

Technical Article-8

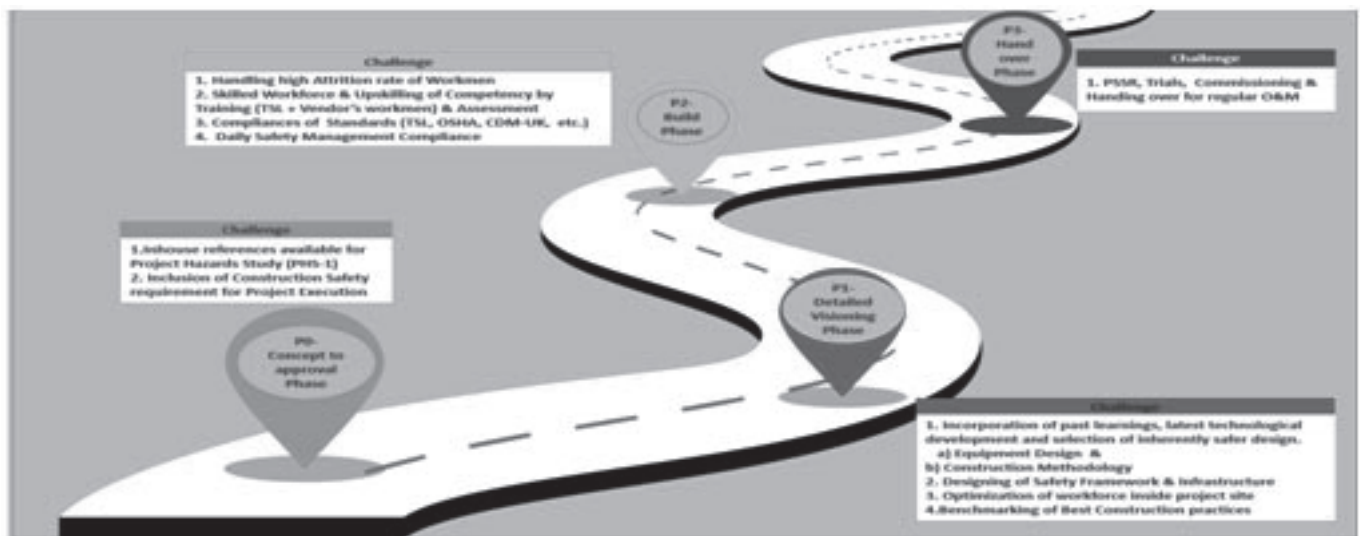
Enhancing construction safety at Mine Site: A comprehensive approach

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Construction sites are dynamic environments where safety should be a top priority. With the potential of accidents leading to severe injury or even fatalities, it is crucial to implement a comprehensive approach to construction safety. This article aims to explore various aspects of construction safety, including risk assessment, training & education, equipment usage and the importance of safety culture.

In all phases of project from concept to beneficiation, there are many challenges, and the safety requirements should be embedded in such a way so that it is seamlessly implemented.



Risk assessment: Before initiating any construction project, a thorough risk assessment should be conducted. This involves identifying potential hazards, evaluating the level of risk associated with each hazard, and implementing control measures to minimise or eliminate those risks. Factors such as working at height, electrical hazards, confined spaces, and heavy machinery operations should be carefully assessed and addressed.

Training and awareness: Providing adequate training and awareness to all workers involved in construction projects is essential for maintaining a safe working environment. Workers need to be aware of potential hazards, proper use of PPE (personal protective equipment) and safe work practices. Regular safety training sessions, skill/upskill training and toolbox talks can enhance and promote a safety-driven mindset.

Equipment usage: Proper selection, inspection and maintenance of equipment play a significant role in construction safety. Equipment must be suitable for the task at hand, and the operators should be trained in its operation. Periodic inspection and maintenance checks should be carried out, ensuring that mechanisms such as brakes, alarms, and safety devices are functioning correctly.

Centralised resources: Scaffolding systems, Material handling cranes & equipment etc are a critical aspect of a construction safety. Providing standard & safe resources in time not only improve the safety overall but also helps in optimising the resources. Engaging Specialized vendor & resources always minimise the overall risk of new job site, situations in project site

Safety culture: Instilling a strong safety culture within the construction industry is paramount. A culture that values safety encourages workers to actively participate in safety programs, report hazards, and share ideas for improvement. Regular safety meetings, incident reporting protocols and open communication between workers and management can contribute to a robust safety culture.

Apart from the above, the summarise the safety enablers for construction activity is as follows:

41st Annual Mine Safety Week Celebration - 2023

1 Amenities

- Workmen Colony
- Site Offices
- Canteen / trolley point
- Assessment Centers
- Rest Shed & Toilets
- Drinking water arrangement
- Vehicle parking
- Bus stands

2 Contracts

- New vendor assessment
- Safety clause in contract
- CSMS Implementation
- Star rating by third party
- Rewards & Recognition
- Consequence Management
- Assessment of Sup./Engg. by CA/CO

3 Assessments & Trainings

- Skill Assessment and Practical Training Centers
- Assessment process & induction
- Medical assessment
- Training container at site
- Training Calendar for worker
- Training material - Slides /videos /practical training

4 Emergency Systems

- First Aid Centers
- Ambulance
- Fire Fighting system
- Rescue, equipment, Plan & team
- Mock drills
- Emergency Assembly areas

5 Safety Items

- Standard PPEs
- Road Barriers
- Safety nets & Spatter arrestor
- Gas Detectors
- Aux. items - Spatters arresters, stands, trolleys, man baskets, shower etc.

6 Construction Vehicles

- Safety Devices in vehicle
- GPS based route
- Height Barriers
- Road Safety team
- Parking places
- Digital appliances

7 Site Management

- Electrical Layouts
- Emergency assembly Areas
- Material Storage Yards
- Pedestrian pathways
- Vehicle Pathways
- Site General layout
- Waste Management
- Contracts (TPI, vehicle check, trainings etc)

8 Risk Mitigation

- 6 Directional Hazards & work permits
- Activity wise SWPs
- Risk Assessment
- E work permit
- Access Control at Construction site

Enhancing construction safety- requires a comprehensive approach encompassing risk assessment, training and education, equipment usage protocols, centralised resource systems, and establishment of a safety culture. Adhering to these principles not only helps prevent accidents and injuries but also fosters an environment of trust and accountability among all stakeholders involved in construction projects. Ultimately a safe construction site is just not a legal requirement but a moral obligation to protect workers and ensure long terms project success.
