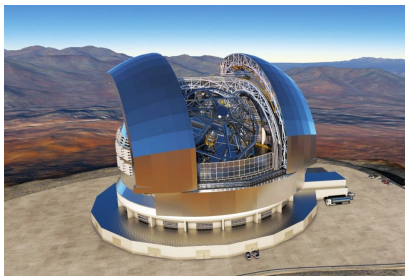
A business unit of AGC Glass Europe strong with a staff of 40 members, AGC Plasma Technology Solutions is specialised in developing and industrialising innovative vacuum plasma coating technologies. The BU offers its equipment and services to a broad range of industries outside the glass world.



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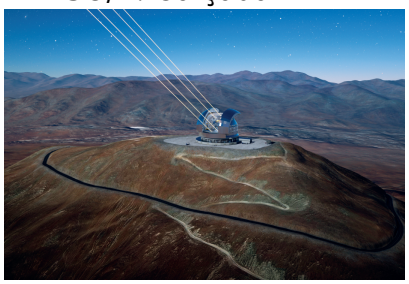

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Foundation and Expertise

Founded in 2016, AGC Plasma Technology Solutions markets solutions that involve depositing thin films on a given substrate in order to functionalise it. Based on its expertise in coating large glass surfaces, the business unit has designed dedicated equipment and developed new layers with a view to offering them to other sectors where these technologies bring real added value. The team of AGC Plasma Technology Solutions in Gosselies (R&D) works hand in hand with that of Lauenförde, Germany, which is dedicated to the manufacturing and installation of machines worldwide.

Prestigious Applications

AGC Plasma Technology Solutions' know-how in building custom-designed plasma coating equipment has found prestigious applications in the optical industry. In 2021 the European Southern Observatory (ESO) and AGC Glass Europe signed a second contract to deliver a coater specially equipped for the large mirrors (M2, M3, M4 and M5) of the world largest telescope: installed in the Atacama Desert (Chilean Andes) at Cerro Armazones (3,046 m), the Extremely Large Telescope (ELT), under construction, is to be equipped with a gigantic 39-meter

segmented primary mirror and additional 4-meter-wide large mirrors.

In 2018 AGC was already selected to assemble and install the two magnetron sputtering coaters for the primary mirror of the ELT. The third coater is designed for the additional 4-meter-wide mirrors. The magnetron sputtering coaters are important to maintain the performance of the telescope optics. Confronted with the challenge of controlling the uniformity of the highly reflective coating over the entire surface of the 4 meter-wide-mirrors, AGC has developed a technical solution including an Online Shimmable Magnet Bar technology in the cathodes that allows superior thickness control of the deposited thin layers. This feat was made possible with the support of BELSPO (the Belgian Science Policy Office), in charge of the Belgian national Contribution and representation to ESO, which relays ESO calls for tender via its Belgian Industrial Liaison Officer, in the aim to achieve a fair Belgian industrial return on ESO activities.

Environmental Impact and Future Development

In addition, AGC Plasma Technology Solutions seeks to highlight the environmental dimension of its technological innovations. A major transition is underway in the coating industry: the move from “wet chemical” to “dry.” This transition, which is particularly marked in the textile and decoration sectors, aims to save water for several functions. To this end, AGC Plasma Technology Solutions offers physical vapour deposition (PVD) or plasma enhanced chemical vapour deposition (PECVD) technology for applying thin layers. These technologies are also applicable in the automotive industry, for example, for applying anti-reflective coatings on the cover glass for automotive interior displays or to the radars of the autonomous vehicles.

AGC Plasma Technology Solutions is currently exploring several avenues of development to make the most of its expertise. The business unit is focusing on the textile and optical industries with its anti-reflective coating solutions for lidars and its range of films for various applications. In addition, AGC Plasma Technology Solutions is working with several universities to scale up plasma technologies developed in their laboratories. In this context, the business unit has developed a strong partnership with the Materia Nova Institute of UMONS (University of Mons). A relevant strategy to reconcile the academic and industrial worlds.

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