

## **Precision center lathe turning**

### **Equipment**

Manual centre lathes, typically Colchester Magnum or Mastiffs, each have three jaw and four chucks with both hard and soft jaws, tailstocks and steadies and all are fitted with digital read-outs.

### **Training and Qualification**

In addition to relevant experience in a machining environment you will, preferably, have completed an engineering apprenticeship and be qualified to C&G, BTEC ONC/HNC or other appropriate level.

### **Procedure**

The route through the machine shop for all machined castings is determined by machine shop supervision. Most castings are proof machined leaving a 0.025 inch cut on all machined surfaces. This is generally carried out on centre lathes or vertical borers (C.N.C. or manual) Castings are then checked for defects either visually or by NDT methods (usually LPI). If no defects are found the castings can be finish machined. On completion of all machining operations, components are passed to the inspection department for a full inspection, this involves a complete dimensional check, final L.P.I. if required and pressure testing to customer requirements if required (NDT is sometimes subject to customer witnessing)

### **Tools and Materials**

Indexing carbide inserts in tool holders. Generally to ISO standards but many special tools are manufactured to Brafé requirements. Measuring equipment. Including internal and external micrometers, vernier calipers, plug/thread/ring gauges. Departmental CMM or portable Faro Arm. Consumables used in machine shop processes e.g. carbide indexable inserts, drills, taps, reamers, files, emery cloth, coolant, tapping compounds and oils, polishing pads, grinding wheels, de-burring tool blades, milling cutters etc.

### **PSE**

Safety boots, overalls, safety glasses, protective gloves, ear defenders and dust mask if grinding or polishing. The company will supply these items. Each employee has a duty to work safely.