WorldSkills UK, CNC Milling

Marking Scheme Overview

The marking scheme for the CNC Milling competition is broken down into 4 main areas of inspection and marking.

1. Primary Dimensions

- Measured Objectively (Yes, it's in tolerance / No, it's not in tolerance)
- Tight tolerance dimensions range between **±0.01mm** and **±0.05mm**
- Including H7 bore holes that are not standard reaming sizes
- There are between **13 – 17** of these dimensions on the model
- These dimensions account for about 50% of the project

2. Secondary Dimensions

- Measured Objectively (Yes, it's in tolerance / No, it's not in tolerance)
- These dimensions have a tolerance of **±0.1mm**
- Including H7 holes that are standard reaming sizes and tapped holes
- There are between **13 – 17** of these dimensions on the model
- These dimensions account for about 30% of the project

3. Surface Finish

- Measured Objectively (Yes, it's in tolerance / No, it's not in tolerance)
- Looking at a surface finish of 0.8Ra
- There is usually **2 or 3** surface finish markers on the drawing
- There is also a mark for only using **one** of piece of material
- These dimensions account for about 10% of the project

4. Conformity to Drawing

- Measured Subjectively (Industry Judges give a rating between **1 – 10** on how accurate it is to given criteria)
- Side 1 Complete – are all drawn features present and in correct position
- Side 2 Complete – are all drawn features present and in correct position
- Machined Chamfers – all edges that can be reached by a chamfer mill must be machined
- Hand Chamfers – all edge / corners that cannot be reached by a chamfer mill are blended in to the machined chamfer
- These dimensions account for about 10% of the project