

Y.PipeInspector

Customized solutions for pipe inspection



- High-speed, fully digital imaging
- Flexibility for various pipe dimensions
- Fulfills all international X-ray inspection standards for pipe welds

Y.PipeInspector is a customized X-ray solution for inspecting pipes that is suited for spiral and longitudinal as well as for end welds. It is available in multiple configurations which utilize our entire range of X-ray tubes from 160 kV to 450 kV, and also features high-speed digital imaging.

Conveyor technology with interfaces and CNC-controlled full automatic manipulation, adapted to the pipes' weights and dimensions ensure that even highly varying types of pipes can be smoothly inspected.

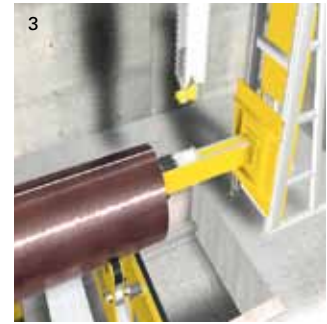
The combination of Y.PipeInspector with our latest software development HDR (Highly Dynamic Radioscopy) ensures the recognizability of all defects in one view of live image and helps to reduce inspection time and increase quality.

Whether combined with customer's local carriage or with complete customized loading system provided by YXLON, each system is individually designed to provide the most versatile solution to match customers' specific requirements.

YXLON. X-ray technology at its best.



1 "Tube inside pipe" principle at a 21" pipe mill
 2 Ceiling-mounted movable tube and high-voltage generator
 3 Flat-panel detector in position close to tower
 4 Flat-panel detector at end of boom



Tube inside pipe

The boom with the tube at its end relies on a frame construction for tensile strength and low weight so that the tube head does not dip noticeably.

The detector is mounted to the wall or ceiling and moves vertically along the scanning axis, allowing a change of FDD and optimum placement for pipes with different diameters.

Advantages:

- Cost-effective design
- Suitable for high-speed image intensifier
- Perfect for shorter lengths of pipes
- Deployed successfully worldwide
- Single wall inspection for small pipe diameters

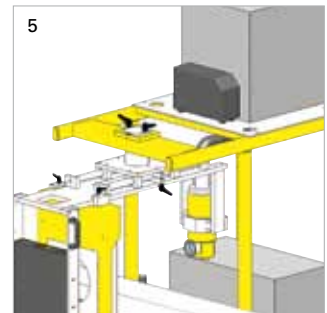
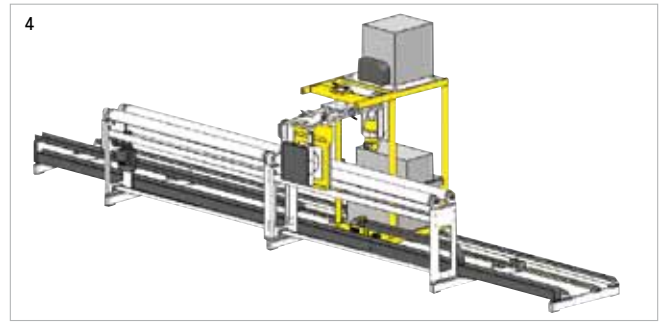
Movable digital flat panel detector

The detector can complete a full-length scan without moving the pipe.

An intelligent control unit moves the X-ray tube and flat panel detector synchronously along the pipe welding seam.

Advantages:

- Small footprint – halfsize of conventional bunker
- High reliability
- Short high-voltage cable
 - higher stability of the system
 - higher uptime, less service costs



- 1 Boom with flat panel detector
- 2 Tower with boom
- 3 Boom with stabilizer
- 4 Double-wall system
- 5 Detector and tube of double-wall system

Detector inside pipe

Advantages:

- Best for long pipes
- Flexible for various inspection geometries
- Optimal for digital flat panel detector

The detector can be mounted at a 12 o'clock or a 3 o'clock position.

Advantages of the 3 o'clock position:

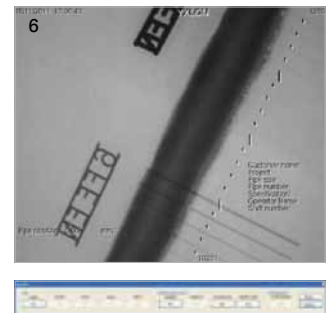
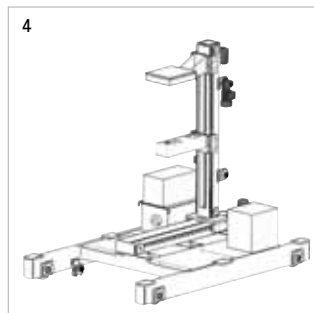
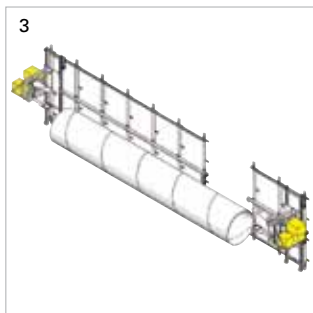
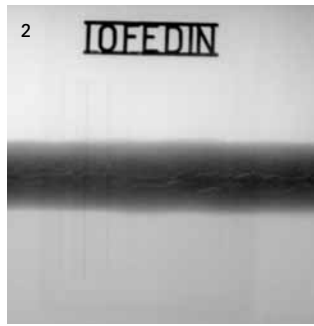
- Smaller pipe diameters can be inspected
- No dirt and dust can fall onto the detector

Double-wall system for thin pipes

The flat panel detector and X-ray tube are aligned on a transverse arm in a fixed position as they travel along the pipe. The arm can be manually rotated or by motor to provide a tilted view of the weld for optimal double-wall inspection.

Advantages:

- Elliptical images of circumferential scans are possible
- Optimized for thin and long pipes
- Lengthwise feed-through is possible



- 1 Image with HDR
- 2 Image without HDR
- 3 Wall-mounted pipe end
- 4 Tube and detector, variable position and variable FDD
- 5 YXLON carriage
- 6 Image overlay software

HDR Highly Dynamic Radioscopy

The HDR-Filter technology makes scanned inspection items appear as if made of glass in a low-noise live image.

Advantages:

- Better detectability in movement
- No constant adjustment of radiosopic parameters for thin and thick regions necessary

Pipe end inspection

Systems for inspecting end welds can be designed as a single or double-end inspection unit. To be mounted on the floor on the wall or on the ceiling

Advantages:

- Designed for film or digital flat panel detector
- Fulfills the strictest requirements for image quality

Options

Image overlay

The overlay software is ideal for superimposing text onto the digital image. It can be installed on an Image 2500/3500 computer and 100% customized. Positioning data can be captured directly from the CNC or network. The software offers a facility to incorporate a pipe measurement ruler into the live image, easy access to dialog boxes for entering operator data and IMAGE x500 remote control. The sequence of operation can also be remotely controlled from the user interface.

High-quality video recording

A separate video recording PC enables videos of inspections to be recorded in high quality and compressed in real-time to save hard-disk space.

Archiving

Special storage solutions are compatible with open standard formats enabling images to be accessed even decades later.

Carriage

A CNC-controlled customized carriage provides optimum throughput and automatic pipe rotation, also for spirally welded seams.

YXLON

Technology with Passion

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