

Project Name – “Serpent”- A snakelike war robot

Problem Statement- To make a robot capable of pushing opponents out of the ring and damaging them while they are in it.

Project Budget- INR 5000

Description-

A lot of competitions had a segment of robot war competitions in which they had various weight categories usually it was either 10 kilos 5 kilos or 20 kilos, so I thought that why not build a robot to fight in the 20-kilo category with this began my journey into metal fabrication.

I could not visualise what I wanted so I made a 30 by 30 box which was usually the maximum dimensions allowed in these competitions that's 30 in centimetres. Usually having a weight limit in terms of 5, I made a shell and base design. In which the base was swappable according to various weight classes. The first base had very weak motors and wheels which kept slipping, over time I adjusted the setup and slowly upgraded the design.

Finally I had a robot with 3 bases for 10Kgs, 15Kgs & 20 Kgs Category.

Its final shell had a wedge in the front with a sharp edge to get under the wheels of opponents and a horizontal saw at the back to cut the wires of the robots whatever is exposed and reachable.

It went on to win a lot of competitions during its life.

Materials Consumed-

1. 5mm Sheet metal
2. Nut Bolts Screws
3. 7.5mm Base plate
4. Motor clamps
5. 300 RPM Motors
6. Relay Module
7. DPDT Switchbox
8. Wires
9. Pipe for wire shielding
10. 30 Amps SMPS supply.