Student 1: Low Excellence

Intended for teacher use only

Teacher Attestation

Standard: 91620: Implement complex procedures to integrate parts using resistant materials to make a specified product

Subject: Industrial Design - Engineering

Project: Manufacture a BBQ / Grill

Teacher:XXXXX

Grade Awarded:

Project Timeline	Teacher Comment
Beginning	Excellent evidence and use of time in initial stages of project. XXXXX has considered and used his time well with minimal teacher input. Time was used outside of class to organise materials, plan production and problem solve. CAD and CAM software used extensively to identify efficient use of materials. No teacher input required. Mock ups of mechanism confirmed function and ensured no material wasted, so parts recycled.
Middle	Practice welds determined best methods –XXXXX made all choices independently. Teacher suggestions to manage warping of plates followed. All tolerances very good.
Completed project	Time utilised very well at all stages. Very independent, only needing technical advice as expected – XXXXX tended to seek advice if he needed it and use it to improve his project. No materials at all where wasted. Project finished to very high standard, functions as intended if not better. Safe work practices observed at all times.

(1)

Cut first section on Plasma

- Using the smaller file of the two to ensure that if something went wrong, I didn't waste a whole sheet of steel.

(2)

Evaluation
Because MIG welding is easy and time efficient, I will be using this method for the majority of my project, using it to weld all the panels and housing together. I have taken my stakeholder feedback into consideration and will use the new back and forth method as my welds will be on the outside of the project and need them to look good.

(3)

Trial sprocket and rotisserie fit up on mock pieces

- This trial was essential as it allowed me to see how the most intricate part of my design would work. I noticed that the sprockets would often catch on the sprocket house where the welds weren't completely flat, because of this, I intend to weld on the sides of my real projects sprocket housing rather than the top to ensure this problem doesn't occur again.
- The grub screws worked well, holding the pieces together while also allowing the rotisseries to be removed when needed.
- I have decided that it is too long and that I don't need the two different diameters, so I will be reducing the size on my real ones by 50% and removing the machined step.

(4)