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Press release

Tailor-made production line for filter bellows of Roth Composite Machinery

Burgwald. For the manufacture of pleat packs for different types of filters, Roth Composite Machinery developed a tailor-made production line with several modules at the site in Burgwald. The Tunisian manufacturer Misfat Filtration is using this machine for the production of oil and fuel filters for combustion engines.

The plant being equipped with a rotary pleating machine as core element has been designed in close dialogue with the customer. Only in the entirety of all machine components it matches into a perfectly interlocking production line for the manufacture of pleat packs.

Further modules are the unwinding unit, the edge guiding system, perforation and edge trimming, a pre-heating oven, a curing oven and the cooling equipment as well as an automatic cross cutter. The machine offers a maximum working width of 600 millimetres. By means of the pre-heating device, the

material can be heated up to 100 degrees Celsius at full speed. The curing oven with vacuum technology having a length of six metres, including the cooling equipment, is heating up to 250 degrees Celsius. Owing to the faster curing times in comparison with standard ovens, the production line is at an advantage with a considerably shorter construction. Roth Composite Machinery offers plants realizing up to 3,000 pleats per minute – depending on the material to be processed. Related to the technology and process, the production line of the company Misfat Filtration reaches a capacity of 1,500 pleats per minute. Mohamed Guermazi, Deputy Managing Director at Misfat Filtration, Jedeida, expressed his satisfaction: “Our new production line started its operation beginning of April 2017 smoothly and is working absolutely reliably. The cooperation with Roth Composite Machinery is very customer- and quality-oriented. From the advice over the designing of the plant to the commissioning and service, Roth is a highly competent partner.”

Technology in detail

Gas burners being used in the pre-heating unit serve for humidity in the combustion process facilitating the subsequent embossing procedure. The filter material passing through the machine with a speed of 75 metres per minute is heated up to 90 degrees Celsius by the oven on a section of 1.5 metres only. In comparison, a conventional system with infrared radiation needs about five metres for that. A complicated threading of the filter material is not necessary as the cover is opened completely. The condensing oven works on the vacuum principle. The hot air is not guided on the bellow top down but it is sucked through. So, the hot air is in the

middle of the pleats much faster. Thus, the construction of the oven is considerably shorter and needs less production area. The innovative condensing ovens used by Roth Composite Machinery in these production lines are available with several lengths.

A so-called quattro embossing unit offers the advantage of being able to adjust the machine individually depending on the material used for the cross and lengthwise embossment. All components are well accessible owing to the open design facilitating the maintenance, cleaning and service of the production line.

Filter Pleating Machines for individual processes

Misfat Filtration manufactures filters for all kinds of vehicles. The manufacturer has more than 1,200 employees worldwide and production sites at the headquarters in Jedeida, Tunisia, in France and in Morocco. Furthermore, the company has logistic platforms in Spain, Poland and Russia. With an annual production capacity of about 30 million filters, Misfat provides leading automobile manufacturers in Europe and Asia.

Winfried Schäfer, Sales Manager at Roth Composite Machinery, declared: "As European technology leader, we offer a complete and comprehensive product portfolio containing tailor-made solutions for various applications. This could be proved successfully again in cooperation with Misfat." Roth offers a broad range of mechanically controlled and servo-driven knife pleating machines as well as rotary pleating equipment and minipleat systems. The know-how of the engineers working for Roth Composite Machinery is based on an experience of more than 30 years in the manufacture of

pleating machines. The company offers worldwide service from one provider.

One brand – many strengths

Roth Composite Machinery designs and builds components, machines as well as complete production lines in the business fields "Filament Winding & Prepeg", "Pleating & Coating" as well as "Brushes & Brooms". The company's headquarters are situated in Steffenberg, additional locations are in Burgwald and Dautphetal.

Originated from the merger of the two special machinery manufacturers EHA and Schlesinger, Roth Composite Machinery belongs to the family company Roth Industries GmbH & Co. KG having approximately 1,250 employees all over the world. Roth Industries is one of the most innovative companies in the area building and industrial engineering.

DATA & FACTS

Production line: Consisting of unwinding unit, edge guiding system, perforation and edge trimming, pre-heating oven, rotary pleating machine, condensing oven, cooling equipment, automatic cross cutter.

User: Misfat Filtration, Jedeida, Tunisia

www.misfat.com.tn

Engineering: Roth Composite Machinery, Burgwald, Germany.

www.roth-composite-machinery.com

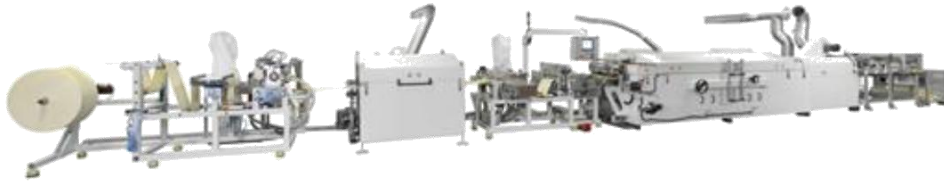


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In close cooperation with its customer Misfat, Roth Composite Machinery developed a production line for the manufacture of filter bellows.



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Roth_Misfat_Maschine_1.jpg

Single unwinding unit, including edge guiding system, perforation and edge trimming.



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Roth_Misfat_Maschine_2.jpg

Gas-fired pre-heating oven.



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Roth_Misfat_Maschine_3.jpg

Rotary pleating machine with gathering station. Owing to the open design, all components of the production line are well accessible as to service, maintenance and equipping.



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Roth_Misfat_Maschine_4.jpg

Special unit with separate rollers for scoring and embossing.



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Roth_Misfat_Maschine_5.jpg

Curing oven, including cooling equipment.



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Roth_Misfat_Maschine_6.jpg

Automatic cross cutter.



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Roth_Misfat_Maschine_7.jpg

Opened pre-heating oven. A complicated threading of the filter material is not necessary as the cover is opened completely.



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Roth_Misfat_Maschine_8.jpg

Open curing oven.



Image capture for file Misfat_IMG_0556.jpg

Filter production at Misfat Tunisia.



Image capture for file Misfat_IMG_0843.jpg

Filter production at Misfat Tunisia.



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Misfat Filtration manufactures filters for all kinds of vehicles. The manufacturer has production sites at the headquarters in Jedeida, Tunisia, as well as in France and Morocco.

About Roth Composite Machinery

Roth Composite Machinery is an expert in the field of special machinery construction – the company develops, designs and builds components, machines as well as complete production lines in the business areas

- Filament Winding & Prepreg
- Pleating & Coating
- Brushes & Brooms

About Roth Industries

Roth Industries GmbH & Co. KG comprising various firms and around 1,250 employees all over the world is one of the most innovative companies in the areas

- Building Solutions - Divisions: Energy Systems, Sanitary Systems, Environmental Systems
- Industrial Solutions – Divisions: Composite Technology, Plastic Technology, Hydraulic Technology

The head office of the medium-sized traditional company is located in Dautphetal, Hesse. While the company's strategic direction, the controlling, auditing as well as the balance and financial planning is effected from there, the local employees are responsible for the development, production and marketing of the products.

25 production and sales companies of Roth Industries are acting all over the world - in core segments as world market leader.

Roth Industries bundles all activities of the companies belonging to the group in Germany and abroad. The company is owned by the Roth family to 100 %.

Competence in
● energy ● water ● plastics

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