

Specification of Competency Standards
for the Manufacturing Technology Industry
Unit of Competency

Functional Area - Product Manufacturing

Title	Benchwork
Code	106410L3
Range	This unit of competency is applicable to the production department of the corporation of tooling manufacturing industry. Practitioners should be capable to understand the knowledge and processing of all kind of benchworks, and apply suitable tools and methods to carry out manual processing and dressing.
Level	3
Credit	6 (For Reference Only)
Competency	<p>Performance Requirements</p> <ol style="list-style-type: none"> 1. Understand the techniques and technologies of benchwork <ul style="list-style-type: none"> • Understand the processing characteristics of the workpiece material • Understand the types and usages of scribing tools • Understand the types, specifications, usages and application methods of commonly used fixtures used for benchwork • Understand the methods and techniques of all kinds of benchwork, such as sawing, hammer, chisel, file, polishing, fitting, drilling, scribing, tapping and reaming • Understand various types, usages, maintenance, and application methods of benchwork, including file, scraper, emery cloth, sand paper, grinding stone and reamers • Understand the different specifications of saw blade • Understand the types and usages of different grinding machines • Understand the structure, usages and operation methods of band saw machines • Understand different international standards of threads • Understand the types, specifications and application methods of screw tap and screw die • Understand the types and application methods of manual tapping, reaming dedicated thread cutting agent • Understand the processing and categories of different drilling and reaming 2. Carry out benchwork <ul style="list-style-type: none"> • Select suitable scribing tools to carry out scribing • Choose the appropriate hand bow saw and band saw, cut the workpiece in accordance with the dash-shaped workpieces • Select suitable files to carry out different cutting and filing work in accordance with marked the shape, such as cutting and filing of chamfers, dress the mould shape and match the location • Select the suitable scraper to pare off the plane, inside and outside surfaces, mating surfaces and patterns • Grind the scraper to suitable shape and cutting edges • Select suitable emery cloth, sand paper or a grinding stone to carry out manual polishing and grinding • Select suitable screw tap and screw Die (Screw Tap) (Screw Die) • Select the appropriate tap bit from the table, manually tap and the desired thread and carry out tapping • Select the appropriate straight holes of reamer and tapered pin to the desired size and the appropriate amount set aside 3. Professional handling of benchwork

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	<ul style="list-style-type: none">Follow safety guidelines and relevant codes of practice of benchwork, and in accordance with design drawings, specifications and production efficiency requirements, carry out tooling benchwork
Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are:</p> <ul style="list-style-type: none">Capable to select suitable benchwork tools and safely carry out all kinds of benchwork, achieve an excellent production efficiency and product quality and precision requirements.Capable to maintain various benchwork tools, and reach the application precision and functions
Remark	