



National Seminar On

Batteries for Mining Sector – Challenges and the Way Forward

Date: 10th August, 2026

Venue: Auditorium, DGMS, Dhanbad



Organized by

Directorate General of Mines Safety (DGMS), Dhanbad



125th year in the dedicated service of the Nation.

ABOUT THE SEMINAR

Batteries for Mining Sector- Challenges and Way forward

The increasing adoption of battery-powered equipment and electric vehicles in the mining industry is transforming mining operations by improving productivity, reducing emissions, and promoting sustainable mining practices. However, the deployment of advanced battery technologies in underground and opencast mines also presents several technical, operational, and safety challenges that require careful consideration.

To provide a common platform for regulators, mining companies, equipment manufacturers, battery manufacturers, researchers, academicians, and industry experts to deliberate on these emerging issues, the Directorate General of Mines Safety (DGMS) is organizing a National Seminar on "Batteries for Mining Sector – Challenges and Way Forward" on 10th of August, 2026, from 8AM to 6PM, at DGMS Auditorium, Dhanbad.

The seminar aims to facilitate the exchange of knowledge, practical experiences, technological innovations, and best practices for ensuring the safe adoption and effective management of battery technologies in mines.

OBJECTIVES

- Deliberate on the latest and emerging battery technologies for mining industry.
- Identify safety challenges associated with battery-powered mining equipment.
- Share operational experiences and best practices.
- Explore strategies for enhancing safety and reliability in battery safety.
- Discuss regulatory requirements and formulate recommendations and roadmap.
- Encourage collaboration among industry, academia, manufacturers, and regulators.

KEY THEMES

- Battery Chemistry and Operational Dynamics: Li-ion vs Lead-Acid
- Emerging Battery Technologies for Mining: Li-ion, Sodium-ion, Solid-state
- Hazards Associated with Battery Technologies
- Battery Monitoring, Diagnostics and Predictive Maintenance
- Digitalization and Next-Gen Battery Management Systems (BMS): AI, Machine learning, IoT enabled Systems
- Battery Lifecycle Management: State of Health Monitoring, Life Prediction
- Recycling and disposal of batteries
- Charging Infrastructure: Safe and Robust Design
- Standards, Testing and Certification
- Explosion protection in Hazardous Mining Environments
- Safety Standards and Regulatory Requirements
- Case studies, lessons learned and best practices

REGISTRATION

Candidates nominated by the mining & manufacturing organizations only will be considered for attending the seminar.

The details (Name, Designation, email & contact number) of the nominated persons shall be mailed to sputtaraju@dgms.gov.in before 30th July 2026.

CALL FOR PAPERS

Researchers, Industry professionals and academicians are invited to submit original research papers related to seminar themes.

The deadline for submission for Full Paper is 30th July 2026.

The paper shall be submitted to tsrinivas@dgms.gov.in

PAPER FORMAT

- Full paper should be in Word format (Maximum 6 pages)
- Abstract should be within 300 words
- Font: Times New Roman, Size: 12pt

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