PATENTS GRANTED

A PNEUMATIC QUADRUPED ROBOT AND A METHOD OF PREVENTING ACCIDENTS THEREOF

Pneumatic Quadruped robot is MJCET R & D sanctioned project of 2017-18. The designed Quadruped robot consists of rectangular chassis, base block, thigh link, knee link and clevis joints and stopper. Each leg consists of knee and thigh links that are actuated by pneumatic actuators. The assembly set up consists of link with actutators, pneumatic storage tank. For the foot of the quadruped robot, spherical ball structure is utilized that helps them to mobilize on any type of terrain.

The frame structure of the pneumatic quadruped robot enables to have any accessory attachments to it. Thus, it can have an arm attachment with sensory system that can enable them to detect the mines and remove them to avoid any accidents. The structure of the pneumatic quadruped robot has an ability to take payloads upto 80kgs, that enables it to attach accessories mounted easily on it that can help it as an equipment to avoid accidents or accomplish any other tasks.

It has won second prize in the Anveshana (A Science and Engineering Fair) – A competition conducted by AGASTYA International Foundation and won a cash prize of Rs. 25,000/- conducted on 30th January, 2018.The Team was among the 30 teams selected at the south zonal competition among the 1100+ teams conducted at Bangalore DRDO and it has been selected as the top team in the south zone. The team has participated at Pune, DRDO for the National level competition held on 24th and 25th May, 2018. The project guides are Dr. Ishrat Meera Mirzana, Professor, Mechanical Engineering Department and Dr. Kaleem Fatima, Professor, Electronics and communication Engineering Department, MJCET.

Seeing the potential, our Advisor cum Director, **Dr. Basheer Ahmed** suggested for patent filing of the project. With the support and encouragement of management of SUES, especially Hony. Secretary **Janab Zafar Javeed Sahab**, we filed a patent of 31/12/2019, published it on 03/01/2020 and got patent granted for a period of 20 years on 16/12/2021.

MUFFAKHAM JAH COLLEGE OF ENGINEERING AND TECHNOLOGY

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Indian Patent No. 384439 Date of Grant-16/12/2021