

Leading aerospace manufacturer adopts Prodigy site wide

The use of Prodigy industrial automation software in the aerospace industry has been consolidated by being adopted site wide for monitoring, control and automation systems at a leading UK aerospace parts manufacturer.



Aerospace Transparency Systems, a GKN Aerospace Services company, designs, develops, tests and manufactures a wide range of aircraft cockpit canopies, windshields and windows, technically classed as transparencies.

The company is the world's number one supplier of transparencies to the military market producing canopies and windshields for the Eurofighter Typhoon, Tornado, Harrier, & Jaguar. The company is also the number two supplier to the civilian aircraft market.

For the highly technical manufacturing process the company has developed a 'state of the art' production cell for handling, machining, inspection and testing to achieve the highest levels of product consistency and repeatability.

The transparency making process begins with billets of acrylic measuring some 2 metres square by 50mm thick. A complex process of heating, stretching, polishing, forming, cleaning and coating is undergone with inspection and testing at each stage to ensure the highest product quality.

Recent investment has seen Prodigy systems installed for various applications at their facility at London Luton Airport, UK.

The specialised nature of the production process has resulted in some interesting applications including:-

- monitoring and control of several autoclaves used for the curing and forming of composites.
- control of gold coating chambers used for the application of fine gold coatings to canopies.
- machine control of four large polishing machines used for optical quality polishing of billets of acrylic plastic.
- monitoring of a clean room environment via radio telemetry data loggers and provision of interlock sequence control for multiple access doors.



Aircraft ice-protection systems are another ATS speciality with their electro-thermal ice protection systems being fitted to a range of civilian and military aircraft.

To enable extreme weather testing and parts certification a new Icing Research Wind Tunnel has recently been commissioned on site. The IRWT has doubled the capacity of the previous facility and is also equipped with a Prodigy system.

Application summaries for several of these projects can be found at our website - www.tascomp.com



Prodigy tests jet engines..

Aircraft Power Maintenance, a Belgium company that repairs and maintains jet engines for commercial aircraft, has installed a Prodigy system for test data acquisition.



The company has specialist facilities, including a jet engine test cell, at their site at Wevelgem Airport. Built to the latest environmental requirements the test cell can handle engines up to 75,000 lbs. and is approved by engine manufacturers Pratt & Whitney.

After maintenance each jet engine is run through a test sequence carried out by three engineers. The system, supplied by ISI of Brussels, provides display interfaces for each engineer, performs test data acquisition and generates reports as proof of satisfactory working.

..and also turbine blades

AETC Ltd, a leading supplier of turbine blades for jet engines and gas turbines, uses a Prodigy system for product testing at its site adjacent to Leeds Bradford Airport, UK.

The company's ability to precision cast and machine turbine airfoils in nickel based alloys to 'engine ready' condition is unique and it supplies its products to leading jet engine and gas turbine manufacturers.

The system was supplied by ISS Ltd. of Ilkley, which has an established relationship with AETC supplying Prodigy based systems for component testing.

Alarm management at Jersey Airport

Jersey Airport, Channel Islands, has chosen a Prodigy based alarm management system to replace an annunciator panel which had become obsolete. The smooth running of the airport, which handles over 1 million passengers a year, relies on the operation of several hundred systems for air traffic control, passenger information, meteorology etc. These need to be monitored 24 hours a day and any alarm conditions logged.



The new system provides a touch panel display connected to an industrial PC running Prodigy software. The touch screen main display is designed to resemble the key and lamp panel it replaced having 64 alarm buttons to show the status of each system.

When an alarm occurs it's button flashes, changes colour and a sounder is activated. Pressing the button accepts the alarm. Alarms can also be accepted using the system alarm banner which is always present on the display.

Users can add free form text comments regarding the alarm condition. Any comments entered, as well as alarm event details and time, are automatically recorded by the system. This is a real benefit as previously alarm events had to be manually entered into a log book. Alarm reports covering any time period can be generated on demand.

In case of multiple alarms being triggered at once a major fault button can be used to accept all active alarms.

If any alarm remains unacknowledged an intercom system is activated to draw attention to the alarm. The system can also allow users to receive and accept alarms via SMS text messaging to mobile phones. An alarm nag facility re-triggers any acknowledged alarm after a preset time if the alarm condition is still active.

A major benefit of the system is remote viewing of the alarm panel from any PC on the network. This allows the alarm panel to be supervised remotely, which is useful at times of low manning when the airport is not in use. However, for safe operation, access to the main panel facilities is restricted.

Another benefit is the provision of remote data capture. This enables the system to provide significantly more information, the possibility of alarm prediction and virtually unlimited expansion capability.

Due to the physical limitations of the old panel many sub system alarms needed to be grouped. This limited the information available when an alarm occurred, often requiring further investigation of the severity of the alarm.



The ability to interface with standard industrial PLC's or dedicated data capture equipment allows the capture of digital and analogue data, which can be used to indicate alarm severity and even predict alarms through trend analysis.



What's New?

New Facilities

With the addition of new facilities in the latest version of the software, Prodigy now has the most comprehensive range of facilities in its class. Facilities now include;

FDA 21 CFR Part 11 Compliance
Designed to make compliance easier for food, pharmaceutical & related industries that require audit trail and enhanced data security.

Expert Data System
Captures the knowledge of your best people, makes it available to all users and can automatically detect and remedy process problems as they occur.

Display Replay
DVD style controls allow you to 'replay' the screen displays for any event and is ideal for fault diagnosis, post event analysis and training purposes.

Multigraph
Need more than simple trends? Multigraph makes it easy to graph any variable against any other and display multiple sets for comparison.

New Alarm facilities
Alarm delay, deviation, alarm flash, alarm comments and more.

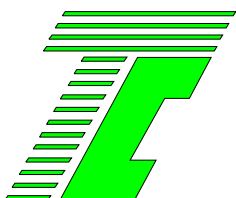
Database Import Export
Lets you use a spreadsheet to speed up database configuration

These are just some of the new facilities and enhancements available in Prodigy version 7. Full information on Prodigy facilities can be viewed at our website www.tascomp.com

New Training Course

An Advanced Developer Course has been added to the range of Prodigy training courses.

The new course, designed for systems integrators, provides in depth training on the more advanced facilities available within Prodigy. Up to 3 delegates can attend the one day course for £595 which is inclusive of lunch and refreshments.



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