



भारत सरकार / Government of India
श्रम एवं रोजगार मंत्रालय / Ministry of Labour & Employment
खान सुरक्षा महानिदेशालय / Directorate General of Mines Safety

DGMS (Tech) Circular No. 10

Dhanbad, dated: 28.08.2026

To,

Owners/Agents/Managers of all mines

Subject: Use of OEM/OPM/Authorised Spares in DGMS Approved Electrical Equipment for Preservation of Flameproof (FLP) and Intrinsic Safety (IS) Protection Philosophy — Reg.

1.0 Introduction

Electrical equipment used in mines, particularly in hazardous areas, is approved by this Directorate with specific methods of protection such as Flameproof (FLP) and Intrinsic Safety (IS) in accordance with the relevant provisions of the IS/IEC 60079 series of standards.

Such approvals are granted after evaluation of the equipment as a complete system, including its components, sub-assemblies, protective circuits, and other safety-critical parts, and are subject to the conditions stipulated under Regulation 208(3) of the Coal Mines Regulations, 2017, which provides that:

"All apparatus and appliances shall be maintained in a safe working condition and in accordance with the conditions of approval."

2.0 Observations

During inspections and based on complaints received from manufacturers, it has been observed that non-OEM/unauthorised spares and incompatible substitute components are being used in DGMS-approved electrical equipment, including protective and control circuit devices such as relays, current transformers (CTs), interposing relays, contactors, sensors, electronic modules, and associated devices.

Such practices may:

- Compromise the flameproof integrity of enclosures;

- Alter intrinsically safe parameters;
- Cause malfunction or failure of protective, interlocking, and permissive schemes; and
- Result in incorrect sensing and operation of protection systems.

Failure of such systems may leave electrical faults undetected or unisolated, leading to overheating, arcing, sparking, or hazardous touch potentials, thereby posing a serious risk of fatality or injury. In underground mines, the presence of methane further increases the risk of ignition of an explosive atmosphere.

3.0 Safety Implications

FLP protection depends upon the integrity of the enclosure to contain an internal explosion, while IS protection relies upon maintaining electrical and thermal energy within certified safe limits.

The use of non-genuine or unauthorised spares may alter the certified safety parameters and impair the protection philosophy on the basis of which the approval was granted.

4.0 Compliance Directions

In the interest of safety, the following shall be strictly ensured:

4.1 Use of OEM/OPM/Authorised Spares

- (i) Only spares, components, and accessories supplied by the Original Equipment Manufacturer (OEM), Original Part Manufacturer (OPM), or their authorised dealers shall be used in DGMS-approved electrical equipment.
- (ii) This requirement shall apply to all safety-critical components, including protective and control circuit devices, flameproof joints and fasteners, cable glands, intrinsically safe interfaces, sensors, and associated electrical and electronic devices.
- (iii) No substitution, modification, replacement, or retrofitting shall be carried out unless the replacement component is identical in specification and safety characteristics to the approved component.
- (iv) Any replacement or alteration that affects, or is likely to affect, the Flameproof (FLP) enclosure integrity, Intrinsic Safety (IS) parameters, energy-limiting characteristics, creepage and clearance distances, ingress protection, thermal characteristics, fault-withstand capability, or the certified protection philosophy of the equipment shall constitute a material deviation from the approved design and shall be deemed to impair the safety characteristics on the basis of which the approval was granted, thereby posing a risk to the safety of persons employed in the mine.

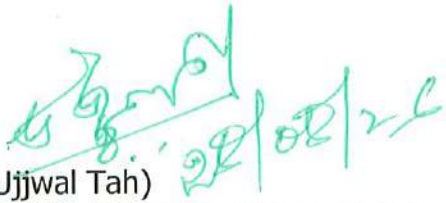
4.2 Maintenance and Repair

All maintenance, repair, overhaul, refurbishment, and rebuilding activities shall be carried out exclusively using OEM/OPM or authorised spares.

The replacement parts shall be identical to the approved components in all safety-critical respects, including flameproof joint dimensions, material specifications, and the certified ratings and safety parameters of electrical and electronic components such as resistors, capacitors, inductors, diodes, Zener diodes, integrated circuits (ICs), transformers, semiconductors, and other associated devices, so as not to impair the FLP or IS protection philosophy.

5.0 Enforcement

All Owners, Agents, Managers, manufacturers, repairers, rebuilders, suppliers, and users of approved electrical equipment shall ensure strict compliance with these directions to safeguard electrical installations and the safety of persons employed in mines.



(Ujjwal Tah)
Director General of Mines Safety
Chief Inspector cum Facilitator of Mines

