

# CASE STUDY

## Plasticraft process line expertise helps new facility at Airbus Defence and Space take off



### Customer

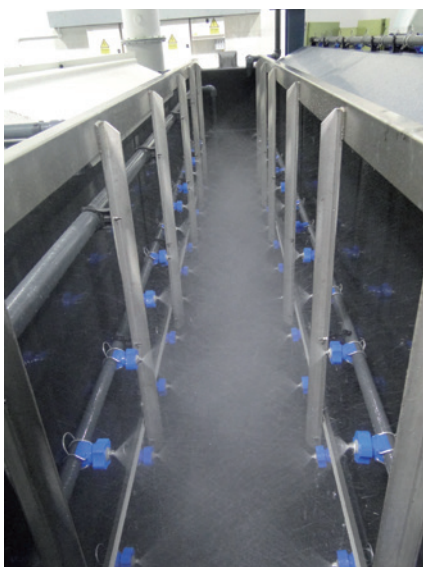
**Airbus Defence & Space**

### Industry

**Aerospace**

### Installation

**Process Lines & Water Treatment Facility**



Process system specialists Plasticraft, part of the NHE organisation, has now completed a major installation for Airbus Defence and Space, formerly Astrium – the world’s second largest space company – citing the European Space Agency among its impressive client list. The project is seen as an excellent example of Plasticraft’s ability to provide a comprehensive service that encompasses both building and enabling work alongside the installation of highly efficient processing systems. The installation, in Stevenage, is centred on a facility that has addressed both specialist processing shop needs and water and effluent treatment requirements.

The centrepiece of the project has been the comprehensive refurbishment of an existing building which has been home to an original processing line – also installed by Plasticraft in the 1970’s for treating aircraft blades. The civil engineering element of the project has not only helped to maximise the efficiency of the processing line facility but, significantly, has also accommodated highly specialist requirements associated with quartz crystal processing located in an adjacent area. Here, the need to create a vibration free environment has been addressed by Plasticraft via the use of extensive floor damping to optimise the lowering of crystals into high pressure explosion-shielded containers.

The adjacent processing line, at the heart of the refurbishment project, focuses on the surface preparation of aluminium skins which, when brought together with lightweight, aluminium honeycomb, form structural panels, a vital construction component for the bespoke satellite designs built by Airbus DS for customers worldwide.

*“The aluminium face skins, which typically measure some 3.8 metres long and 1.5 metres wide with a thickness of between 0.2 and 1.0 mm, are located in purpose-designed frames,” says Will Green, NHE’s Sales Director. “One of two overhead cranes that we have installed then moves each loaded frame through four of the process tanks, each measuring 4.2 metres in length and featuring both air agitation and heating.*

*“Here, degreasing, spray rinse, chrome sulphuric pickle and a final spray rinse ensure a chrome free finish is achieved,” he continues. “Additionally, we have installed two smaller tanks where similar processes can be applied to smaller components, such as machined parts. The process facility also features a control system that oversees the movement of the cranes, including a second unit that is used within the crystal processing area.”*

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Apart from producing excellent surface finishing properties for each of the aluminium skins, NHE's ability to fulfil associated water and effluent treatment requirements is also playing a key role at the site. This has had a dramatic impact on water usage as Brian Watson, Head of Support Services at Airbus DS in Stevenage explains –

*"Before the new installation, the old process utilised free-flowing rinse tanks. Over the initial three-month period following installation, our water usage has dropped dramatically,"* he says and points out that the consequent savings are anticipated to have a significant and beneficial impact on the investment return.

*"The water treatment facility now comprises a holding reservoir linked directly to a filtration system that produces the de-mineralised water required for the process, which is then held in a very large clean water tank,"* continues Brian Watson. *"This feeds into the rinse processes after which the effluent treatment installation – including sodium hydroxide, hydrochloric acid and sodium bi-sulphate elements – enables the water to be recirculated into the system, with only a small amount then collected for effluent discharge."* He says that, to date, only two chemical additions have had to be made to the system compared with one per month which was normal practice beforehand.

With the civils works, the installation of the processing line and the water and effluent treatment facility successfully installed and now operational within this dedicated area at Airbus DS, NHE's involvement with this highly successful organisation – a leading international name in its sector – has been comprehensive. *"Importantly, the company was able to work very closely with us to meet our precise operational requirements with, in particular, its technical expertise and installation capability making a significant contribution to the overall success of the project,"* adds Brian Watson.

*"Airbus DS operates in one of the most advanced sectors of industry with high value projects undertaken for leading names in the space industry,"* continues Will Green. *"The need for our technology to perform to the highest level is therefore paramount, and both we, and our customer, are delighted with the results achieved to date."*

*"This is an excellent demonstration of our technology being used in a highly demanding context where manufacturing and science genuinely meet,"* concludes Mike Priddle, NHE's Managing Director. *"By meeting the full range of customer needs – from civil engineering to process and treatment facility installations – we believe we have been able to provide Airbus DS with a key facility that will help them to maintain their highly successful position in this extremely challenging sector."*