

TUG OF WAR

DIMENSIONS AND FABRICATIONS:

1. The machine should fit in a box (chassis) of dimension 400 X 400 X 600 mm (l x b x h), (+ or – 50mm) at any given point during the match. The external device used to control the machine or any external tank is not included in the size constraint.
2. The machine should not exceed 45kg of weight including the weight of weapons or any other source. All pneumatics tanks/source should be on board. Weight of remote control & adapter will not be counted.

MOBILITY:

All robots must be easily visible and should have the controlled mobility in order to compete.

METHODS OF MOBILITY INCLUDE:

- Rolling (wheels, tracks or the whole robot).
- Non-wheeled robots having no rolling elements in contact with the floor and no continuous rolling or cam operated motion in contact with the floor, either directly or via a linkage should be there. Motion is continuous if continuous operation of the drive motor(s) produces continuous motion of the robot. Linear-actuated legs and novel non-wheeled drive systems come under this category.
- Jumping and hopping is not allowed.
- Flying (using air foil, helium balloons, ornithopters, etc.) is not allowed.

ROBOT CONTROL REQUIREMENTS:

- The machine can be controlled through wired or wireless remote. Power supply should be on board only. Refer below for further details on battery and power.
- The machines using wireless remote must have at least a 4 frequency remote control circuit or 2 dual control circuits which may be interchanged before the start of the race to avoid frequency interference with other teams. The case of any interference in the wireless systems will not be considered for rematch or results.

- Remote control systems from toys or available in the market might be used.
- Non-standard or self-made remote control systems must be first be approved by the event coordinators.
- The voltage difference/voltage i/p in the remote control should not exceed 9V at any point of time and during the entire length of the competition. But if there is no wired connection between robot and the remote controller then it can exceed the given limit of 9V.
- If the robot is wired, all the wires coming out from robot should be stacked as a single unit.
- Loose connection or improper winding may lead to disqualify before event is started.
- Wires should be properly installed.

BATTERY AND POWER:

1. The machine is to be powered electrically only. Use of IC engine in any form is not allowed. On board batteries must be sealed, immobilized electrolyte types (such as gel cells, lithium, NiCad, NiMH, or dry cell).
2. The electric voltage b/w 2 points anywhere in the machine should not be more than 24 V DC at any point of time.
3. All effort must be made to protect battery terminals from direct short and causing a battery fire, failure to do so will cause direct disqualification.
4. Use of damaged, non-leak proof batteries may lead to disqualification.
5. Special care must be taken to protect the on-board batteries.
6. Change of battery will not be allowed during the match.
7. AC supply is strictly not allowed.

NOTE:

Qualification of a robot to next level is subjective and is totally dependent 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, they can disqualify the robot. Judges can disqualify both the robots of a match from advancing to the next round.

CERTIFICATE POLICY :

Certificate of Excellence will be given to all the winners. Certificates of Participation will be given to all the teams who qualify the first round of the competition.

ROUND DETAILS:

1. Mainly 3 or more rounds will be held.
2. In first round 50% robot will be qualifying for the next round.
3. Proportion of elimination of robot may vary by coordinators in knock out rounds as per entries during the event.
4. Round procedure may get change according to situation.

**Any rule or specification can be altered by the coordinators as per the situation.

CRITERIA FOR VICTORY:

1. If the robot passes out the front wheel of the opponent robot to the decided line, it will be qualified for next round.
2. A robot will be declared immobile if it cannot display linear motion of at least one inch in a time period of 20sec.
3. In case both the robots remain mobile after the end of the round then the winner will be decided subjectively according to their performance judged by co-ordinators.
4. A robot that is deemed unsafe by the judges after the beginning of the match, it will be disqualified and therefore declared the looser. The match will be immediately halted and the opponent will be declared as the winner.

5. Make up/ repairing time for robot, after the start of event is 2minutes. For the knockout round and for remaining rounds, the time limit of 3 minutes will be given. This repairing time will be given one time only for a particular round.

6. Final decision will be taken by coordinators.

TIMING: The maximum timing for one match is 2 min. If the match is a tie then the participants will have to play another round for 1min.

