FABRICATION OF MECANUM WHEELS

project report submitted in partial fulfillment of the requirements for
the award of the degree of

BACHELOR OF TECHNOLOGY IN MECHANICAL ENGINEERING

Submitted by

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(N.B.A Accredited & NAAC with B+grade,approved by AICTE New Delhi)

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CERTIFICATE

This is to certify that the Design and fabrication project work entitled "FABRICATION OF MECANUM WHEELES" is submitted by K.THARUN KUMAR (Regd. No. 15811A0359);CH.MANIKANTA (15811A0326); B.NARENDRA REDDY (15811A0321); E.SAINATH (15811A0333).to the Department of Mechanical Engineering, AVANTHI INSTITUTE OF ENGINEERING &TECHNOLOGY, Makavarapalem in partial fulfilment of the requirements for the award of Degree of Bachelor of Technology in Mechanical Engineering.

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ABSRTACT

Omni-directional mecanum wheel is used to describe the ability of a system to move instantaneously in any direction from any configuration . Omni directional robotic platforms have vast advantages over a conventional design in terms of mobility in congested environments.A mecanum-wheeled robot is a kind of popular and representative omnidirectional mobile robot, which can move in all directions on the work plane,e.g. forth and back, sideway and spin. In this paper , a kinematics model of a mecanum - wheeled robot is analyzed and discussed . Based on the model , two omnidirectional mobile robots are designed and developed . Because robots implemented by multiple control methods havemore flexible and adaptable in different occasions , three control methods : speech recognition , Bluetooth and infrared remote control are applied to the two robots . Then,motion of the two robots controlled by three modeare compared and concluded.