Use and Functions of wire mesh in shotcrete applications
INTRODUCTION

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OUTLINE

- Usage areas of wire mesh
- Mesh reinforced shotcrete
- Testing methods of wire mesh and shotcrete
- Conclusion
Areas of usage

- In aprons of reinforced concrete construction
- In tunnel formwork systems
- In construction in metro and tunnel
- Slope stabilization
- In water bodies, dam, canal and flumes
Mesh reinforced shotcrete

- To reinforce
- Used in very poor, loose rock
- Wire mesh has high tensile strength
Mesh reinforced shotcrete
Wire mesh types

Chainlink mesh (Diamond mesh)  Weldmesh
Chainlink mesh

- Support loose rock
- Not suitable for shotcrete reinforcement
- Penetration of shotcrete is difficult
- Corrosion
Weldmesh

- Ideal for shotcrete applications
- Strong enough
- Sheets are light enough to handle by one man
Problem of wire mesh
Testing methods

- Static testing of reinforced shotcrete
Dynamic testing
Load deformation behaviour reinforced shotcrete panels

Load (kN) vs. Deflection (mm) graph showing the behavior of panels reinforced with Dramix fibers, Mesh, and Polypropylene.
Conclusion

- Wire mesh and shotcrete is conventional method.
- Use in very weak rock.
- Shotcrete and wire mesh shows high tensile strength.
ANY QUESTIONS