

## **DRAFT TECHNICAL SPECIFICATIONS FOR COAL DUST EXPLOSIBILITY METER**

1. **Description:** Portable, Hand Held, Battery operated, Coal Dust Explosibility Meter to provide real time indication of the combustibility/explosibility of MINE DUST in underground coal mines. It should help manage daily rock dusting operations to help identify and mitigate explosion hazard potential of inadequate rock dusting applications.
2. **Features:**
  - a. Digital Display of range of percentage of combustibility/explosibility & instantaneous level of combustibility/explosibility of mine dust on the spot on real time basis
  - b. Indicate percentage of rock dust contained in coal dust mixture
  - c. It should indicate **PASS** with green light when 80% stone dust is there in the sample in the absence of methane.
  - d. It should indicate **FAIL** with red light when rock dust is below 80% in the sample.
  - e. It should also allow setting of lower rock dust levels and appropriate calibration if desired by the user.
  - f. It should display error in case of false/incorrect readings due to wrong calibration or any other cause.
3. **Battery:** Disposable and market available intrinsic safe batteries with provision to indicate low battery for battery replacement
4. **Accessories:** All required/relevant accessories including for operation, sampling, testing and calibration must be provided along with the main instrument.
5. **Operating Temperature:** 10 to 40 degrees C
6. **Operating Humidity:** it should operate upto 85% relative humidity.
7. **Calibration:** Calibration should be enabled at user end with provision of storing calibration parameters for multiple tests.
8. **Approval:** DGMS approved for use in underground coal mines.
9. **Training:** Training in use, operation, calibration and maintenance should be provided at three Regions of of Ramagundam, Bellampally and Kothagudem.
10. **Guaranty/Warranty:** 12 months from the date of receipt of the material or 18 months from the date of supply.
11. **Service Life:** Minimum ten years during which spares and services should be available.