

BCECA Engineering Project Focus

Advanced materials company, Solvay, is always asking more from chemistry to solve the challenges facing society. The aerospace industry depends on high-performance adhesives. In September 2018, Solvay opened a new manufacturing facility in North Wales

BCECA member Fluor is one of the world's largest publicly traded engineering, procurement and construction (EPC) and maintenance companies. In 2015, Fluor finished the front-end engineering and design work (FEED) for the expansion of Solvay's plant near Wrexham. This was followed by the detailed design work, and the facility was completed in 2018.

Keeping the world airborne

While the COVID-19 crisis deeply impacted the aerospace industry in 2020, growth will return. Continued growth is also anticipated in the aerospace and defence sectors. Specialist adhesives and sealants are integral to safe and sustainable aircraft construction and operation. Aerospace is a highly regulated industry with adhesive products used on external and internal equipment from the engine compartment to the in-floor emergency lighting. Solvay supplies films and pastes based on epoxy, phenolic, bismaleimide and polyimide resin chemistries, along with bonding primers, core-splice adhesives and potting compounds. These products provide exceptional performance in a setting where high shear and temperature changes are the norm. Solvay has continuously invested in R&D and production capability to maintain its position in a competitive marketplace with the help of world-class EPC contractors like Fluor.



Modular design, fabrication and installation

Fluor delivered the FEED and EPC work for the three-storey, 80,000-square-foot plant to a tight schedule to meet Solvay's requirements. Construction took place on a site adjacent to Solvay's existing facility in Wrexham, which produces pre-impregnated carbon fibre composites, also for the aerospace industry. The ground floor houses process manufacturing, raw material and finished goods storage, laboratories and logistics capability. Mixing equipment is found on the first floor. Supporting utilities, including process heating, ventilation and air conditioning are located on the top floor. The main building pipe-rack was designed and fabricated in modular form and assembled alongside the structural steel frame. This brought the installation phase forward by four months. An integrated engineering team located in Fluor's offices in the UK, US and India executed the project.

Sustainability

As well as creating around 50 new jobs, construction work was delivered by local companies where possible. Environmental stewardship featured strongly, with appropriate measures taken to protect plant and animal species.

For more information about our member companies, including Fluor, and other exciting developments in the engineering contracting sector, contact BCECA at Camelford House, 89 Albert Embankment, London SE1 7TP

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