

# **ROBOWARS**

## **1. About**

**“Cowards die many times before their deaths; the valiant never taste of death but once.”**

**-William Shakespeare**

This time it's going to be a Deadly Fight. This is a quest that only the valiant can dare to undertake; it is not for the faint of heart. This involves total domination through strategy and control. Robowars promises to be an ultimate battlefield where bots fight for their lives. These gladiators will go on to fight one enemy head on for the title of the Champion. Two shall fight, but only one will live on. War is the only way to earn respect in Robowars '15.

In an arena of destruction with the finest weapons in the universe being yielded for vengeance, it's time for Robowars. We proudly present Robot Warfare with Fighters of the Future. Only the best of the best have a chance at this. Will the humans survive?

Stay tuned and become a part of Robowars, Zealicon 2015

## **2. Specifications**

- 2.1. The robot should fit inside a box of 700mmx700mmx700mm(lxbxh) before the start of every match. The external device used to control the machine or any external tank is not included in the size constraint.
- 2.2. The total weight of the robot and all the equipment and accessories excluding the power source should be no more than 40 kg. The weight of external compressor in case of pneumatics or hydraulics will also be included.

**EXCEEDING THE WEIGHT LIMIT WILL LEAD TO DISQUALIFICATION OF TEAM.**

- 2.3. Thickness of material used as armour to protect parts of bot should not exceed 5 mm.

### **3. Power Sources**

- 3.1. The machine can be powered electrically only. Use of an IC engine in any form is not allowed.
- 3.2. Each team must prepare its own power sources. Only 220V volt AC sources will be provided at the arena, but can only be used in the form of DC voltage.
- 3.3. Maximum DC source voltage and eliminator voltage allowed is 24V.
- 3.4. In case using on board batteries, the only permitted batteries are ones that cannot spill or spray any of their contents when damaged or inverted.
- 3.5. All connections should be made safe to prevent short circuits and battery fires. Any unsafe circuitry may be asked to be replaced; failure to do so will result in disqualification.

### **4. Mobility**

- 4.1. All robots must have easily visible and controlled mobility in order to compete. Methods of mobility include rolling (wheels, tracks or the whole robot).
- 4.2. Jumping, hopping, flying or any other method of mobility which leads the robot to lose contact with the ground is not allowed.

### **5. Robot Controls**

- 5.1. Remote controls both wired and wireless are allowed in the event.
- 5.2. All the wires coming out of the robot should be bundled as a single unit and then should be covered by flexible plastic pipe.
- 5.3. The wire should be properly protected and insulated.
- 5.4. The wire should be sufficiently long so as to remain slack at all time during the competition.
- 5.5. In case of wireless remote controls, the remote should have at least two frequency operations to prevent interference with other team.
- 5.6. Teams are recommended to attach a pipe to bot in vertical direction through which wires come out .The length of pipe will not be considered in bot dimension.

## Rules & Criteria for Victory

1. The teams need to register in the group of five or more.
2. The maximum duration of 1st round is 3 minutes and that of 2nd round will be 5 minutes. Any team that is not ready at the time specified will be disqualified.
3. Once name of team is announced, only 5 minutes will be given to complete their setup in the arena.
4. A robot will be declared immobile if it cannot display linear motion of at least one inch in a timed period of 30 seconds. A bot with one side of its drivetrain disabled will not be counted out if it can demonstrate some degree of controlled movement. In case both the robots remain mobile after the end of the round then the winner will be decided subjectively
5. Robots cannot win by lifting their opponents. Organizers will allow lifting for a maximum of 15 seconds per lift then the attacker robot will be instructed to release the opponent. If, after being instructed to do so, the attacker is able to release but does not, their robot may be disqualified.
6. If two or more robots become entangled or a crushing or gripping weapon is employed and becomes trapped within another robot, then the competitors should make the timekeeper aware, the fight should be stopped and the robots separated by the safest means.
7. Points will be given on the basis of aggression, damage, control and strategy.
8. Aggression – Aggression is judged by the frequency, severity, boldness and effectiveness of attacks deliberately initiated by the robot against its opponent.
9. Control – Control means a robot is able to attack an opponent at its weakest point, use its weapons in the most effective way, and minimize the damage caused by the opponent or its weapons.
10. Damage – Through deliberate action, a robot either directly or indirectly reduces the functionality, effectiveness or defensibility of an opponent. Damage is not considered relevant if a robot inadvertently harms itself.
11. Strategy – The robot exhibits a combat plan that exploits the robot's strengths against the weaknesses of its opponent. Strategy is also defined as a robot exhibiting a deliberate defence plan that guards its weaknesses against the strengths of the opponent.
12. The organizers reserve the rights to change any or all of the above rules as they deem fit. Change in rules, if any will be highlighted on the website and notified to the registered teams.
13. Violation of any of the above rules will lead to disqualification.

(NOTE: Qualification of a robot to next level is subjective and totally on the decision of the judges. A robot winning in a round against its opponent doesn't guarantee its entrance into the next round. If the judges found the winner robot incompetent to enter into the next round, it may get disqualified. Judges can disqualify both the robots of a match from advancing to the next round. All the decisions taken by the judge will be final and binding to all. Any queries afterwards will not be entertained.)