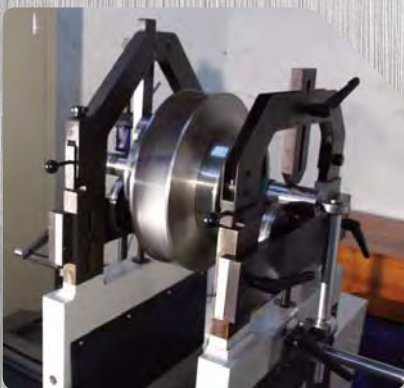


Engineering Services



Dynamic Balancing



PTS utilises a hard bearing style balancing machine that indicates residual unbalance either in single or dual planes. Our equipment can handle items up to 2000kg in mass and 1600mm in diameter. This equipment is used for balancing impellers and single or multi stage rotating assemblies to ISO 1940 2003 Grade G6.3 or above. NATA accredited certificates are also available. This attention to detail ensures minimal vibration, extended bearing life and optimal pump operation.

3D Z-Axis Printer



Newly designed pump impellers or reverse engineered data from the Faro Fusion arm can be turned into casting patterns in a fraction of the time of conventional pattern making through a process of 3D printing. This technique ensures absolute accuracy of the complex compound curves used in impeller vane development. This has historically been a very lengthy process and open to pattern makers interpretation of 2D drawings. For double entry impellers the 3D printing of impeller vanes ensures that the vane leading-edge profiles on both sides are an exact mirror image resulting in balanced hydraulic loading on shafts, bearings etc.

Faro Arm



The Faro Fusion arm is the latest in reverse engineering and quality control technology enabling us to quickly check cast and machined items or reverse engineer components rapidly and efficiently. Scanned and/or probed data from the Faro arm can be used in the 3D Z printer to produce casting patterns accurately so as to replicate the original item exactly. This is a compact portable system which can be used on site for in situ data collection, reducing the need to take the equipment out of service for long periods.

Heat Treatment



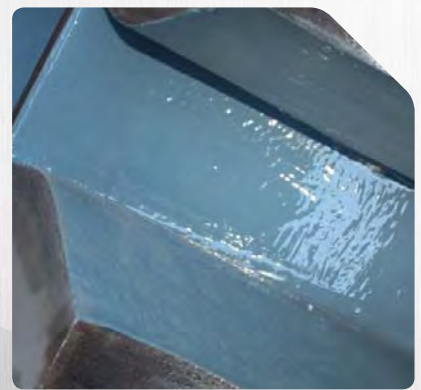
PTS have a computer controlled heat treatment furnace which can be programmed for annealing, normalising or hardening of all types of materials with 100% repeatability. Heat Treatment temperature and duration is documented and can be retrieved for printing in chart or certificate form for customer's records. Our heat treatment furnace is used regularly in the production of AS2027/CR27 high-chrome cast iron, AISI440C stainless steel and Duplex Stainless steels which require staged programs for heat treatment cycles between machining operations and with this capability allows us to control all facets of manufacturing.

Non Destructive Testing (NDT)



Our PCWI DC15 high-voltage porosity tester is used to check surface coating integrity. We also have equipment for hydraulic and pneumatic pressure testing of pump casings and complete pump assemblies. Material thickness checking is carried out using an ultra-sonic measuring device. We also employ dye-penetrant for crack detection purposes, and we use Poldi impact testing to check material hardness.

Resin Coatings



PTS can apply all commonly available types of anti corrosion coatings and Tungsten Carbide HVOF spray wear resistant coatings.