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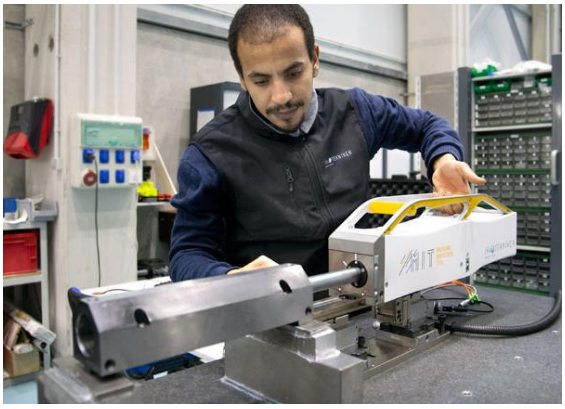
Inspecting components with a micro margin of error 25 times thinner an A4 page

F4E and Tekniker have developed an innovative portable metrology equipment able to measure the diameter of cylindrical hinges with 20 microns of tolerance. An innovation in the field of Industrial Dimensional Metrology tools which could find promising applications in quality control and R&D to inspect pipes and valve manufacturing or metalworking for example.



The technology

ITER often requires to go beyond the state of art and design new high-precision components for which there is no suitable metrology tool. F4E and Tekniker have developed an innovative metrology equipment able to measure the diameter of cylindrical hinges with 20 microns of tolerance. This innovative sensing probe combines mechanical touching with confocal technology and offers high precision design of scanning stage, avoiding undesired errors.

Ultra-high accuracy, portability and easy adaptation...

With state of the art technologies, inspecting components with such level of tolerance was complex and could take up to several days. This high precision mechatronic system offers a special counterbalance to allow measurements of holes up to 300 mm length. Fully portable and provided with autocalibration means and alignment means, this equipment is perfectly suitable for in-situ measurements.

…for micron-tolerance machining and dimensional metrology

This groundbreaking piece of metrology equipment could be useful in many fields of the Industrial Dimensional Metrology and Micron-Tolerance Machining markets and find promising applications in quality control and R&D for pipes and valve manufacturing, optics or metalworking for example.

Collaboration opportunities

The technology is available for direct use, licensing opportunities and technical adaptation for new applications, components or other geometrical tolerances.

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