



What is Shotcrete?

Shotcrete is a construction method where concrete is sprayed onto surfaces at high velocity to provide stabilization and support.

The process involves using a hose to project a wet or dry concrete mix onto slopes, tunnel walls, or excavation faces. This technique is particularly effective for creating durable, seamless layers that conform to irregular surfaces.

Shotcrete can be applied with or without reinforcement, and it is often used in conjunction with rock bolts or soil nails for enhanced stability.

Its rapid application, quick setting time, and strong adhesion make shotcrete an ideal solution for slope stabilization, retaining walls, and underground structures, ensuring both immediate and long-term support.

Applications

- Tunnelling and Underground Construction
- Slope Stabilization
- Repair and Rehabilitation
- Swimming Pools and Water Retaining Structures
- Architectural Applications
- Industrial and Marine Structures

Benefits

- Can be applied in complex shapes and challenging locations.
- High strength and durability.
- Faster than traditional concrete methods.
- Reduces formwork and scaffolding requirements.
- Allows remote application in hazardous zones, therefore, improving safety.

Our Equipment



Shotcrete rig



Concrete Mixer



drilling & geotechnical

SHOTCRETE



Compressor

Our Projects



Shotcrete work at PLTA Maninjau, West Sumatra, Indonesia (2024)



Shotcrete work at Sorowako, South Sulawesi, Indonesia (2014)

Technical Specification

- Material mix consists of cement and aggregates from sand and gravel as well as additives and water, with water-cement ratio (w/c): Typically 0,4 – 0,5
- Powered by compressor
- Thickness between 10 cm and 15 cm
- Compressive strength of 25 MPa
- Welded wire mesh, rebar, or rock bolts can be embedded for structural support.

Why Choose Geonusa Utama?

- 15+ years of experience in geotechnical solutions
- Proven track record in infrastructure and private sector
- Committed to safety and quality
- Experienced team and in-house equipment

Contact Us:

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