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Case Study:

MPL Dhanbad: PPE Detection | Fire & Smoke

Introduction

Maithon Power Plant, a coal-based thermal power facility located in Dhanbad, Jharkhand, operates under complex and high-risk industrial conditions. With hundreds of personnel working daily, ensuring strict adherence to safety protocols is essential. To tackle challenges such as PPE compliance and hazard monitoring in real-time, Maithon Power Plant sought a solution that would enhance operational safety and improve emergency response capabilities across the facility.

Problem Statement

MPL Dhanbad encountered significant safety and compliance challenges in its industrial operations, largely due to the complex environment and the high volume of personnel. Monitoring strict adherence to safety protocols, such as the mandatory use of personal protective equipment (PPE), proved to be a demanding and resource-intensive task. Frequent incidents of non-compliance, including instances where workers were found without helmets or safety jackets, posed serious risks to employee safety and regulatory compliance.

Additionally, the presence of other potential hazards, such as fire outbreaks required vigilant surveillance to ensure rapid response and prevent disasters. MPL Dhanbad sought a comprehensive, intelligent solution that would automate monitoring processes, reduce human error, and strengthen real-time emergency response capabilities across the facility.

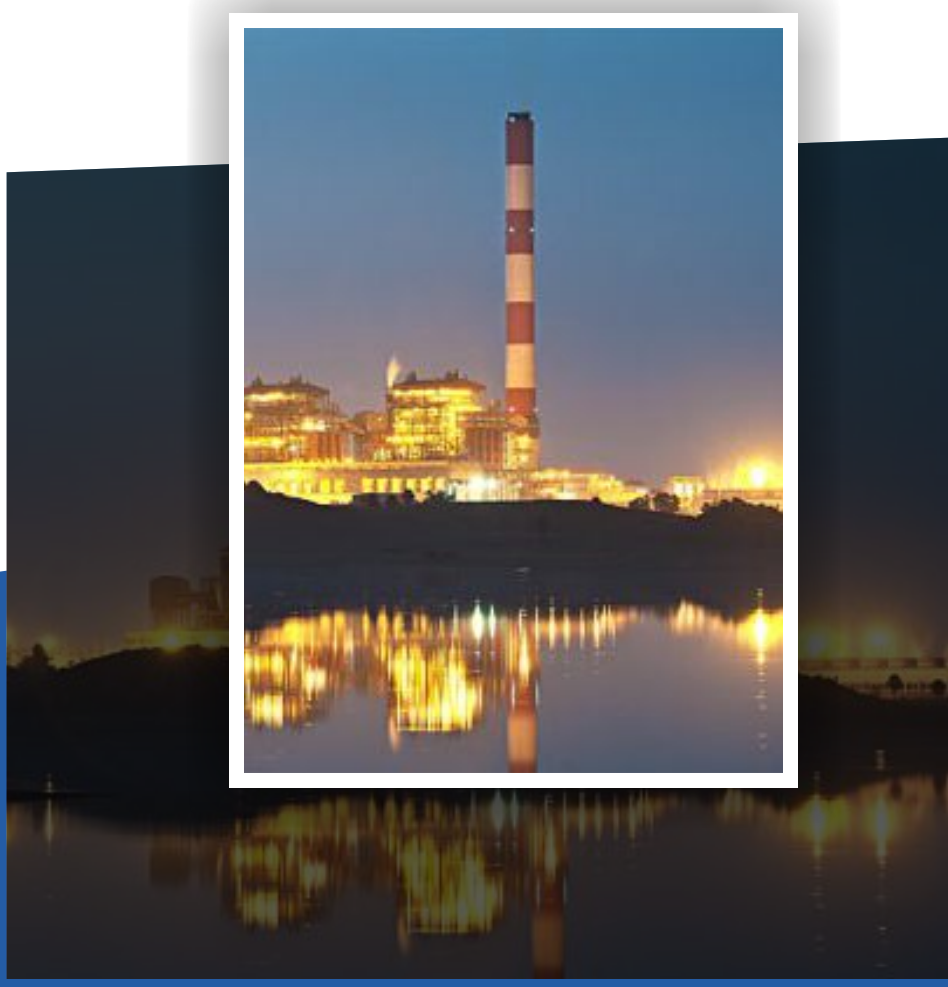

Fig.1 Okean - PPE Detection | Fire & Smoke, MPL Dhanbad, India

Use Cases

- No Helmet Detection
- No Jacket Detection
- Person Collapse Detection
- Fire & Smoke Detection

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Solution: PPE Detection | Fire & Smoke

Features

- Detect no helmets for safety compliance . This reduce head injuries and hazards
- Detect no Jacket for safety compliance. Reduce accidents and dangerous events.
- Detect Fire& Smoke for rapid response & prevent any massive accident.
- Reduce the cost and claims liability of the HSE (Health, Safety and Environment) Department of organisations.

OKEAN®

Vehant's Advanced AI Driven Video Analytics Platform

MPL Dhanbad deployed OKEAN AI/ML-based video analytics system across its facility, greatly enhancing safety measures. The system's real-time monitoring capabilities allowed the management to detect and address safety violations and hazards immediately, ensuring that workers adhered to PPE guidelines. In instances of emergency, OKEAN's instant alerts empowered the authorities to act quickly, mitigating potential dangers and preventing escalation. With automated alerts and detection features, MPL Dhanbad was able to uphold standard operating procedures (SOPs) consistently, reducing the manual effort required for surveillance and compliance checks. By leveraging this advanced technology, MPL Dhanbad successfully created a safer, more compliant work environment for workers, enhancing both operational efficiency and employee welfare.

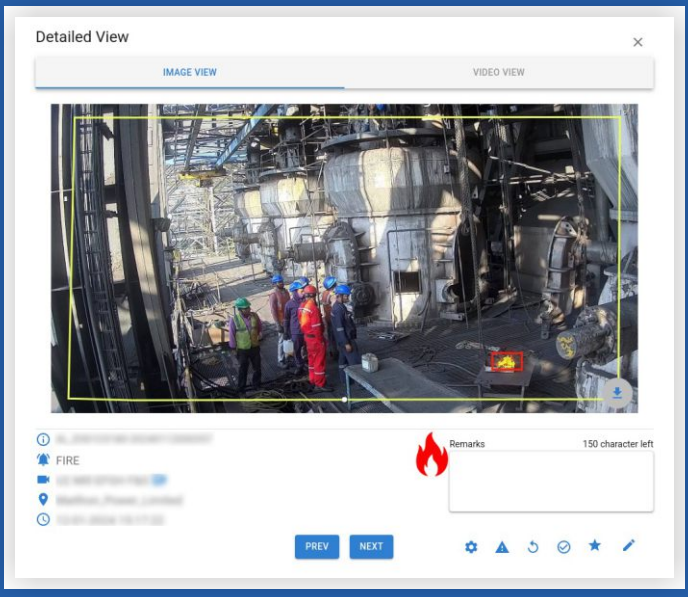

Fig.2 OKEAN interface view

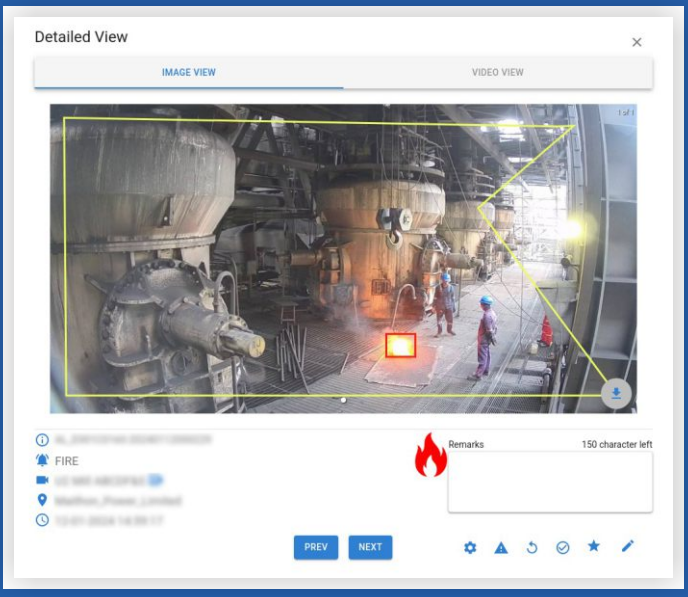

Fig.3 OKEAN interface view for fire & smoke detection