

GOODWIN FACILITIES & RESOURCES



CAD facilities in Goodwin design office

Goodwin's Check Valve manufacturing facilities in Stoke-on-Trent, England, comprise a Steel and Super Nickel alloy foundry (Goodwin Steel Castings) and a well equipped CNC machine shop with full design, fabrication, inspection and test facilities (Goodwin International). The ISO 9001 foundry specialises in producing high integrity pressure vessel castings from a few kilos to 12,000kg in finished machined weight. The materials cast by the foundry are detailed on page 48 of the catalogue and include carbon and low alloy steels, stainless steels, duplex stainless steels and super nickel alloys such as Hastelloy® and Alloy 625. Goodwin's ability to produce the special alloys is enhanced by their in-house 10 tonne AOD refining furnace.

The design, machine and assembly shops cover some 9400 m² and are equipped with 31 modern CNC machine tools that are the core of the production and are supplemented by many conventional machine tools.

The test facilities include five hydraulic hydrostatic test rigs, the largest of which has a 2500 tonne hydraulic ram and can test valves up to 60". Cryogenic testing is also carried out on site where valves are submerged in liquid nitrogen at -196°C and leak tested with helium gas.

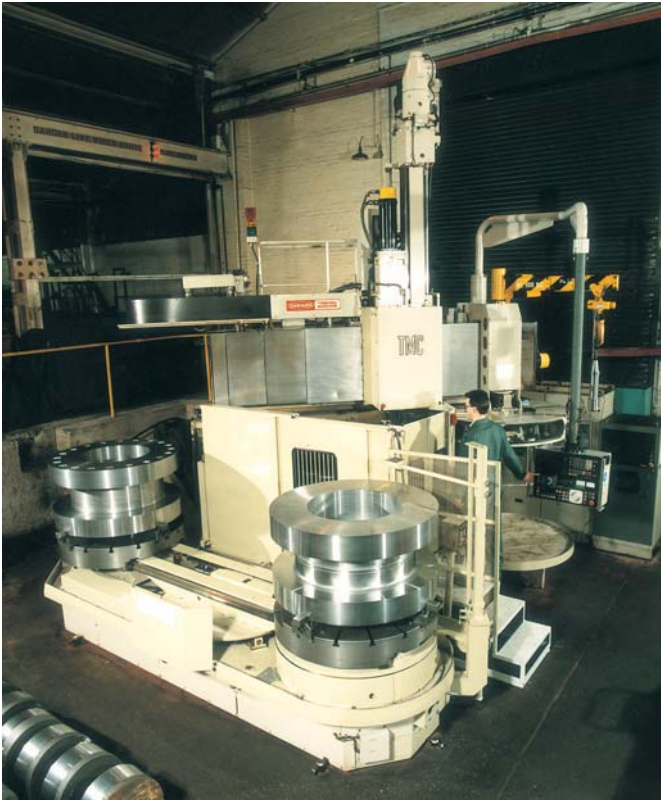
Valve design is carried out using CAD and is verified on computers utilising finite element analysis - ANSYS. Both the foundry and the design, machining, assembly and test facilities are audited by the British Standards Institute and approved to BS EN ISO 9001:2000 (Certificate FM343 and FM13182).



Charging Goodwin Steel Castings 8 ton AOD refining vessel



8 ton arc furnace at Goodwin Steel Castings



Three station CNC vertical borer with live spindle and tool changer



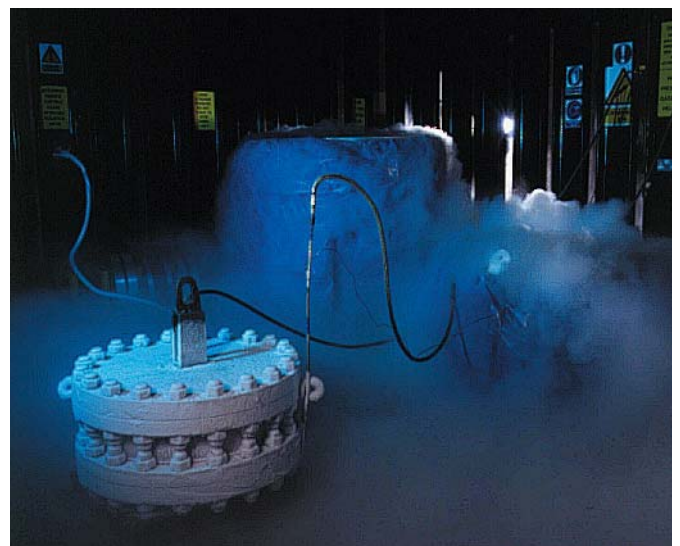
2500 tonne hydraulic test rig in Goodwin's Assembly bay



Four pallet CNC machining centre with auto tool changer



Twin Pallet CNC machining centre with 60 tool changer



Cryogenic test facility for helium leak testing