

Robot Mud Wrestling Contest

Based on Robot Sumo Rules originally created in Japan by Mato Hattori
Rules adapted for Western Canadian Robot Games Robot Mud Wrestling
by Quentin Cobb. January 2003

Description

Crouching at opposite sides of a clay-floored ring, muscles taut and bodies glistening with sweat, two sumo wrestlers stare each other down. Then, grunting with effort, they lunge furiously, colliding with resounding thwacks, red-faced and panting. They grapple and flail until one falls to the floor with a painful-sounding thud.

It's difficult not to admire the centuries of tradition and the dedication of the contestants devouring huge meals of "chanko" many times a day, but one is left with the nagging thought "Yes, but how would they do in a street fight?"

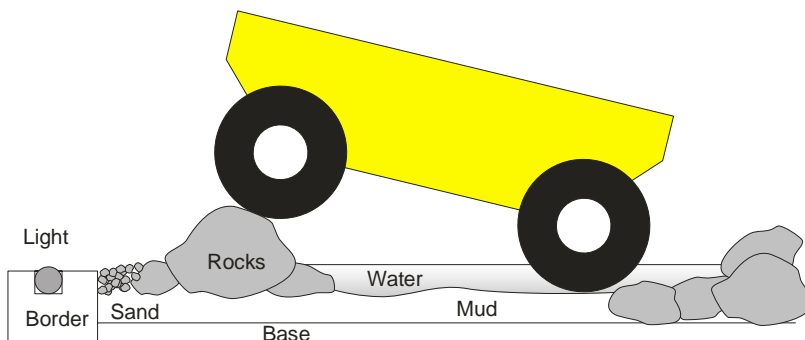
Robot Sumo is a fine sport but it takes place in a very artificial environment whereas real-world robots must deal with varied terrain and uneven surfaces. Just think of the Mars Rover or bomb disposal robots.

Robot Mud Wrestling, at its simplest, is a sport in which two contestant robots use brains and brawn to eject their opponent from an arena composed of natural outdoor materials such as mud and rocks. We're not talking about the finer points of tacky wheel rubber compounds or scoop design here – we're talking robust, monster trucks or tanks with ground clearance. Things that can splash through mud wallows, climb over rocks and forcibly eject their opponent.

The Arena

The arena consists of a 1.22m square (half an 8'x4') board with a 38mm square border (half a 2x4 stud). To facilitate edge detection the border will be painted gloss white and have a 12mm groove containing a rope light.

The arena floor will consist of a variety of materials that may include: soft mud, water, sand or gravel. The arena will not contain materials that form a sharp step of more than 35mm.



The Play:

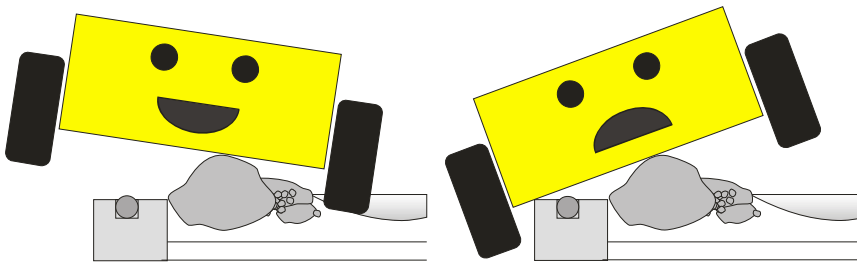
The robots are placed in the arena about 50cm apart and equal distance from the center. They are set down parallel to each other and facing opposite directions so that robots must actively search for the opponent and not merely "steamroller" straight forward.

When both contestants are ready, the judge will signal the start of the three minute round at which time the robots may be activated (you may physically flick a switch on your robot). Once activated there must be an automatic 5 second delay before the robot can start moving.

The robots will proceed in combat until one unit is ejected from the arena or disabled. If a bout is won before the 3 minute round is up, the clock will be stopped and the robots replaced in their starting position for a second bout. There may be up to three bouts in a three minute round, with the winner being the robot which wins the most bouts in the round (to a maximum of 2 wins i.e. best 2 out of three). Each contestant is guaranteed a minimum of three rounds, and is awarded points per round on the following basis.

- The contestant wins the round: 2 points awarded.
- The contestant ties the round: 1 point awarded.
- The contestant loses the round: 0 points awarded.
- The contestants who accumulate the most points will make it the finals where 1st, 2nd, and 3rd place will be decided by a round robin.

A robot is considered to be removed from the arena when any of its wheels or legs are over the edge and its center of mass has tipped or when any part of the robot touches outside the arena.. A robot whose body hangs over the edge is not considered "off" until it physically tips off the edge and touches outside the arena. Judgment of the arena officials is final.



Should one robot become disabled (flipped on its back, bogged down in soft mud or smoking, for instance) and is unable to move for 30 seconds, the robot will be considered to have lost the will to compete and arena officials will award that bout to the remaining robot. A new bout will begin if time permits.

If both robots are stuck in an entanglement or deadlock, then the clock will be stopped and the judges will ask the contestants if they want to restart the bout from the robots starting positions, Both players must agree to this, if not, the bout continues as normal.

The Robots:

The requirements are essentially the same as for International Robot Sumo. The robots must fit within a 20cm by 20cm square tube at the beginning of the round, but may expand to any size once the contest begins. The height of the robot is unlimited. The robots must weigh 3KG or less.

The entire robot must be capable of some form of movement across the arena surface... No cinder-blocks. The robot may not attach itself to anything outside of the arena

Robots must be autonomous, i.e. operate without human intervention once the activate button has been pressed. The robot must not receive any prompts or cues from the operator. All motivation and control must come from within the robot itself. There are no restrictions on the type of controller or RAM that can be used.

There must be an automatic 5 second delay from pressing the activate button before the robot makes any movement.

The robots must not contain any combustible, corrosive, or otherwise dangerous materials for safety reasons. No explosive compression or decompression, either internal or external is permitted. There is a risk of compressed containers rupturing and creating shrapnel. Any robot whose strategy or operation is considered too dangerous will be disqualified by the officials.

Your robot must have a name that is neither obscene nor insulting

Intentional damage to the other robot or interfering with the opponent's operator is not allowed. Good will and friendship between competitors may evaporate if one opponent uses lightning bolts to destroy the electronics of a competitor.

If you have any questions concerning your robots eligibility, please feel free to call the contest organizers and they will be happy to inform you if the robot is legal or not!

Interpretation

As long as the concept and principals are maintained, the judge may modify or interpret the rules to meet any unforeseen circumstances.

The judge's decision is final.