Testimonial | Nueva Aeronáutica Profesional S.A. de C.V.

Nueva Aeronáutica reaps benefits of digital radiography.

For 20 years, Mexico City's Nueva Aeronáutica Profesional S.A. de C.V. used traditional methods to conduct non-destructive testing (NDT) for its clients in the aviation industry. Digital Radiography was a concept that appeared complex and challenging to take on.

"I saw this as a very complicated thing. It seemed to me that it was going to be complicated to use it in aviation," said Oliber Pineda, Director at Nueva Aeronáutica.

Pineda's concerns have since diminished. Nueva Aeronáutica turned to Carestream NDT, known for its award-winning CR digital imaging product line, as it considered incorporating a digital system. A field exercise using Carestream NDT's INDUSTREX HPX-1 Plus Digital System demonstrated to the Nueva Aeronáutica team the advantages of going digital—high-resolution images, storage flexibility and the ease of portability.

Now, as Nueva Aeronáutica addresses clients' growing needs, including the archival of X-ray shots—the company on average takes more than 3,000 images a year—it has embraced the accuracy and affordability of digital radiography with the INDUSTREX HPX-1 Plus.

The transition was easier than he imagined, Pineda said.

A Shift to Digital

Established in 2000, Nueva Aeronáutica provides maintenance services for aircraft, in addition to other services. It detects cracks, corrosion and other discontinuities on planes. In the aerospace industry, NDT testing is often used to locate and examine a defect, providing detailed information about the problem at hand, ensuring safety and a high degree of quality. The NDT testing method enables inspectors, like those at Nueva Aeronáutica, to examine areas of a plane that are hard to reach without disassembly.

The HPX-1 Plus Digital System fits in with Nueva Aeronáutica's workflow. The system can handle extra-long plates, ideal for aerospace applications. It also accepts custom cut plates and rigid cassettes, offering 30 percent faster throughput on long plates through an imaging plate transport system as well as higher mechanical reliability.

"There are days when we almost don't stop, shooting one after another after another, and there can be about 200 to 300 shots per month," Pineda said.

The HPX-1 Plus runs on INDUSTREX Digital Viewing Software that works with both computed radiography (CR) and digital detector array (DR) inspection. For Nueva Aeronáutica, the image process automation tools have come in handy. Inspectors can use these tools to streamline the process, increase productivity and ensure an accurate result.

Before going digital, the team had to evaluate the X-ray shots closely, Pineda said, to spot artifacts. HPX-1 Plus optics improve sensitivity and reduce unwanted artifacts. With its adjustable PMT and Laser Power, the HPX-1 Plus system allows Nueva Aeronáutica to fine-tune images for optimum capture.

Keeping Up with Demand

Given the volume of work at Nueva Aeronáutica, the ability to store images digitally has been beneficial as well.

"There are days when we almost don't stop, shooting one after another after another, and there can be about 200 to 300 shots per month," Pineda said.

Further, customers now can access information much earlier in the process since files can be shared digitally. Productivity has increased as well. Pineda estimates the time taken to conduct these tests and capture images has dropped by half.

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"It takes us more time to develop film than it does to take the shots or do the X-rays," he said.

The HPX-1 Plus has enabled Nueva Aeronáutica to offer consistently reliable service to its clients, which in turn helps those customers make knowledgeable decisions. "It does help to make more informed decisions and not have to repeat X-rays," said Pineda, adding that retakes have reduced.

The trips to airplane hangars, where cleanliness can be a challenge, also have become easy with the digital process.

"We always had the problem of sealing a room 100 percent at the customer facility or work in reduced space with a van," Pineda said. "Even with signs that said, 'Keep out, radiation,' people opened the door and spoiled the film for us."

Though the aerospace industry has strict compliance requirements, including some NDT testing procedures that require film, Nueva Aeronáutica finds significant benefits in shifting to digital.

Today, 90 percent of the company's NDT testing is done digitally, and Pineda, who once thought of digital radiography as a complex tool, now recommends it.

"It is going to save you time and you can produce more," he said.

INDUSTREX HPX-1 Plus Digital System Product Benefits:

Powerful

- Industry-leading viewing and analysis software
- Image resolution 50 um
- 25 um pixel size
- High speed for improved productivity

Flexible

- Accepts flexible plates and rigid cassettes
- Handles the widest range of plate sizes in the industry
- Reads multiple plates at one time
- Multiple laser intensities while maintaining spot integrity
- Adjustable PMT sensitivity

Reliable

- Built specifically for NDT applications
- Positive internal air pressure keeps contaminants out of critical areas
- Vibration damping feet

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