

## Fives – manufacturer of Abbey, Bronx, OTO and Taylor-Wilson

FIVES, an industrial engineering Group with a heritage stretching back more than 200 years, designs and supplies machines, process equipment and production lines for the world's largest industrial groups, including the aluminium, steel, glass, automotive, aerospace, logistics, cement and energy sectors.

In 2014, Fives achieved sales of €1,560mn with a team close to 8,000 employees and a network of over 100 operational units in nearly 30 countries.

Within the tube and pipe sector Fives designs and supplies solutions from mill to finish with the capacity to manage small to large projects around the globe. Its pioneering systems include Abbey and OTO mills, Bronx straighteners and Taylor-Wilson finishing equipment that are custom engineered to provide a quality, fully integrated solution. This combination of resources and infrastructure utilises the most recent developments in tube and pipe mill technology, delivering reliable finishing solutions for a wide range of seamless and welded products.

Recognised for experience and superior technology by steel and nonferrous manufacturers, thousands of installations are commercially present throughout the world, such as OTO and Abbey mills that feature the best in ERW pipe mills, entry systems, tube and pipe cut-offs and Abbey slitting lines and drawbenches. Fives' installations also include Bronx tube and pipe and long product straighteners, Taylor-Wilson hydrostatic pipe testing, collapse testing and leak testing machines and a complete line of end facing and rotary cut-off equipment.

Abbey, Bronx, OTO and Taylor-Wilson products are represented by Fives' offices in Boretto, Italy; North Canton, Ohio, USA; West Midlands, UK; Shanghai, China; and Mexico.

Fives Group – France Website: www.fivesgroup.com



## MAC features tube, bar and wire test systems

MAGNETIC Analysis Corp will be featuring test systems for tube, bar and wire in Hall 11, Stand 11 J14 at Tube/ wire Düsseldorf 2016. Using a full range of eddy current, ultrasonic and flux leakage technologies, the latest developments in MAC's Multimac®, Echomac® and Rotoflux® systems will be introduced at the show. Additional information on a variety of applications ranging from the 500mm ultrasonic/flux leakage system for inspecting large diameter pipe, to the new compact, affordable Minimac<sup>®</sup> 55 eddy current test for detecting short ID or OD defects, will be available.

MAC's 500mm test systems utilise rotary ultrasonic and flux leakage technology. The rotary test technique spins large numbers of transducers around the pipe as it passes through

Magnetic Analysis Corp's 500mm UT/MFL test system for large diameter pipe



an enclosed rotary test chamber continuously supplied with pressurised water couplant. This design offers advantages of higher throughput speeds, quicker reconfiguration of transducers for different diameter material, repeatable test results, and 100 per cent coverage. The 500mm UT tester can detect longitudinal and transverse crack type defects on OD and ID pipe surfaces, and throughout the product's cross section, meeting standards that require finding artificial notches at a 5 per cent or 10 per cent level of the wall in pipe with any wall thickness. The system, which also features MAC's wireless transmission of test signals, can ensure compliance with industry standards at throughput speeds up to 1m/s. The

500mm transverse and longitudinal Rotoflux<sup>®</sup> flux leakage testers, together with the ultrasonic test provide a far more comprehensive test. The ultrasonic technology provides critical full inspection capability, including shear wave inspection of longitudinal and transverse defects at any quality level and wall thickness measurement and lamination detection. The addition of the UT rotary to the magnetic flux leakage testers provides complete all-direction test capability and gives the user full flexibility to optimise the pipe inspection process. The two flux leakage units can test to 10 per cent OD and ID notch levels up to approximately 14mm wall thickness, and 5 per cent OD and ID levels for thickness up to 12mm. The result of the combined test technologies is a system that is compliant with API 5CT and 5L, ASTM E570 and other standards, including those that require ultrasonic testing as the first method and a second method at the discretion of the pipe producer.

MAC's experienced engineers will be present at the booth to discuss the ultrasonic/flux leakage test systems and the new compact Minimac<sup>®</sup> 55, which features all the capabilities of MAC's Multimac<sup>®</sup> software in a single channel instrument, as well as other non-destructive test solutions for tube producers.

MAC's 85+ years developing and supplying non-destructive test equipment and systems to tube, bar and wire manufacturers ensures a thorough understanding of customer inspection needs.

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