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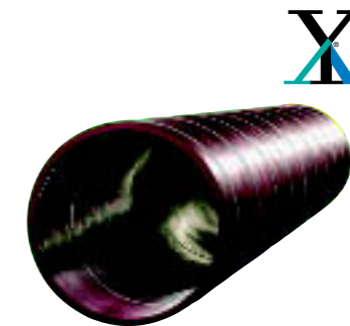
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High-quality solutions for the non-destructive testing of welding seams

The importance of quality assurance for welding seams during pipe production, after on-site pipeline assembly or in subsequent pipeline servicing and maintenance cannot be overstated. For years the non-destructive testing of materials via X-rays has been a 'tried-and-true' method for detecting irregularities in welding seams, whether in steel, aluminum or special alloys.

The wide-ranging areas of deployment involved, each with its own special requirements, place great demands on the X-ray inspection systems in use.

Solutions to match any requirement

YXLON offers the fitting solution to match each and every need. Our wide spectrum of products ranges from complete pipe inspection systems – including conveyor technology when desired – to spot-check sample or inline series inspection during production, straight through to mobile and portable X-ray inspection systems for deployment in the field. The use of high-grade, robust components, imaging systems suited to match your needs and high-performance analysis software enable us to provide you with an assured inspection decision while offering a high degree of user friendliness at the same time.

The range of our product portfolio guarantees that we can offer you precisely the solution to match your requirements.



We have the matching solution for you.

The challenge lies in the details

Despite automated welding processes, irregularities in welding seams can and do occur. Pore cells, bonding defects and an insufficient number of welding points are only a few of the defects to be recognized in compliance with ISO 6520.

Contrary to other technologies, even such difficult areas as the ends of pipe segments can be inspected with certainty when X-rays are used. Besides this, an inspection using various technologies is frequently stipulated due to safety reasons, e.g. at the joints of spirally welded segments. Whether using film, image intensifiers or flat detectors, X-ray inspection systems have been deployed successfully toward quality assurance in pipe production for years.



However, norms or contract stipulations call for an inspection of welding seams not only during pipe production: They also require that seams are inspected following on-site pipeline assembly.

That brings us to servicing and maintenance work: X-ray technology is deployed here, too. In some countries a regular inspection of welded seams for the presence of weak points is mandatory by law. That applies to certain sectors such as nuclear power plants or the chemical industry. The need for maintenance at spots that are not accessible from outside can be determined using X-ray technology, for instance in the case of insulated pipes or inner pipe walls. YXLON offers a complete range of portable and mobile X-ray inspection systems for all of these tasks.



Y.PipeSolutions – Special solutions to meet your requirements

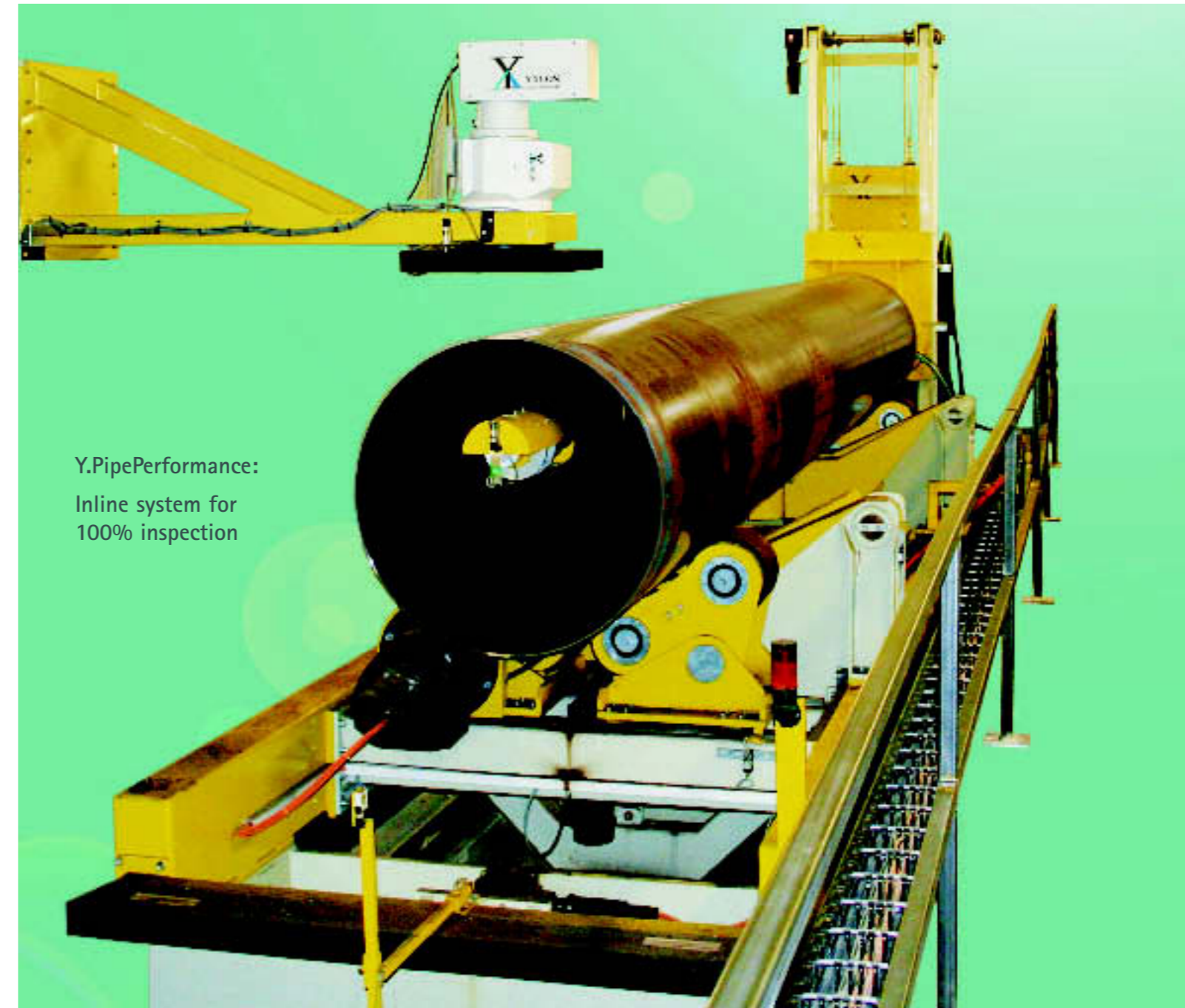


When it comes to quality assurance in pipe production, the welding seams along the pipes are often tested in their entirety, not just at the ends of pipe segments. In that case the throughput, i.e. the inspected meters of welding seam per minute, holds the same importance in ensuring smooth production flow as a high image quality. YXLON offers pipe inspection systems that do justice to the demanding specifications posed by pipe manufacturers.

The solutions offered involve conveyor technology and/or interfaces to conveyor technologies for the widest variety of pipe-production plants. Manipulation adapted to pipes' weights and dimensions assures that the most different types of pipes can be inspected trouble-free.

We combine stable X-ray sources with the image-generating media best suited to meet the respective requirements. Film is one alternative, although image-intensifiers or high-resolution flat detectors are equally viable.

When flat detectors are used, an additional factor in their favor is that they allow solutions to be implemented that require the least space: Since the compact image generator can be easily mounted on a sled, the inspection envelope has to be only a bit larger than the pipe itself. An intelligent control unit moves the X-ray tube and flat detector synchronously along the welding seam. In the case of spirally welded seams, the pipe is also rotated automatically.



Your requirements define our solutions.

Y.XPO and Y.XMB – Solutions with certainty in the field



Portable and mobile X-ray systems from YXLON have been specially conceived for deployment in the field. Their high reliability and simple operation set them apart from other systems.

Y.XPO and Y.Smart

Low weight and compact dimensions are the distinguishing factors that make the portable X-ray systems Y.XPO and Y.Smart outstandingly suitable for deployment in the field. The systems display low power consumption and are resistant against voltage fluctuations. In selecting the materials used, the focus was placed on a high degree of robustness alongside functionality in order to ensure trouble-free deployment, even under difficult conditions. YXLON offers units ranging from 160 kV to 225 kV and 300 kV.



Y.XMB

The compact constant-potential X-ray systems Y.XMB 160 and Y.XMB 225 are particularly suitable for assignments in which a high dosage output is required together with flexibility and mobility. By combining them with the wide-ranging YXLON assortment of unipolar metal-ceramic X-ray sources, flexible X-ray systems emerge that are capable of dealing with nearly any mobile application. All of the system's components are mounted for transport on a handtruck equipped with pneumatic tires, a crane hook and two axes for tilting, and can thus easily be transported by one person to the deployment site.



Y.XPO 225 – Inspection with certainty in the field



Our products master difficult conditions.

High-grade components – The basis for outstanding results



The good results achieved by our inspection systems are based not least of all on the use of high-grade components which, in turn, make use of state-of-the-art technology.

Y.Image x500 software family

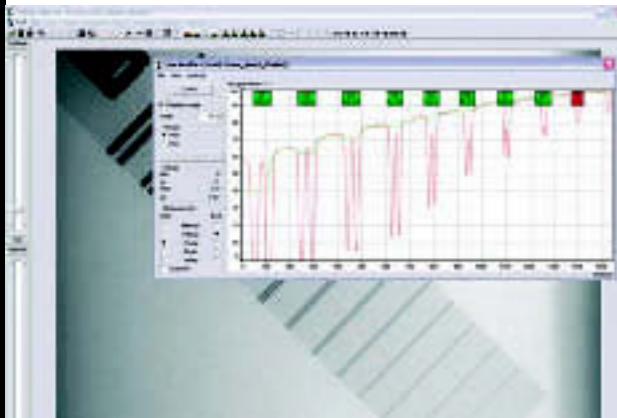
With the software products from the Y.Image x500 family YXLON is offering high-quality image-processing and image-storage systems that help to make inspection decisions with certainty.



Developed at first for radiographic images from image intensifiers using a standard video signal, today systems from the x500 family offer special functions for the calibration of flat panel detectors in order to achieve optimum image quality.

Compared with X-ray film, that development was the only way to enable what is at times an even better image quality.

When digital detectors are used, the entire grey-scale sector is supported by up to 65,535 different shades. A considerably more efficient analysis of the picture is thus possible than would be the case using a conventional film viewer.



The functions for qualification and documentation of image quality are key elements within the x500 software family:

The semi-automatic setting of geometric definition and con-

trast resolution are just as possible as the analysis of the image's signal-to-noise ratio.

Y.Tubes

The unipolar and bipolar metal-ceramic X-ray tubes from YXLON combine great mechanical strength, a high resistance to voltage fluctuation and high output with small dimensions and a low weight. Together with our constant-potential X-ray systems, very dependable overall systems are the result.



Y.XRS

Y.XRS image intensifiers were conceived especially for industrial use. They distinguish themselves through their robustness, long product life and excellent image quality, and are particularly suitable for testing welded seams in real time.



Y.Panel

Nowadays modern digital flat detectors achieve results that are at least as good as those recorded on film. The inspection itself takes place considerably faster, the inconvenient storage of chemicals and their cost-intensive use are no longer necessary. YXLON offers a complete range of flat panel detectors.



High quality for outstanding results.