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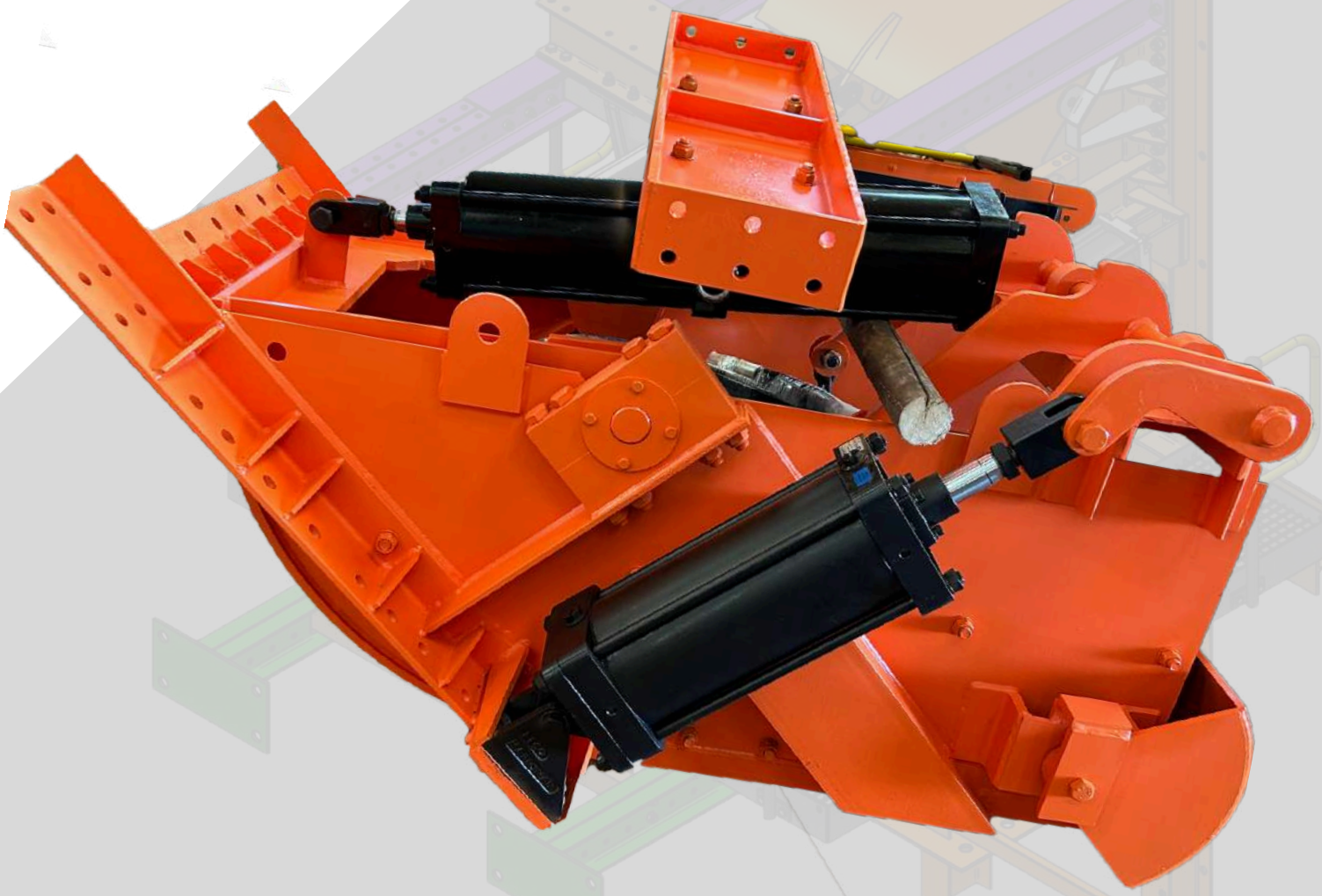
WERKMAN MUDRUSH
SAFETY CHUTE

ENHANCING MINING SAFETY WITH INNOVATIVE DESIGN



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Introduction

In the mining industry, safety measures are crucial to protect workers and prevent accidents. In this regard, Werkman Engineering has developed the Werkman Mudrush Safety Chute, a patented and precision-engineered solution designed to provide safety during mud rush events. We explore the unique features and benefits of the Werkman Mudrush Safety Chute, highlighting its structural compliance, intelligent design, and ability to safeguard operators during mud rush incidents.

Understanding Mud rush and Ore Passes

Description of mud rushes: Sudden and uncontrollable flows of mud, rock, and ore in underground mining operations.

Introduction to ore passes: Vertical excavations connecting different levels, facilitating the movement of ore and materials.

Role of the ore chute: Controls the flow of ore and materials from the ore pass to a transportation means, such as a hopper car.

Key Features

- **Dual-door design:** The chute incorporates two doors, each serving a specific purpose.
- **Small feed door:** Controls the regular flow of ore into the hopper car by selectively opening and closing.
- **Larger safety door:** Activated in case of a sudden mud rush event, enabling the operator to escape while blocking mud from entering the tunnel.
- **Operator protection:** By providing a safe escape route and a quick barricade against mud rushes, the chute prioritizes the well-being of operators.

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Advantages and Significance

Enhanced operator safety: The presence of a dedicated safety door allows operators to escape potential harm during mud rush incidents.

Quick response: The intelligent design and functionality of the chute ensure rapid activation of the safety door in emergency situations.

Controlling mud rushes: The safety door effectively barricades the mud, reducing the risk of mud infiltration into critical areas.

Prevention of accidents: The chute's ability to protect operators helps minimize injuries and potential fatalities during mud rush events.

Structural Compliance

Adherence to SANS 2004-CS1:2005 ensures the structural steelwork meets the required safety standards.

Complies with SANS 10208-4:2014, demonstrating adherence to design requirements for reliable and safe operation

Conclusion

The Werkman Mudrush Safety Chute represents a significant advancement in mining safety technology. By addressing the specific dangers associated with mudrush incidents in underground mining, this innovative solution prioritizes the well-being of operators. The compliance with structural and design standards demonstrates its reliability and effectiveness in ensuring safety during critical moments. With its unique dual-door design and quick response capability, the Werkman Mudrush Safety Chute sets a new standard for safety in the industry, contributing to a safer working environment and mitigating the risks posed by mudrush events.

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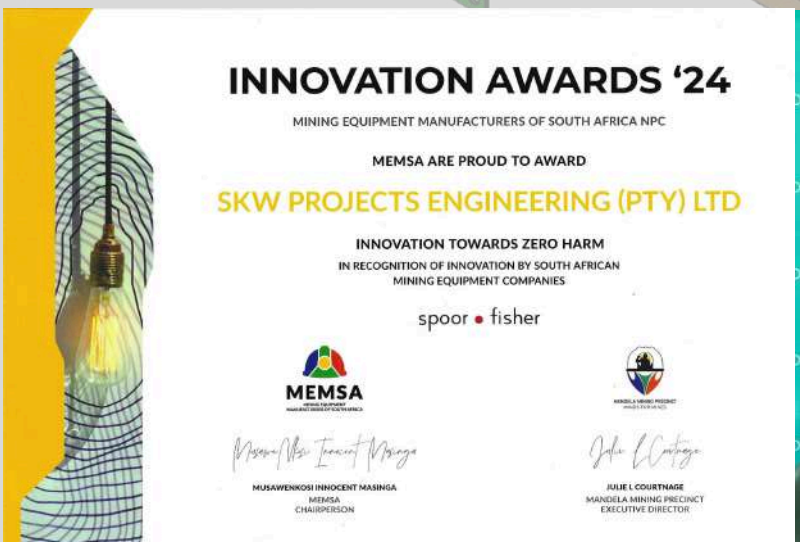
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