



Infrared heat reduces curing time re-painted aircraft assemblies by over 75%

A new paint finishing line with infrared drying for painted assemblies was recently installed by a leading provider of integrated avionics, engines, systems and service solutions for aircraft manufacturers, airlines, business and general aviation, military space and airport operations. It used to take more than an hour to paint and cure the acrylic paint until lately. It was decided to modernize this line as part of a major investment. As a result, they contacted with Hi Tec Spray, specialized in application and fluid handling equipment and IR specialists Excelitas Noblelight for drying and curing.

Excelitas Noblelight set up trials at their test and development facility in Neston, with the customer.

The result was a 116-kW medium wave system comprising of three individual 38.5kW heating stations as well as a conveyor system and spray booth, supplied by Hi Tec Spray. Before being painted, assemblies like wheels or brakes, are shot blasted to remove any old paint and are then run through a nondestructive testing zone to confirm that there are no stress fractures.

After that, they are placed on an indexing conveyor ready for painting with a two coat PU system, with the wheel unit being rotated at each station to give even heat distribution and assisting the paint application by the operator.

The different heat Stations are used to preheat the assemblies before the primer coat is applied, which ensures that they are completely dry and allows the primer to flash off before the topcoat is applied. The coated assemblies then pass to the next station where they are heated to the required curing temperature of approx. 110°C for 6 minutes and then passes into the next zone where they are held at that temperature for a further 6 minutes. In the last step the assemblies pass through three more indexing stations which allows them to cool down before being offloaded.

The IR system from Excelitas Noblelight has reduced the original curing times by over 75%, a high-quality finish and paint savings have also been an outcome of this investment.



Features

- Re-painting of aircraft assemblies
- Time savings over 75%
- Optimized energy consumption

Technical Data

- 116 kW infrared system
- Fast response medium wave infrared heat
- Three 38.5 kW heating stations

Excelitas Noblelight

Infrared Process Technology
hng-infrared@heraeus.com
www.noblelight.com