

TECHNICAL VISIT REPORT- ELECTRIC VEHICLE, EXPO

Venue: Science City, Kolkata

Date: 22nd April 2022

Objective: Technical visit to Electric vehicles (EV), EXPO

Introduction: The discovery of Lithium-ion batteries has come a long way in revolutionizing the world of portable electronics be it a laptop, a handheld camera, or even a high-end Tesla Model S with a top speed of 200 mph.

The concept of a rechargeable Lithium-ion battery was first described by **Stanley Whittingham**, an achievement for which he would share the 2019 Nobel prize in Chemistry at Stockholm.

With increasing global warming, electric vehicle seems to be the only feasible option towards a greener, cleaner & better world by reducing the greenhouse gas & its effect which offers the following distinct advantages:

- Cleaner environment.
- Lower running costs.
- Better driving experience.
- Government funding.
- Reduced noise pollution.

Participation: The EXPO was attended by the faculty & staff alongwith the students of The Department of Electrical Engineering B. P. Poddar Institute of Management & Technology:

Faculty:

Dr Nandita Sanyal, HoD,
Prof. Tapan Kumar Basu, Adjunct Professor,
Assistant professors, Dr Sutapa Mukherjee,
Madhumita Kundu Mondal,
Sujata Saha,
Anushree Roy

Technical Assistants

Nihar Goswami
Sajal Goswami
Dilip Pal

Students:

1st, 2nd & 3rd year: 67 Nos

Description: The scheduled event, proposed to build a pollution free nation offered a comprehensive market information, an insight into the business opportunities & a platform for networking technical know how about the futuristic market & the emerging trends in the EV sector. The EXPO heightened the awareness & usefulness of the plug-in vehicles including the techno- commercial viability of such options. The event highlighted the profiles of the major exhibitors including the display of various options like Electric car, electric bus, Electric Rickshaws & electric cycles which are being made available for the market.

Take away: The EV EXPO was packed with entertaining & exciting demonstrations on the emerging trends which included vehicle rides & high-performance test drives. Despite the scorching heat, the future techies of our institution were fascinated by the most innovative electric vehicle products & services on display at the EV EXPO.

It was not only an opportunity to potential customers who are looking for greener mobility amid rising environmental pollution & fierce congestion but also served as a **platform for emerging & innovative start-ups for the young & energetic techies from BPPIMT in the field of *e-mobility*.**





TECHNICAL SPECIFICATIONS

DRIVE MOTOR AND BATTERY	
Battery Type	Lithium Ion (NMC) (Detachable)
Battery specifications	60V 35Ah
Motor Type	DC Brushless Hub Motor
Drive motor	1500 Watts
Motor Controller	3-speed with Regenerative Braking
Charger Type	10 Amp Smart Charger with Over-voltage, Temperature and Short-circuit protection
PERFORMANCE	
Max Load	150 kg
Climbing Ability (Gradeability)	15°
Charging time (from flat to full charge)	4 To 5 hours
Range travelled per full charge	100° kms
SUSPENSION	
Front	Hydraulic
Rear Side	Hydraulic
BRAKING SYSTEM	
Front Side	Disc
Rear Side	Disc
DIMENSIONS AND WEIGHTS	
Kerb Weight	81 kg
Tyre	130/40
Tyre Type	Pneumatic
Dimensions	L x W x H = 1250 mm / 460 mm / 1100 mm
Seat Height	740 mm
Wheelbase	1345
Ground Clearance	160 mm
Turning Radius	1.6 m
Color Options	Matte White / Midnight Black
OTHER FEATURES	
Drive Modes	3 Modes: Sports (Gear 3), City (Gear 2), Economy (Gear 1)
Display	Colour LCD Display
Front wheel Rim	Cast Alloy
USB Charging for Mobile phone	Available
Security	Anti-theft smart remote lock
IoT Enabled	Yes
Smart Cluster	Yes
ECONOMICS OF USAGE	
Power (electricity units) consumed in charging the battery fully	2.5 Units / charge*
Running cost / km	20 Paisa / km*

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