of fully automatic operation was also a decisive argument for Emtelle in favor of the line from battenfeld-cincinnati.

About Emtelle:

The company employs 350 people and operates production plants in Scotland and Denmark and many additional subsidiaries in a total of 67 countries. Besides the telecommunications industry in Europe, Asia and America, Emtelle also supplies customized products to other industries. These include water supply pipes for

Scandinavia, irrigation pipes for India as well as power supply and IT solutions for cars and trains in the United Kingdom.

Web: www.emtelle.com

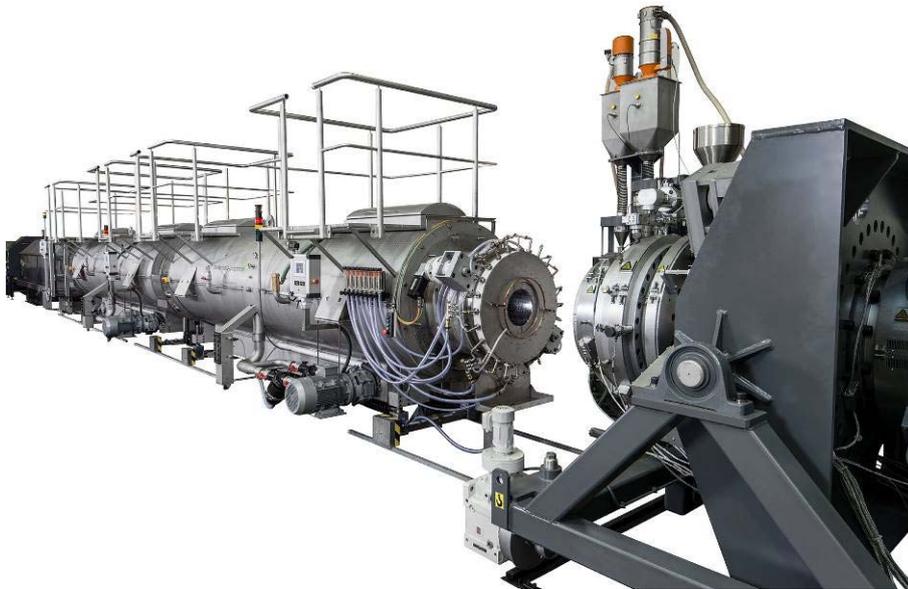
About battenfeld-cincinnati:

battenfeld-cincinnati is a leading producer of energy-efficient, high-performance extruders and complete extrusion lines according to customer-specific requirements. It offers a variety of equipment in the areas of pipe, profile, sheet, thermoforming sheet and pelletizing. Customers are supported by production facilities in Germany, Austria, China and the USA, as well as an extensive worldwide sales and service network.

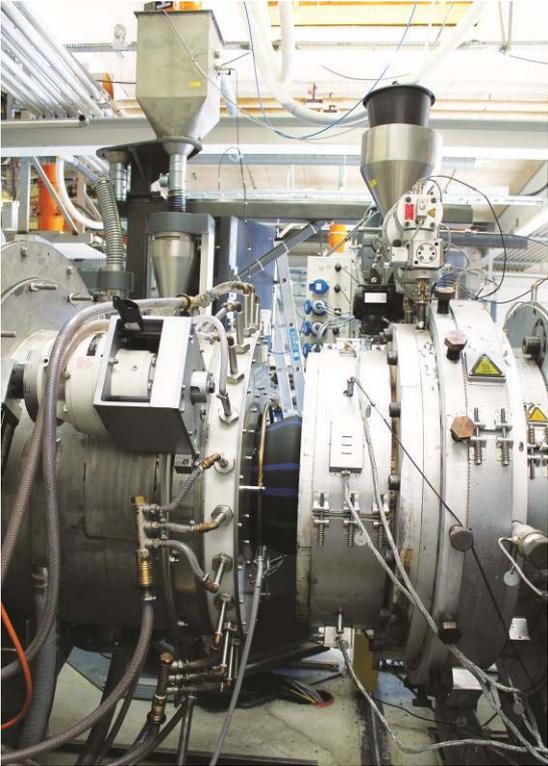
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Youtube: www.youtube.com/BattenfeldCincinnati

Photos:



With the FDC line, changeover to different pipe dimensions currently takes about 20 min at Emtelle's plant and change to a different automatic dimension range is possible within one shift



Close-up view of pipe head and calibration sleeve at Emtelle's plant in Sønder Felding, Denmark during production



With the FDC line, pipe dimensions and wall thicknesses can be changed during running production

5840 characters
1041 words

Ref.: 201701_PR_en_Emtelle-FDC
Photos: 201701_PR_Emtelle-FDC 1-3
Date: 13 March 2017