



CORPORATE PRESS RELEASE



Parma, 22- 24 March 2018

Circular Economy 4.0 Arena: RadiciGroup sustainability case studies

At MECSPE 2018, the Group and its vertically integrated companies: control of the entire production process from start to finish, including end-of-life recycling

Recently, at the trade fair **MECSPE** in Parma, Italy (22 -24 March), RadiciGroup had the opportunity to present its experience in the area of sustainability during the series of meetings, **Circular Economy Arena 4.0**. On 23 March, during the morning session, “**CIRCULAR ECONOMY: REAL PATHS TO SUSTAINABILITY**”, **Susanna Caprotti** (RadiciGroup Performance Plastics) and **Maria Teresa Betti** (RadiciGroup Sustainable Communication) gave a presentation entitled “**From jackets to automobiles: nylon’s certified path to sustainability**”. The objective was to demonstrate how the use of ecodesign could reduce the environmental impact of a product – from the production processes and materials used to the end of life, including the potential recycling of the product itself.

Two sustainability cases were brought to the attention of the engineers and technical professionals in the audience (who received free T-shirts made of RadiciGroup Radilon® nylon). The first case was an experimental pilot project, carried out by all the players in the Group production chain, to **recycle wheel trim** for reuse in automotive applications, while the second was a **100% nylon vest** (fabric, lining, zipper, labels, snaps, etc.) that could be completely recycled at the end of its useful life through extrusion, so as to find a new use in the plastics industry.

As Ms. Caprotti and Ms. Betti emphasized during their talk, “*the challenge is to conceive of and realize **single-material components designed for disassembly** (and this also goes for garments and other products), which can be recycled simply and quickly after separating the different pieces, without sacrificing performance, style, comfort and consumer needs.*”

Today, RadiciGroup is the only European group able to monitor its entire production process, from polymer chemicals to the manufacture of synthetic fibres and engineering plastics, as well as end-of-life recycling. The materials are used in numerous application sectors, **particularly automotive,**

furnishings and apparel, and are manufactured using strictly controlled corporate purchase and production processes in order to limit consumption and emissions.

Additionally, in the Circular Economy Arena 4.0, during the session on 22 March dedicated to **“NEW DEVELOPMENTS IN COMPOSITE MATERIALS”**, **Erico Spini**, marketing & application development director Europe of RadiciGroup Performance Plastics, took the floor to discuss the Group’s experience in the use of recycled carbon fibre in the thermoplastics field. The goal of his presentation, entitled **“Recycled carbon fibre for thermoplastics: opportunities and technical problems”**, was to highlight the potential advantages and technological challenges to overcome in the use of recycled carbon fibre. By virtue of its high mechanical properties, carbon fibre can be used in metal replacement and, thanks to its low specific weight, is suitable for the lightweighting of parts. Moreover, by adding carbon fibre, possibly together with other additives, good thermal conductivity can be obtained without significantly compromising mechanical properties.

“Today, we are not yet producing a recycled carbon fibre-filled polyamide compound,” noted Mr. Spini, *“but we are working on several promising products combining high performance and a competitive price, with the further benefit of lower environmental impact. Based on preliminary comparative data, we note that 30% recycled carbon fibre-filled polyamide (using recyclate from a well-defined source) has mechanical properties close to those measured for products using virgin carbon fibre. These encouraging initial results have to be confirmed by analysing more production lots and testing recycled carbon fibre of different origins.”*

RADICIGROUP – With approximately 3,000 employees, sales revenue of EUR 946 million in 2016 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, Performance Plastics 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.
