MoveInspect + BendingStudio

Highly precise 3D measurement of tubes and pipes with medium or large diameters

Big pipes have to fulfill highest requirements, whether in thermally highly stressed modern power stations or in plant manufacturing and shipbuilding. Exact dimensional accuracy is indispensable in installation and operation. Especially in small batches, unnecessary rejects are an unacceptable cost factor. The biggest challenge for tube manufacturers to stay competitive is a reliable, exact inspection of the components. It should be simple and save time and costs.

Combining the coordinate measuring machine MoveInspect HR|XR with the wireless MI.Probe and the software platform BendingStudio, AICON offers efficient quality control for tubes with medium and large diameters. MoveInspect and MI.Probe fulfill all requirements regarding precision, flexibility and stability for operation in production.

Tactile measurement with the MI.Probe at Bilfinger Piping Technologies, Dortmund/Germany

The software platform BendingStudio offers many application-oriented functionalities. Production processes, such as the setup of bending machines, are optimized. That reduces costs.
The components are perfectly matched to one another to benefit from all advantages.

MoveInspect HR|XR – **Precise even in rough production environment**

Measurement of a component at a fixed measuring station at Gassner Stahlbau GmbH, Bürs/Austria

Production environments, as in large tube production, are impaired by vibrations and movements. Many measuring systems, however, require an undisturbed setting. So how can you obtain precise test results? With MoveInspect, vibrations or changes in position are no problem! Thanks to the „dynamic referencing“-function, MoveInspect is able to detect such disturbances and to compensate them automatically.

Tube with AICON targets

The system is tracking optical reference points on the object for monitoring its position continuously. It does not matter whether object or measuring system changes position during data collection, the user always receives reliable results. Thus, MoveInspect is the solution for measuring in production environment. It is deployable for mobile use as well as for stationary use at a fixed measuring station.

HEXAGON MANUFACTURING INTELLIGENCE | AICON 3D Systems

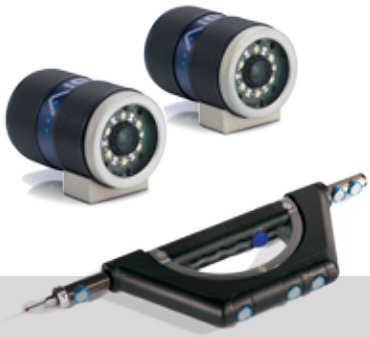
MI.Probe – 3D measurement **the easy way**

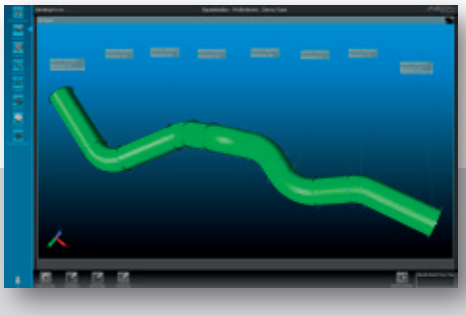
With the hand-held MI.Probe, objects can easily be measured three-dimensionally by tactile probing. MoveInspect is tracking the MI.Probe continuously during the measurement process and determines its 3D position in space. The system is much more flexible than measuring arms as it works without cumbersome cables or other mechanical connections to the measuring device. The operator has total freedom of movement. The system can be adapted to the object size and the required accuracy, and is easily extendable if needed.

Versatile and functional – BendingStudio Software

It takes several steps from a drawing to a finished part, each one requiring different types of data. The software platform BendingStudio links all the data and processes involved around production of bended parts – from production and process planning to manufacturing and quality control. All users have shared access to the same stored content; everyone gets the data needed for the relevant production step. Thanks to open interfaces, correction data can be transmitted to CNC bending machines. And data can even be transferred to production software.

MoveInspect + BendingStudio





YOUR ADVANTAGES AT A GLANCE:

- Highly precise and fast measurement
- Total freedom of movement with MI.Probe
- For use in rough production environment
- Mobile and stationary application
- Easy and user-oriented measurement with BendingStudio
- Cost reduction by less rejects and higher machine availability
- Satisfied customers thanks to higher product quality

Technical Data

Measuring system	MoveInspect HR|XR with MI.Probe
Configuration	MoveInspect HR|XR cameras, variable configuration with 1, 2 or more cameras on tripods or on a camera bar
Max. tube length	Depends on camera configuration; e. g. about 6 meters with MoveInspect HR|XR Large; longer tubes can be measured by overlapping repositioning
Measuring range	Bending data, sheath tolerance, bending radii, ovality, functional dimensions
Tube diameter	50 mm - 2,500 mm
Software	MoveInspect and BendingStudio, optional: external inspection software

AREAS OF APPLICATION

- Industrial and plant manufacturing
- Shipbuilding
- Boiler and power plant construction
- Chemical industry
- Offshore industry

RANGE OF USE

- Supervision of tube manufacturing
- Comparison against CAD data
- Setup and correction of bending machines

HEXAGON MANUFACTURING INTELLIGENCE

IMS center Authorized Distributor

AICON 3D Systems

AICON 3D Systems GmbH
Biberweg 30 C
D-38114 Braunschweig, Germany
tel. +49 (0)531 58 000 58
info@aicon.de | www.aicon3d.com

IMS Center
Bolshoy pr. V.O., building 84-A
St. Petersburg, Russia
tel. (812) 333 45 67
company@ims-center.ru
ims-center.ru