

CSIR FIRE AND EXPLOSION RESEARCH, TESTING AND TRAINING FACILITY AT KLOPPERSBOS

The CSIR-managed fires and explosion testing and training and research and development (R&D) facility at Kloppersbos is located approximately 40 km north of Pretoria.

THE FACILITY

Established in 1987 to conduct research into the explosibility of South African coals, this facility has extended its offerings to provide full-scale surface testing for the evaluation of underground explosion suppression systems, the inflammability of conveyor belts; dust suppression systems for continuous miners; and similar investigations.

EXPLOSIBILITY TESTING

The unique location and size of the facility allows demonstration of large-scale coal dust/methane explosions, making it an ideal venue for basic and refresher training sessions for underground workers.

OFFERINGS SAFETY AWARENESS TRAINING SEMINAR

These seminars reinforce the levels of awareness among underground workers of dangers associated with methane and methane/coal dust mixtures in an underground environment. Certificates of attendance are issued to each worker who completes the course. Planning is underway to include other modules of relevance in this offering. The Kloppersbos explosibility laboratory tests coals samples from mines across South Africa to determine the explosibility index of the coal. Mine officials use this information to determine appropriate measures that will

effectively prevent catastrophic coal dust explosions. The laboratory also tests industrial dust for explosibility e.g., dust from food processing, chemical and pharmaceutical industries.

RESEARCH, DEVELOPMENT AND TESTING

Kloppersbos is uniquely equipped for development, testing and validation of products and systems that prevent and mitigate fires and explosions in underground mines. Products and systems evaluated in recent years include bagged stone dust explosion barriers, an active explosion suppression system and aerated spray application stone dust products. Routine flammability tests are carried out to evaluate the flame retardant properties of conveyor belts.

INDUSTRY DAYS

Kloppersbos has hosted a number of industry open days. Stakeholders from across the mining industry are invited and suppliers of mine safety products and services are given the opportunity to showcase their offerings.

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