



**ME**  
**SAFE**

## **LONG HOLE PLUG**

*Assessing the hazard of  
bogged rods in up holes*



**Our goal is to increase safety & efficiency in the construction and mining industry through cost effective solutions.**





*WHY?*



**EFFICIENTLY increasing operator SAFETY**  
**Current hazard control methods ineffective and costly**







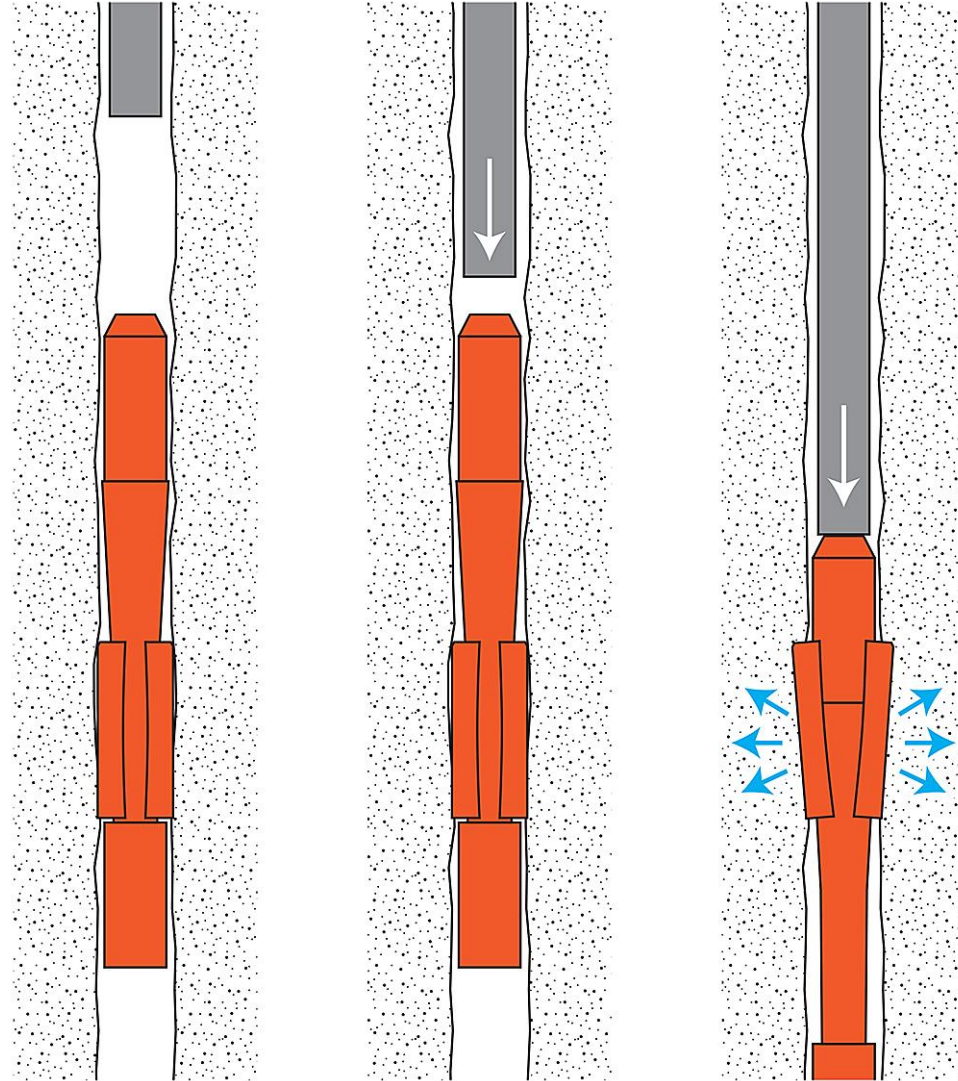
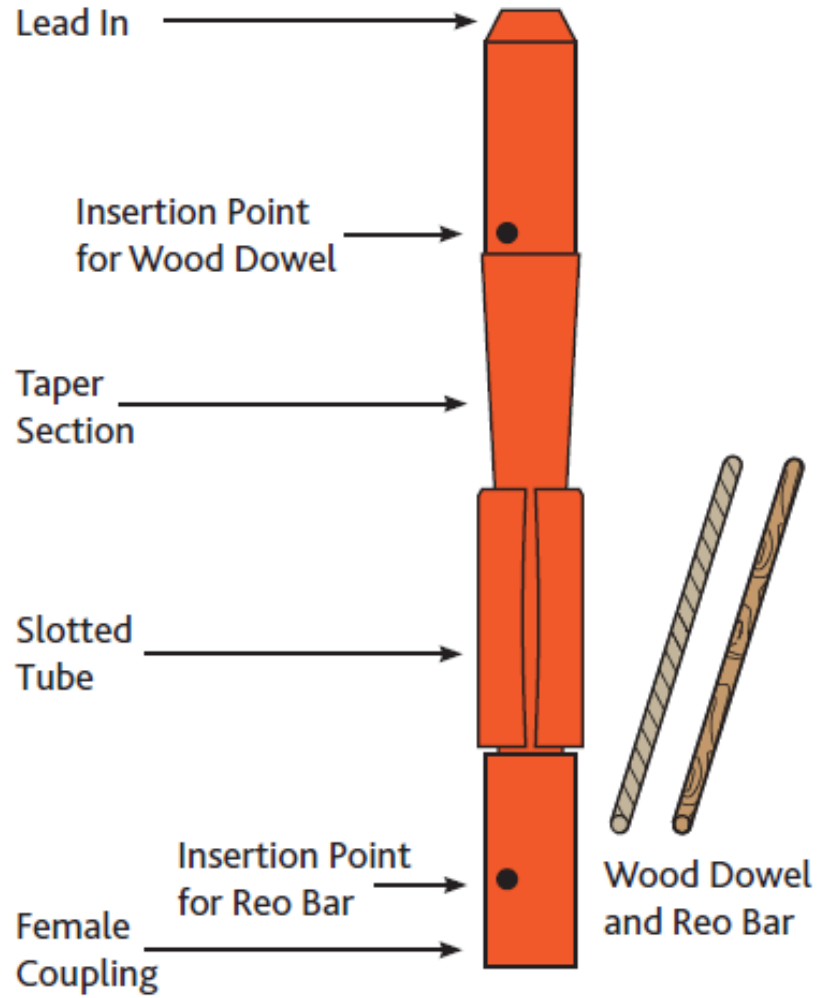
# OVERVIEW

- *LHP Components*
- *Testing*
  - *Drop Testing*
  - *Field Testing*
- *Installation*





# LONG HOLE PLUG COMPONENTS







# STATIC PULL TESTING

- Slotted tube holds LHP in place until cone component engaged
- Pull out resistance of 120kN prior to mobilisation in 80MPa concrete
- Important safety test



Slotted Tube Component



# DROP TESTING

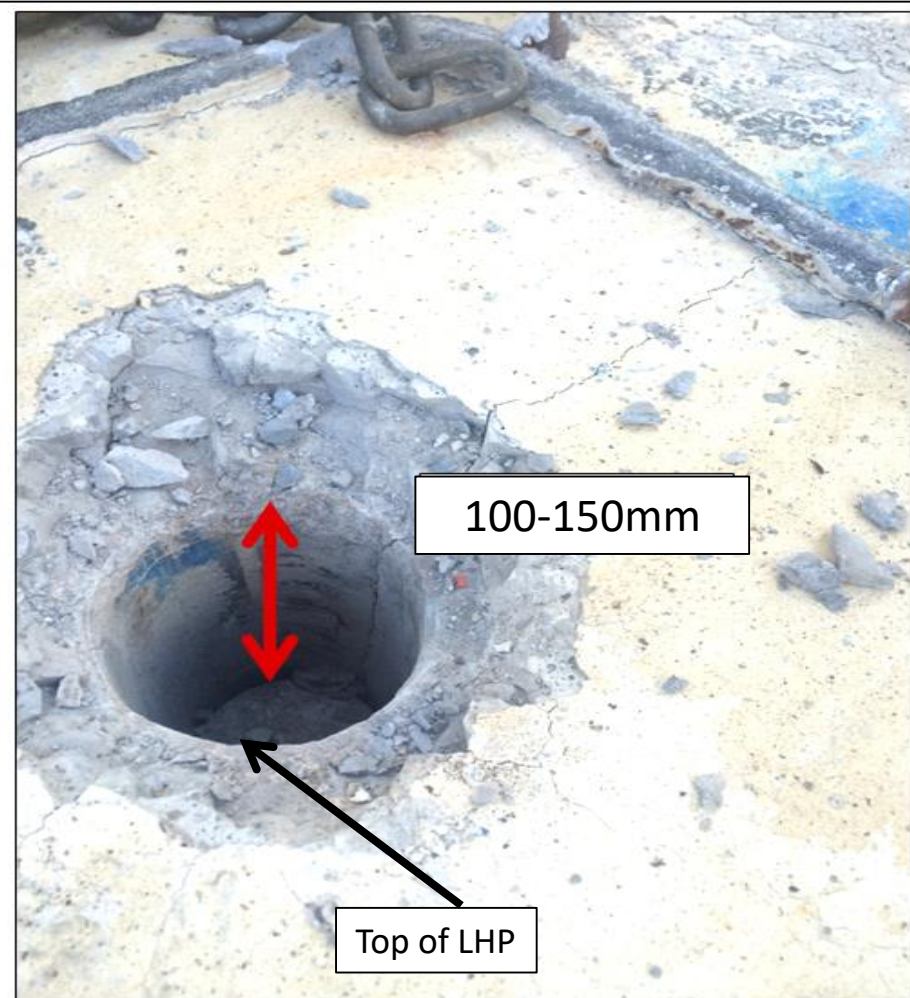
- 50m Vertical hole replicated using steel casings
- Drill rods allowed to free fall 25m
- LHP's installed in reinforced concrete blocks
- 42 tests completed
- **140 ton force generated, 100% success in arresting drill rods between 100 – 150mm**







# DROP TESTING







# FIELD TESTING

- Risk assessment with stake holders
- Safety of installation
  - *Manual handling*
  - *Isolations*
  - *Working around the boom*
- Effectiveness in client's rock mass
  - *Underground drop tests*
  - *100% success!*
- Easily installed with no safety or operational issues
- **Positive operator feedback!**





# INSTALLATION



Place in Jaws & locate drifter



Rotate boom & push LHP through jaws





# INSTALLATION



Index drill rod & line up with hole



Install using percussion



*Used in over 35 mines throughout the world*  
*A Cost Effective Solution to a common Industry Hazard*

