



**NARNARAYAN SHASTRI INSTITUTE OF TECHNOLOGY
ELECTRICAL DEPARTMENT**



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Internal Guide:- Ronak Prajapati ,External Guide :-Ashokbhai Prajapati(Sharp Engineers Ltd.)

Project Title:- PMSM Motor’s Simulation and Advanced Technology.

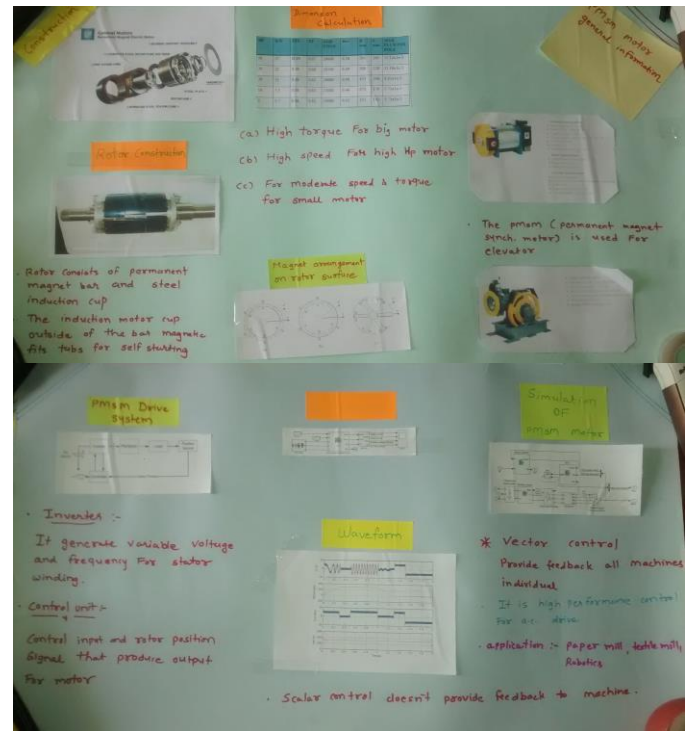
Abstract:- Permanent magnet synchronous motor (PMSM) has been widely used in high performance drive applications for its advantages such as compactness, high efficiency, reliability and suitability to environment. Due to its high power density and smaller size, PMSM has evolved as the preferred solution for speed and position control drives on machine tools and robots. A Permanent Magnet Synchronous Motor (PMSM) is a motor that uses permanent magnets to produce the air gap magnetic field rather than using electromagnets. These motors have significant advantages, attracting the interest of researchers and industry for use in many applications. Permanent magnet synchronous motors are widely used in low and mid power applications such as computer peripheral equipments, robotics, adjustable speed drives and electric vehicles.

Project Application:-

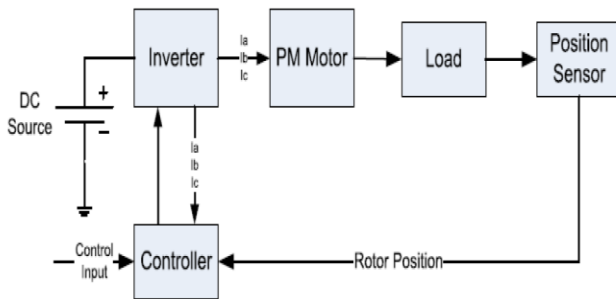
- (1) compressors.
- (2) Direct-drive washing machines.
- (3) Precision Machining Tools
- (4) Variable Speed Elevator
- (5) Automotive Electrical power steering
- (6) Traction control
- (7) Automobile Robotic arms

Approx. Project Cost:- 15000/-

Project Photo:-



Block /circuit Diagram:-



Major Hardware components used:-diff types of magnets,techo meters ,testing devices for motors,all company tools of sharp engineers.(training company)

Software used:- MATLAB