

Industry Institution Interaction Council (IIIC) & Institution Innovation Cell (IIC)

A REPORT on “**MEDHA SERVO DRIVES (P) LTD R&D CELL**”, CHERLOPALLI HYDERABAD

31-07-2023

As a part of **Industry Institution Interaction Council (IIIC) & Institution Innovation Cell (IIC)**, the IIIC-Convener Dr G Janardhana Raju, IIIC-Co-Convener Dr Krishna Mohan Chinnala, IIIC-Co-ordinator Dr G Subba Rao and IIIC member Mr P Srinivas of Nalla Narasimha Reddy Education Society's Group of Institutions, (NNRG) Hyderabad visited **MEDHA SERVO DRIVES (P) LTD R&D CELL**”, CHERLOPALLI, Hyderabad R & D office on 31-07-2023.

Mr Viresh Kumar, Dy General Manager – HR received the NNRG team members at his office. Following the self-introduction of all, Mr Viresh Kumar said that the **MEDHA SERVO DRIVES (P) LTD R&D CELL** was established in 1984 is an R&D intensive Company dedicated to Railway products. MEDHA has designed and manufactured various world class high-tech electronics products for application in Locomotives, Coaches and Railway Stations. The Company has successfully established a track record of more than 35 years. with aim to provide technically sound and economically viable and sustainable services for design, construction, and maintenance management of infrastructure projects.

For Locomotives Medha supplies Propulsion System (which is comprising of Traction converter, Auxiliary converter and Vehicle control Unit), Driver control desk, Traction Motors, control and switch gear panels, different models of Speed Recorders, Energy Monitoring Systems, Event Recorders, Wheel Flange Lubricators, Wheel Slip Control Systems, Electronic Governors, Locomotive control system, auxiliary converters, Energy efficient Hotel load converters for passenger locomotives etc. For Air conditioned Coaches Medha supplies 25KVA, 3ph Inverters and 2.5KVA Inverters. For Electric Multiple units or sets, Medha supplies, propulsion system, traction motors, end wall panels, passenger information system etc. For Railway Stations Medha supplies Integrated Power Supply Systems. MEDHA has graduated to CMMI Level 3 Certification and currently working towards Level 5 certification by further improvement in it's process. MEDHA has certified with IRIS (International Railway Industry Standards)

After the brief introduction given by Mr Viresh Kumar, IIIC – Convener Dr G Janardhana Raju discussed for the purpose of visit on the following:

- Filling of gap between Academics & Industry
- To invite the Dy G M- HR to the NNRG Institution to address the 4-2 students
- Permission to depute students for internship at Medha Servo Drives in 4-2 semester followed by placements on written test basis including personal interview.

Mr Nageswar Rao Technician had explained and shown Diesel loco, Electrical loco, BMS, Signaling, Power Systems, Control Electronics, Station Yard Designing, PE labs etc

Outcomes of the visit:

- Mr Viresh Kumar, Dy General Manager- HR accepted to visit NNRG campus.
- R & D simulation, prototype procedures
- Maintenance of Mechanical & Electronics labs
- Providing internships based on written test followed by personal interview.



Interactive session with Mr Viresh Kumar, Dy General Manager-HR ,
MEDHA SERVO DRIVERS (P) LTD



Electrical Loco prototype designed by MEDHA SERVO DRIVERS (P) LTD

An initiative and contribution towards Atma Nirbhar Bharat mission

Railway Products

- Complete Propulsion Systems
- Rolling Stock Equipment
- Signaling Systems
- Solar Inverters
- Solar Trackers
- Electric Mobility

Medha offers first "Make in India" Grid Tied Solar inverters in compliance with all stringent IEC standards, certified by international Labs

First...

- 1990: Speed Time Distance Recorder, first microprocessor based system anywhere in Indian Railways
- 2002: First Indian supplier of microprocessor based governor and microprocessor based locomotive control system
- 2012: Complete propulsion system from wheel axle to traction motor & more for DEMU
- 2010: SIL4 - Electronic Interlocking
- 2008: 3 MW IGBT Traction Converter
- 2013: 4.5 MW Electric Locomotive
- 2014: AC-AC EMU
- 2016: Kolkata Metro
- 2018: Train 18 EMU & Sri Lanka DEMU
- 2018: Solar Inverters
- 2017: Train Collision Avoidance System
- 2019: Electric Mobility
- 2021: Vande Bharat Express
- 2022: KAVACH
- 2022: Rail Coach Factory

Advanced R&D

- ISO 9001:2015
- ISO 14001:2015

Comprehensive Testing

- IEC 61800-3 for grid tie inverter
- IEC 61800-9 for safety
- IEC 61800-10 for EMC
- IEC 61800-11 for harmonic
- IEC 61800-12 for safety
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- IEC 61800-100 for safety

Sophisticated Manufacturing Facilities

- ISO 9001:2015
- ISO 14001:2015
- ISO 45001:2018
- ISO 50001:2018
- ISO 27001:2017
- ISO 22301:2017
- ISO 22313:2017
- ISO 22314:2017
- ISO 22315:2017
- ISO 22316:2017
- ISO 22317:2017
- ISO 22318:2017
- ISO 22319:2017
- ISO 22320:2017
- ISO 22321:2017
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- ISO 22398:2017
- ISO 22399:2017
- ISO 22400:2017

Dr G SUBBARAO
Event Co-ordinator

Dr G JANARDHANA RAJU
IIC-CONVENER & DEAN-SoE

