

BRAZIL

Macea: Technical Ceramics “Made in Brazil”

Macea was founded in 1983, and initially supplied thread guides to the textile industry. Its product portfolio was gradually widened. Wear resistance, thermal shock, electric insulation, mechanical sealing, high precision and customisation are all key topics when it comes to applications for the technical ceramic components made by Macea ceramics. Besides general industrial applications, textiles, petrochemicals, steel foundries, agriculture, electronics, medical and dental applications make up the company's main market in Brazil and Latin America. Today, Macea has 30 employees and, complementing its own production capability, also works in cooperation with high-tech ceramic companies all around the world to offer solutions. Macea also represents Yuasa Yarn Guide from Japan and Machinable Ceramic Macor from France. To learn more about the company, we talked to CEO Paulo Macea (PM).



Fig. 1
Paulo Macea

CA: What key technologies are installed at your plant?

PM: Dry pressing, CIM, tape casting, machining, grinding, lapping and material-adapted firing technology are the “heart” of the plant. We have also started talking about a possible cooperation with Lithoz/AT to implement Additive Manufacturing at our facility.

CA: What types of materials do you offer today?

PM: Zirconia, alumina; ZTA, silicon carbide, silicon nitride, boron carbide; boron nitride; cordierite; corundum, graphite; machinable ceramics; mullite; polycrystalline sapphire; steatite; technical porcelain; titania and tungsten carbide.

CA: Are all these materials processed in your plant or do they represent some of the traded products in your portfolio?

PM: We concentrate on producing high-alumina, zirconia, titania, ZTA and silicon carbide products while other materials come as semi-finished products to be processed in our plant. We also operate as reseller when solutions are not within our capabilities.

CA: Which markets do you serve?

PM: The domestic and Latin American markets are our core markets. We aim to push exports as there is a high tax for national supply (40 % in total), while we can offer products tax-free for export. The Brazilian currency has been getting weaker lately. This is a disadvantage as we use high-quality raw materials and feedstocks, which we have to import to ensure high-quality products. But we can offer competitive export prices.

CA: What are the most important user segments for Macea products today?

PM: Textiles are still a good market mainly for synthetic fibre producers, we are also very strong in agricultural applica-



tions with pistons, jackets, mechanical seals and nozzles. We supply steel foundries with oxygen sensors, special filters, setters, crucibles and refractories; for the mining sector, we have a variety of wear resistance applications.

CA: *Do you partner with companies in your market segment?*

PM: We do have good partnerships with companies all around the world, including in China, Germany, United States and Japan. We also act as traders and solution providers. We buy and maintain a good stock of semi-finished products and pre-sintered blanks to finish at our plant, so we can consistently reduce the delivery time.

CA: *How is your R&D organised?*

PM: Together with our partners, we develop individual solutions, and this network is important for us to increase our possibilities and business capability. We have development partnerships with institutes and universities, also abroad. We also use consultancy services with special expertise.

CA: *What effects has the pandemic had on your business?*

PM: Initially the effect was strong, the whole administration team was working from home. We experienced reduced business (around 40 %) from March until June 2020, but after that business saw a good recovery, maybe due to the shortage and the lack of products on the market. Our export business also enjoyed an exceptional upswing, and in the end we had the best year of last decade.

CA: *Do you forecast a growth scenario in the post COVID-era?*

PM: First of all, I don't think we shall ever be the same people after COVID. Now, it is time to think about our life and find a balance between family, pleasure and business, all of us have stories about suddenly losing somebody close. With regard to business, services in general will change a lot, many of them will disappear while new ones will become established, but most of them, as they can be managed from home office, will directly affect unemployment in some way.

So it's a good opportunity for industry to think about changing its strategy and being less dependent on China, it is a chance for production capacity to recover and internal industrial investments to be made. Each country has to think about this and try to enhance its skills and abilities.

CA: *Thank you for talking to us.*



Fig. 2-4
View into different production sectors ...



Fig. 5
... and into part of the showroom

(Figs.: Macea)

KS