

Babcock invests in fully automatic CNC bending machine for their high pressure pipe fabrication facility

Babcock is focused on rapidly responding to customers' challenges by delivering trusted solutions and investing in best in class technology. With boiler experience dating back to 1891, Babcock is Africa's most established and experienced boiler supplier, and offers a full range of specialised support services to the power generation and related industries.

The company recently invested in a new, fully automatic, CNC bending machine for its specialist manufacturing facility for steam generation parts as part of a drive to improve efficiencies at the facility, says Fernando Nunes – Workshop Manager at the fabrication facility. Established in 1993, Babcock's fabrication facility is located in Jetpark, Boksburg, and specialises in fabrication, manipulation and testing of most high pressure pipes for boiler applications, including waterwall furnaces, superheaters, economisers, headers and manifolds. The facility is ISO 9001 accredited and manufactures and supplies tube and pipework for all industries using steam generated power, such as the energy, pulp and paper, metallurgical, mining, chemical and petrochemical sectors.

Representing the latest technology in CNC bending machines, the CNC 120 TSR-CBF tube bending machine from CSM is ISO-9001 and CE certified, easy to operate and allows for increased flexibility, precision and productivity. CNC stands for Computer Numerically Controlled, referring to the use of a computer to control machine tools. The CNC bending machine is programmed according to engineering drawings to automatically manipulate any length of pipe according to customers' specific requirements. The machine is used to manipulate or bend tubes and piping with plain, bevelled or swaged ends up to a 114,3 mm O/D maximum. In addition to manufacturing parts for new boiler projects, the fabrication facility deals with breakdowns and emergencies so a quick turnaround time is essential, and in some cases emergency jobs can be completed within a few hours while the customer is waiting, says Nunes.

Babcock's fabrication facility operates from a 3 260 m² workshop with four purpose-built production bays, each serviced by two 10-tonne overhead cranes and fitted with a comprehensive range of fabrication equipment including tube bending, tube end forming, in-house designed 'H-fin' machines, tube bevelling, horizontal boring mills and welding equipment. An outdoor 2 500 m² stockyard and lay down area houses the hydrostatic test, spray painting and store facilities.

The specialist facility also manufactures and supplies membrane furnace panelling; tubular and plate water-cooled fume hoods; swaging, expanding as well as tube studding; 'H-fin' extended surface tubes for economisers; plain tube economisers or assembly fired heaters; and seamless boiler tubing and pressure piping to DIN 17175, BS 3059 and ASTM standards.

Babcock is accredited with the international standard of welding professionals ISO 3834 Part 2 comprehensive quality requirements and all welders employed at Babcock's fabrication facility

are certified members of the South African Welding Institute. The facility utilises all types of welding including MMA, GTAW, GMAW and SAW, and any materials from normal carbon steel up to the 1% and 2¼% chrome steels as well as high temperature, high strength, creep resistant steels are used.

“Our fabrication facility ensures that we have direct control over production and construction activities and can deliver timeous completion of contract work under demanding schedules and breakdown conditions,” says Nunes. “We strive to deliver quality and our weld repair rate is currently less than 1%.”

Among some of the recently completed projects for which Babcock has supplied its specialist high pressure pipework services is the manufacture of economiser elements for Kelvin Power Station, re-heater tube manipulations for Matla Power Station, tube manipulations for Kendal Power Station, and breakdown support for various other Eskom power stations.

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