

CNC turning and milling operations

Equipment

CNC Lathes, typically HASS and PUMA, all with hydraulic three jaw chucks using both hard jaws and soft jaws, some with hydraulic tailstocks, some with driven tooling.

C.N.C. mills (machining centres), typically MAZAK and HASS. Some vertical, some horizontal, some with one table, some with twin pallet, some with “through the nose” coolant, some with adaptors for “through the nose” coolant and some with 4th axis capability.

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.