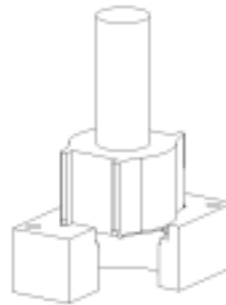


## Practical Task Assignment 2 – EDM Wire Cutting

Electro-Discharge Machining (EDM) is a metal removal process by means of electrical energy released by spark discharges occurred between an electrode and the workpiece with electrical conductivity. Wire EDM is a process in which a thin electrode, a brass wire of usually  $\varnothing 0.25$  mm, is used to cut conductive materials such as steel, copper and aluminium. The wire is continuously spooled, much like a handsaw blade, passes through a starter hole in the workpiece and cuts complex shapes following a programmed path.

### I. Objectives:

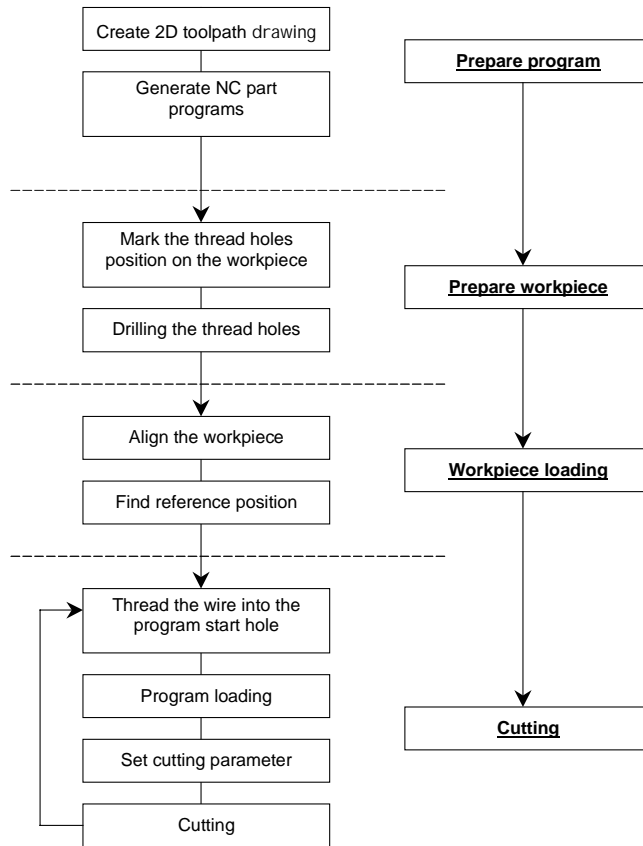
To understand the application of the EDM wire cutting process;  
To familiar with the typical specification and construction of an EDM wire cutting machine;  
To be able to create a NC program for wire cutting application;  
To familiar with the operation procedures;  
To be able to prepare parameters setting for different applications;  
To understand how the alignment of workpiece set.



### II. Training content

This assignment is required to produce an electrode of a mini watch casing mould, as the following figures shown by an EDM wire-cutting machine ONA 250 and NC programs of the tool path. The process can be divided into four main steps including generation of NC tool path program, preparation of the workpiece, loading workpiece and execution of EDM wire-cutting process as shown in the following work flow.

## 1. Work Flow of Wire-Cutting Process



## 2. Finished Product - Electrode of Watch Casing

