

PERFORMANCE YARN PRESS RELEASE

Bergamo, 22 February 2019

Process sustainability and product quality

**New lactam wastewater recovery plant at RadiciFil:
setting new targets on energy savings and emission reduction**



Enhanced environmental performance and improved polymer and, hence, yarn quality: these are the main objectives set for the **new lactam wastewater recovery plant** installed at the RadiciFil production site in Casnigo (Bergamo) during the course of 2018. The production facility specializes in polyamide 6 polymerization and BCF yarn production, the core business of the **RadiciGroup Performance Yarn Business Area**.

The new plant, which has recently undergone a test run, recovers the wastewater from the polymerization process with a caprolactam concentration of 8-12%. Using *falling film* and *mechanical vapour recompression* technologies,

the plant processes the water, so as to raise the caprolactam concentration in the output up to 80%, thus making the recovered caprolactam suitable for reuse in continuous cycle polymer production.

“This investment has taken advantage of some of the benefits provided by Industry Plan 4.0”, said Nicola Agnoli, CEO of the RadiciGroup Performance Yarn Business Area, “and is part of the company production plan. The system incorporates the latest developments in technology, which allow it to reduce the quantity of heat energy used and will help us achieve the EU 2020 goals (ETS) concerning CO₂ emissions.

The new plant has already proven effective in achieving a noticeable reduction in the quantity of natural gas used for steam production, as well as a generalized improvement in the quality of the output product.

The **quantity of steam** needed for the lactam wastewater recovery process in the new system has fallen by **about 80%** (the pressure being equal) compared to the amount required for the old plant previously in operation.

This reduction, in turn, has had a positive effect on **RadiciFil's overall performance**: the consumption of **natural gas** needed for the operation of the entire production plant has dropped by about **35-40%**.

Another innovative feature of the new wastewater recovery plant lies in its ability to adapt to changes in production, flexibly adjusting to the variations in the lactam wastewater input load in a range from 60% to 100%.

“The construction work for the new system was coordinated by Marco Gualteroni, engineer and site energy manager acting in the capacity of project leader. In all the phases of the project, the work was accomplished in collaboration with the members of the RadiciFil Technical Department and a multidisciplinary team whose members are experts in different company functions. The project also benefited from external assistance by Giovanni Algeri, an engineer who works for another Group company. Once more, teamwork proved to be the best strategy for the fulfilment of ambitious goals.”

RADICIGROUP – With approximately 3,000 employees, sales revenue of EUR 1,147 million in 2017 and a network of production and sales sites located throughout Europe, North America, South America and Asia, RadiciGroup is one of the world's leading producers of a wide range of chemical intermediates, polyamide polymers, engineering plastics, synthetic fibres and nonwovens. These products – the result of the Group's outstanding chemical expertise and vertically integrated polyamide production chain – have been developed for use in a variety of industrial sectors, such as: AUTOMOTIVE – ELECTRICAL AND ELECTRONICS – CONSUMER GOODS – APPAREL – FURNISHINGS – CONSTRUCTION – HOUSEHOLD APPLIANCES – SPORTS. The basis of the Group's strategy is a strong focus on innovation, quality, customer satisfaction and social and environmental sustainability. With its business areas - **Specialty Chemicals, High Performance Polymers** and **Synthetic Fibres & Nonwovens** (Performance Yarn, Comfort Fibres and Extrusion Yarn), RadiciGroup is part of a larger industrial group that also includes textile machinery (ITEMA), energy (GEOGREEN) and hotel (SAN MARCO) businesses.
