Testimonial | INDUSTREX HPX-1 Plus CR System

Aztech Materials Capitalizes on Growth with the INDUSTREX HPX-1 Plus CR System

Aztech Materials' services underpin many construction projects in Las Vegas. The company provides materials testing and offers special inspections for builders in a city where new projects break ground often.

Some of Aztech's projects include the Venetian Palazzo low-rise, tower, and podium; Caesar's Palace-Octavia Tower; the former Fontainebleau; and the Wyndham Desert Blue Tower. Aztech provided testing and continuous special inspection services for parking and gate expansions at McCarran Airport. They continue to offer services on the various gate expansions and other projects that require special inspections.

Aztech Materials Mobile Lab

While Aztech is mostly known for its civil engineering work, in the last few years the company has grown in the non-destructive testing (NDT) market. Aztech's NDT testing is useful in remodeling and reconfiguring, which requires coring through concrete. X-rays can identify the location of electrical and plumbing lines, rebar, and post-tension cables, and avoid costly damage by helping guide the core safely through.

"A lot has changed since Aztech opted to go digital," said Travis McDonough, Operations Manager. "Traditionally, we had a mobile dark room. Sometimes when doing a concrete X-ray, we would be on a lift in a tower that takes an hour to get where we were actually X-raying. It was a slow process, so our production wasn't that great."

Enter the HPX-1: A Game-Changer in Productivity

"Now, Aztech uses Carestream NDT's INDUSTREX HPX-1 and the process has become much more efficient. Our throughput rates have increased dramatically with less time running back and forth for image processing," said Mr. McDonough. "It's been a total game-changer. With the HPX-1 CR system, we go to the inspection site and stay there until we're done doing the X-rays. Our production has grown exponentially. We're able to complete many more X-rays when we do these jobs—and we can adjust the contrast and things like that during our analysis—things that just can't be done with film."

The HPX-1 was built for companies like Aztech when onsite. It has a filtered, positive pressure air system to keep dust out of the reader on the construction site, ensuring plate integrity in scanning and clean images. It has the flexibility to handle long plates (up to 60 inches), short plates, rigid cassettes, and flexible plates in a single system. And, the rubber feet absorb ambient vibrations from heavy equipment.

Easy-to-Use Software and High Image Clarity

The INDUSTREX Digital Viewing Software—used for image analysis, file sharing, and storage management in the HPX-1—enables Aztech to set up customized parameters for a project.

"I love that we can preset filters so when we're scanning in the image plates, it automatically saves that filter," said Mr. McDonough. "We title them as per the jobs that we're on. The density in concrete can change so much depending on where we are, so it's been great to use that image clarity to capture details."

The user-friendly software has allowed Aztech to train its personnel quickly on how to run the imaging plates, and save, edit, and annotate images.

"We like that we can put a little stamp on the images as well, to add our logo on there," said Mr. McDonough. "Scan times are fast so we're able to upload the image, save it, edit, and everything. By the time the imaging plate is done being erased, we're able to start the next load right away."

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With Digital Imaging, You Know You Got the Shot

"With film we would go out and say, 'I think we got a good shot, let's just try and see what it looks like,'" said Mr. McDonough. "With CR, we can try it and look at the values and make adjustments from there. With the transition to digital there's no more human error or wondering if the shot will be ok, so it's been a total game changer for us."

On one job, Aztech was performing a concrete X-ray on a structure with post-tension cables. The anchor points for these cables were cracking and the cables had begun to slip.

"We were able to X-ray the concrete with so much clarity that they could identify the cracks on these tiny little wedges that hold the cables in the concrete," said Mr. McDonough. "We've definitely been able to impress a lot of clients with our image clarity and really impress them with our production."

The HPX-1 Has Given Aztech a Competitive Edge

The scanning speeds, customized reporting capabilities, cloud storage, and the ability to ramp up production have worked in Aztech's favor. The company has been able to set itself apart from the competition, even on the welding front.

For instance, a large water tank X-ray that had proven challenging for others to complete in a short period of time was possible with the HPX-1. "We were able to do that day after day and the client was impressed," said Mr. McDonough.

He credits Aztech's growth in NDT testing to the HPX-1 System. It has proven to be reliable—CR plates are good for more than 1,000 uses with proper care; scan processing times are faster; and the technology shortens shot times.

HPX-1 Inside the Mobile Lab

Concrete X-rays have also seen growth, from 20 X-rays in a typical shift to 40. On some occasions, Aztech has been able to perform 60 concrete X-rays in one work shift. Aztech has doubled its production on welding X-rays with the system as well.

Aztech is an Advocate for Going Digital

"It was a big leap of faith," said Mr. McDonough. "Our first purchase was a pretty big commitment for us, and it's paid for itself in its first year based on the new clients we've been able to attract and the way we've been able to take care of our clients."

While the company has not had to service a reader yet, or call on Carestream NDT's Support Excellence Center, Aztech appreciates the close relationship they are building with the Carestream NDT sales team. And they are not done investing in digital—the company recently purchased an INDUSTREX HPX-PRO to add even more portability to their digital imaging capability.

HPX-1 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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