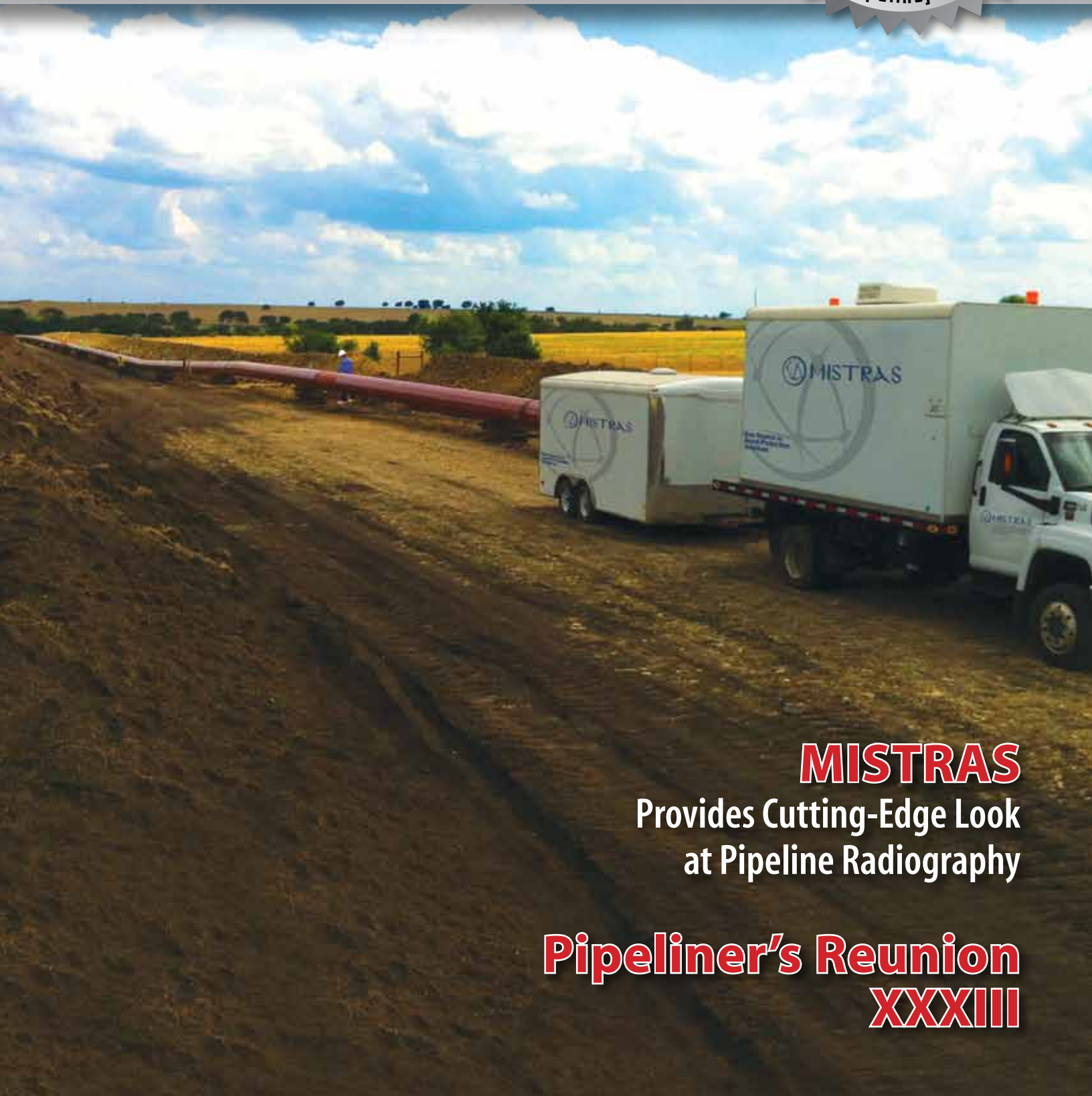


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PIPELINERS

HALL of FAME NEWS



MISTRAS
Provides Cutting-Edge Look
at Pipeline Radiography

**Pipeliners' Reunion
XXXIII**



Provides Cutting-Edge Look at Pipeline Radiography

MISTRAS film digitization technician Sheila Burton examines a weld shot on her computer after digitizing the film from a radiographic test. Burton digitized the film on a VMI 2905 Laser Film Digitizer, shown at left.

In times past, “grabbing” the old film was asking quite a favor. That request started a chain reaction that included digging out a large piece of film from a climate-controlled storage room/facility, comparing it to an equally lower resolution radiographic test result that could not be enhanced, and returning the old scan to its storage place. If technicians wanted to mark or write on the film, they’d need a grease pencil.

But now, MISTRAS Group, Inc. is a leading provider of Computed Radiography (CR) with Film Digitization (FD), which is the next big advancement in pipeline imaging and has become a growing demand for customers requiring the highest quality, accuracy, and storage capabilities. Now, the conversation probably sounds something like this:

“Hey, take a look at these two scans. The one on the left is a digitized archive from last week. I’ve enhanced resolution on both. Those inclusions are exactly the same.”

“(Computed Radiography with film digitization) is beneficial for all pipeline applications – buried pipe, repair/replace, oil & gas, power,” Tom Bull, Business Development Manager for MISTRAS Midstream Pipeline Sector, said. “As in any industry, when you get away from error factors and increase the quality of data, you put your company in the elite status.”

MISTRAS’ Computed Radiography produces digital X-ray images without using film. The same X-ray producing devices are used as with typical X-ray testing (RT), but the image is captured on a flexible, reusable sheet coated with a phosphor material called an imaging plate. The imaging plate is then scanned by a laser scanner producing a digital image that can be edited, uploaded and shared. In most cases, this technology can be easily retrofitted into film-based systems, eliminating the need for film, chemicals,

processing lab, equipment, and storage.

The image plate is then erased by technicians and ready for use again in 60 seconds for thousands of more tests. The digital image can be enhanced, filtered, annotated, zoomed, shared, and stored.

“One point to remember is that the end results are only as good as the technician observing the data and at MISTRAS we have the most highly-skilled, talented, and safety-conscious technicians in the business,” Bull said.



MISTRAS film digitization technician Sheila Burton feeds film through a VMI 2905 Laser Film Digitizer, which takes creates a portable, digital file of the original scan.

There are many reasons the use of MISTRAS’ Computed Radiography with Film Digitization has grown in pipeline radiography – increased efficiency, cost savings, and convenience – but one factor is placed above all others.

"In my opinion, the single greatest reason this technology has gotten off the ground is the increased safety," said Kenneth Qualls, Applications Specialist at VMI (Virtual Media Integration) – a leading Computed Radiography system manufacturer. "(CR with FD) technology allows you to use lower strength (se75 radioactive) sources to reduce boundaries and exclusions zones resulting in a safer work environment for everyone."

"The biggest thing about Computed Radiography is the safety," said Chris Smith, MISTRAS Group, Inc. Vice President of Corporate Compliance. "If we can provide a safer work environment for everyone involved, both MISTRAS employees and the customer, that's paramount. The fact it, and Film Digitization, increases productivity, the quality of product delivered to the customer, and work flow is a bonus worth investing in."

That smaller exclusion zone is also just one of several products of an overall increase in efficiency with the use of MISTRAS' CR. Decreased on-site exposure times and a smaller exclusion zone also means shorter, less frequent, and less costly nonproductive downtime.

While the increase in safety is of paramount concern, the increase in customer service and efficiency Computed Radiography with Film Digitization provides is hard to overlook. MISTRAS' CR with FD actually increases productivity, safety, and quality at the same time.

The most profound improvement in productivity is related to the actual processing of images (see infographic for a complete breakdown).

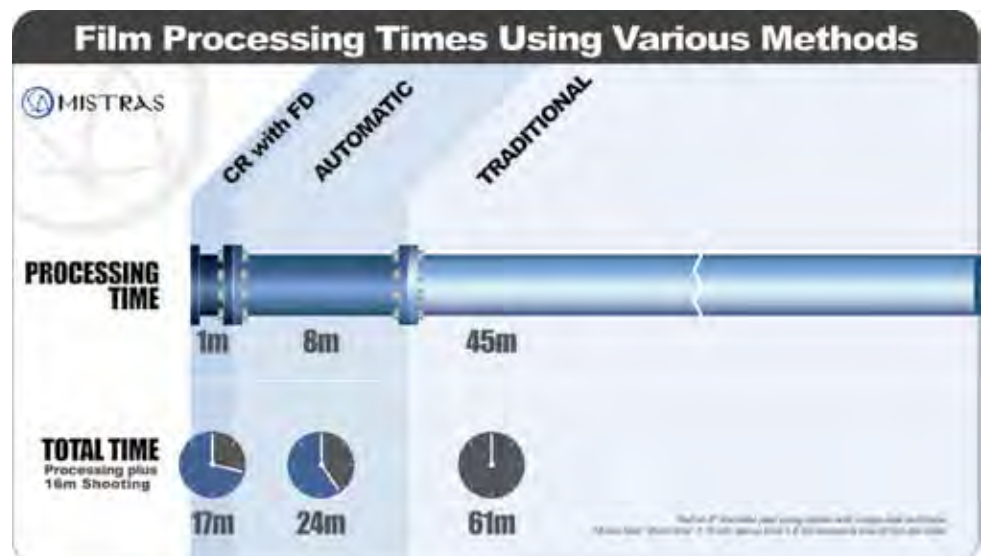
Because MISTRAS' CR allows for multiple plate processing at the same time, that equates to a production improvement of 15 to 30 minutes per hour using Computed Radiography versus traditional film radiography. This promotes same shift response to acceptance results, defects, and rework requirements.

Not only do the results get into the hands of the customer quicker, they also stay there with simple, convenient archiving services. MISTRAS' CR eliminates the need for film and the expensive costs that come with it. Rather than being transferred onto normal X-ray film, which is bulky and needs to be stored in a climate controlled environment, images captured with CR are digitized (FD). These digital images can be viewed and enhanced to aid interpretation and eliminate assumptions or the need to re-examine. Interpre-

tation is easier too since digital images can be marked, highlighted, and annotated for clearer interpretations. And the digitization of images improves work flow by allowing for digital archiving that enables easy future viewing and electronically sharing via email for fast approvals

"It's an added service to the client for maintaining their records for long periods of time," Bull said. "It is more accurate to read and it reduces the storage costs because the information is on portable media, not in boxes stored in a climate-controlled area. It's more reliable, safer for our technicians, and allows them to do their jobs more efficiently and at a higher level."

Adhering to its mission as One Source for Asset Protection Solutions, MISTRAS also offers the ability to digitize film already processed with conventional RT.



These capabilities allow MISTRAS to take a 12x12 foot storage room full of X-Ray films and digitize them onto portable media such as a disc or CD; thus eliminating the costs associated with storage, space, and climate control. With that portable media, MISTRAS customers can upload digitized films to the web, where their clients can now have access.

In addition to eliminating the darkroom, chemical, and hazmat costs associated with traditional X-ray film development, MISTRAS' Computed Radiography prolongs the useful life of radioactive sources.

Furthermore, the smaller footprint and desktop size coupled with just a 110-volt power supply requirement that VMI's advanced technology provides means CR with FD makes a radiographer's life just a little easier.