

Staff Industrial Visit Report

- **Visit Program Title:** Industry Institute Interaction
- **Name of Industry:** **Matel Motion & Energy Solutions Pvt Ltd,Pune**
- **Address:** Survey No- 326, Khed Shivapur,
Gauddara Road,Pune.
Pin code-412205

- **Name of Faculties:**
 1. Mr.Gaikwad S.S. (Asst.Professor)
 2. Mr.Kadam S. G. (Asst.Professor)

- **Department:** Mechanical Engineering
- **Schedule:**12 May 2023 (Friday),From10:00 am to 1:00pm (1 Day)
- **Focus of Training:**
 1. To stay up to date with manufacturing industries technological advancement
 2. To understand the gap between the theoretical and practical knowledge thatcouldbe passed to the society.
 3. To gain in-depth knowledge about the construction and working of E mobility power trains
 4. To understand the different applications of Industrial motors and drives.

- **Benefit to our Institute:**
 1. Representation & Introduction of our Institute.
 2. Interaction with director of the company
 3. Interaction with Experienced Engineers and co workers of the company with our faculties
 4. Obtained one point(1mark) under staff training program activity from monitoring committee point of view.
 5. Built relation among such industries with our department regarding Student Internships, Projects, Expert talks and Placement opportunities.

1. About Industry:

MATEL is a tech company focusing on cutting-edge electric power train solutions for electric vehicles and industrial applications. MATEL has developed Electric Mobility products with differentiated performance based on the unique intelligent Power train technology named 'I Power train.

With over 100 + trained experts and a competent team, MATEL commits to delivering the best-in-class electric power train solutions for Automobile and Industrial applications with an aim to be preeminent in the industry by focusing on our customers' requirements and providing them customized solutions. We build efficient and high-performance electric motors & controllers with intramural & sustainable technologies for energy conservation and efficiency.

MATEL Motions has a proven track record of a system-driven approach that ensures unhindered and value-added services to our stakeholders with perpetuity.

2. Various products :-

MATEL State-of-the-art power train technology which includes electric machines, controllers and gear train are designed with the deep thought of application and high energy efficiency

The main two categories of products are:-

1. E Mobility power trains
 - a) 2-wheeler In-wheel power train
 - b) 2- wheeler mid-drive power train
 - c) 3- wheeler L5 Power train
 - d) 3- wheeler L3 Power train
 - e) MCU
 - f) Smart BMS
2. Industrial motors and drives
 - a) IEC motor
 - b) Solar Pumping

3. Specifications and applications of different products:-

A) Power train for three wheeler



Pic.1 Power train for 3 Wheeler

- Integrated electric drive solution for 3 Wheeler Passenger & Cargo vehicle
- Exle variants powering from 45 kw & 6.5 kw continuous & Peak Power up to 10kW
- Suitable for 0.75T, 1T & 15T for 3 Wheeler Passenger & Cargo vehicles.
- Certified as per AIS04
- E-axle consists Efficient PMSM Motor & a silent Gear-box.
- MCU IS with VCU functionality
- Natural Air Cooled, IP 67
- Thermally Stable design for continuous gradeability of 13.5% & Peak Gradeability of 22%
- Suitable for 8 inch, 10 inch & 12 inch wheel size
- Achievable Max Speed : 50 kmph
- Noise Level <65db
- Designed for No maintenance upto 2L Km
- **Suitable for standard CV shaft**

B) IEC motor



Pic-2 IEC Motor

MATEL's IE5 motor covers a wide range of industrial applications having low power consumption with increased performance capacity. MATEL's IE5 Motor with its High power density, ultra-premium efficiency, reliable design, improved torque utilization, fast-changing speed, and electric stability makes it a mandatory choice for various industrial applications.

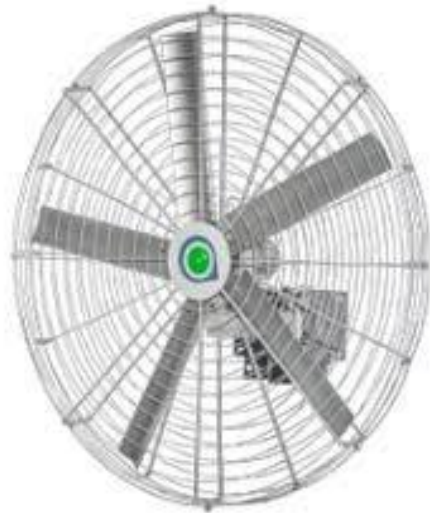
C) Solar pumping



Pic-03 Solar pump

solar pumping motors which are reliable, highly efficient, and fully serviceable. It has a unique design which makes them superior for submersible applications. Motors have a wide range of rated speed, rated current and power ratings. It can be used interchangeably for different variety of applications. The solar pumping motors are categorized into two major ranges i.e. Submersible motor and Surface Monoblock pump set.

D) Industrial Fans



Pic-04-Industrial Fans

4. Visit Photographs:



Pic-05 With Director and HR of the company



Pic-06 Senior supervisor explaining about IEC Motors



Pic-07 Senior supervisor explaining about Pumping System



Pic- 08 Packaging of the product

6. Video Links:

Matel Motion & Energy Solutions related video links:

<https://www.youtube.com/channel/UCLy7c6KYyxIXBa7b5RtTQXg>

7. Remark if any:

HOD

Principal