



Carbon fibre: Italian cutting edge technology

The Lamborghini super sport car excellence enter the arena for the Newspec project

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In the Group of 13 enterprises called to implement the intuition of Newspec ("New cost-effective and sustainable polyethylene based carbon fibres for volume market applications", project nr. 604168), there is an absolute spearhead in the development, production and application of carbon fibre materials. Its identity guarantees lightness, power and innovation; its research goes beyond sector limits to sprint at the pace of aerospace research: this is the way nowadays Lamborghini dictates the rules of perfection, concept, design and technology. Carbon fibre, a synonym of cutting edge technology and dynamism, is the material with which, 30 years ago, the parent company of Sant'Agata Bolognese revolutionised the history

of the sector, rewriting its parameters and transforming the wall separating 0 from 100 kilometres per hour into a faint and thin border, capable of crumbling in something less than three seconds. Because, in the selective universe of the super sport cars, today excellence is decided by the power-to-weight ratio, which Lamborghini researches and cultivates since 1983, when it first introduced carbon fibre components in its production. The added value that the know-how of Lamborghini shall bring to the European Newspec project shall be the analysis and comparison of materials alternative to Pan, the one currently used to manufacture carbon fibre: the company, in fact, with its two development centres, the Seattle lab in the United States (Aesl

- Advanced Composite Structures Laboratory), site of the osmosis between aerospace and automotive industries, and the research centre in Sant'Agata (Acre - Advanced Composite Research Center), is a world leader in the research on composite materials, with partners like the Boeing aerospace giant and the Washington University. "The objective, with the scientific co-ordination of Warrant Group Srl within the ambit of Newspec, shall be finding alternative solutions to the production processes for carbon fibre - explains Luciano De Oto, director of the Advanced Composite Research Centre - to reduce both the costs of the raw material and the environmental impact of the production processes. Our task, therefore, shall consist of identifying precursors, evaluate and compare them, from laboratory tests up to verifications in 1:1 scale". Because, De Oto emphasizes, "to be able to compress the variable costs of carbon fibre should open the way for remarkable advantages in terms of global competitiveness". Lamborghini, the repository of international patents, is the sole company in the world fully managing in-house the complex process of the production of carbon fibre reinforced composite materials, from design to prototyping, from test and validation procedures to mass production. "We are not an university, but - De Oto states - architects of change. Since our first experiments with carbon fibres the world has changed, and today the use of composite materials has become widespread. The power-to-weight ratio remains our excellence - he specifies - innovation is played through strict parameters; outside them you are excluded from world competition".



Luciano De Oto