



GOODWIN STEEL CASTINGS LTD

ESTABLISHED 1883

Ivy House Foundry, Hanley,
Stoke-on-Trent, ST1 3NR, United Kingdom

Tel +44 (0)1782 220000

Fax +44 (0)1782 208060

Email castings@goodwingroup.com

Boiler Feed Pumps (BFP) Boiler Circulation Pumps (BCP)

Goodwin Steel Castings Limited and its sister machine shop Goodwin International Limited supply finished machined and pressure tested BFP/BCP castings to Original Equipment Manufacturers and direct to Operators. Goodwin have a historical supply of 150+ BFP/BCP units to OEM's and have more recently supplied in excess of \$7 million USD worth of reverse engineered components direct to Power Station Operators. As a single and integrated vendor Goodwin continue to prove to be an economical choice for retrofit.

Goodwin engineers have many years experience dealing directly with Power Station engineers talking their language and tailoring their needs with our ability to reverse engineer; manufacture finished components as well as procure ancillary components to meet the Stations requirements. Our foundry and machining facilities produce high integrity steel, low alloy, stainless, duplex and super nickel alloys finish machined and pressure tested castings; ranging from 1,000 - 40,000 lbs delivered direct to site.



Success in supplying large companies and projects arises from the tight integration and communication between the foundry and machine shop, offering our customers a single integrated solution. Our facilities are retained under common management by the sixth generation of the Goodwin family who have supplied cast product for the last 130 years.

Goodwin have excellent technical capability to aid you with life extension project work and would welcome any enquiries to support such activity.

Yours Sincerely,

Bernard R. Goodwin

Production Director - Goodwin Steel Castings Limited

1. Problematic Pump Casing Wear

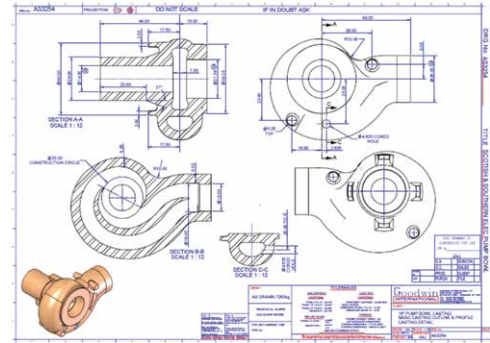
BFP/BCP's are normally considered as 'fit and forget' pumps with a pump casing lifespan of approximately twenty five years, in which the pump casing is subject flow erosion and must be periodically checked in service.



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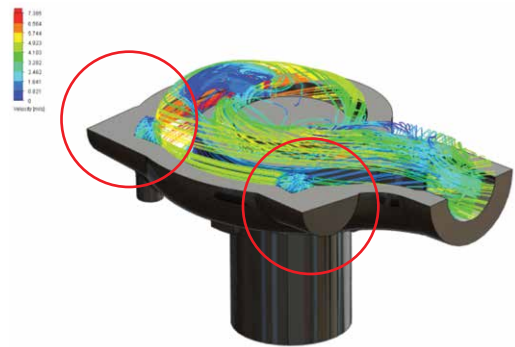
2. Goodwin Site Survey & Dimensional Analysis

Using three dimensional laser scanning equipment our engineers are able to accurately measure existing equipment and generate computer models for review. This service can be conducted on site or at our facility using our computer controlled measuring machines.



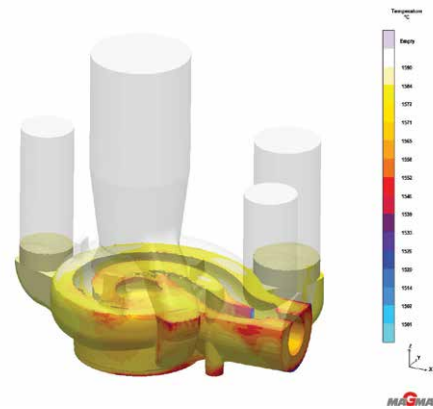
3. Goodwin Pump Casing Design Analysis & Reverse Engineering

BFP/BCP's which were installed over twenty years ago could not benefit from modern fluid dynamic analysis or the advances of simulated steel casting and computer controlled machining. Volute access plugs are often found on older pumps casings which are not only prone to leaks to atmosphere, but impairs the fluid flow which reduces the pump casing efficiency and reliability, Goodwin's manufacturing process route often facilitates the removal of such plugs.



4. Goodwin Manufacturing Drawings, Manufacturing Inspection Test Plan

Our three dimensional models are adjusted for methods of production and manufacturing drawings are produced for customer approval. Accompanying our manufacturing drawings will be a 'Manufacturing Inspection & Test plan' which will identify the manufacturing processes, quality assurance specifications and acceptance criteria.



5. Goodwin Finished Machined & Pressured Tested

Our components are finish machined and pressure tested in accordance with customer approved drawings and the manufacturing inspection test plan. Our components are inspected and released with documentation direct to site. Goodwin have the skill set to provide additional services such as hard facing, weld overlays, weld end preparation and fabrication welding of forged spool material, in addition to pump casing assembly.

