

JEM's Knowledge List

Title
Six Methods for Groundwater Control in Shaft Excavation
Verification Items During PS Anchor Testing
Technical Inheritance and Digitization for Large-scale Excavation
Strength Specifications for Shotcrete on Slopes
Grouting for Groundwater Treatment in Upward PS Anchor Holes in Underground Power Plants Arches
Standards for Groundwater Treatment in PS Anchor Holes in Underground Power Plants Arches and Water Stopping
Measures to Improve PS Anchor Cycle Time
Causes of Variability in Load Measurement Values of PS Anchor Load Cells
Encountered Expansive Mudstone Geology During Tunnel Construction
Planned Layout for Underground Power Plant Work Shafts in Mudstone Geology
Historical Changes in Japan's Underground Power Plants
Rain Measures Unique to Tropical Rainforests
Curtain Grouting Above the Underground Power Plant Cavern
Tunnels Using NATM Method
The underground cavities excavated for power plants in mudstone geology.
Upward Drilling and Insertion of PS Anchors
Management Values for Elongation During PS Anchor Tensioning
Points to Note During Manufacturing of Covering formwork of Large sectional Arch Lining Concrete
Fundamental Technologies for Underground Power Plant Cavern Construction
Rapid-setting Materials for Shotcrete
Shaft Winch Repairs Completed After an Accident
Concrete Placement for Water Pressure Steel Pipe Shafts
Special High-altitude Work Vehicles Used at Underground Storage Base Sites
Standards for Concrete Placement in Arch Linings for Underground Power Plants
Basic Review of Changed Underground Power Plants Construction Plans
Vibration Control from Blasting at PS Anchor Anchorage Sections
Causes of Increasing Load Cell Values of Upward PS Anchors in the Arch Sections of Underground Power Plants
Safety Factors Used in Underground Power Plants Cavern Design
Management Standards for Excavation in Underground Power Plants Arches
Rock Support for Large-section Underground Power Plant Arches
Management Standards for Wire Elongation During PS Anchor Tensioning
Analysis of Underground Cavities
Filling of Over Cutting Tunnels
Blasting for Invert of Large-section Tunnels
Drilling Diameter for Rock Bolts and Method of Grouting
Downward Installation Angle of Sidewall Rock Bolts and Mortar Filling Behind Washers
Concrete for Large-section Diversion Tunnel Linings
Displacement Measurement Associated with Tunnel Excavation
Days Required for Arch Lining Work in Underground Power Plant Caverns
Installation of Upward Rock Bolts
Measures to Prevent Fall of rocks at Tunnel Faces
Evacuation During Tunnel Blasting
Form Removal Time and Concrete Strength for Large-section Tunnel Arch Concrete
Preparation of Construction Plans for Large-section Diversion Tunnel Linings
Details of Covering formwork for Large-section Tunnel Arch Lining
Concrete Placement for Large-section Tunnel Arches
Reinforcement Assembly for Large-section Tunnel Arches
Pre-investigation and Displacement Measurement Plan Before Starting Underground Power Plant Caverns
Management Standards for Elongation Values During Tensioning of PS Anchors in Underground Arch Sections
Geothermal Measurement Inside Tunnels
Differences Between Load Cell Indications and Tension Jack Readings for PS Anchors

Installation of Underground Displacement Gauges
Investigation of a 100-year-old Power Plant Waterway Tunnel
Cutting Slope Protection Works at Tunnel Inlets
Groundwater Amounts Feasible for Shaft Excavation and Sheet Piling for Shafts
Construction Considerations for Water Conveyance Tunnels and Water Pressure Pipe Shafts
Secondary Grouting Below PS Anchor Packers
Grouting Construction Plan for Power Plant Waterway Tunnels
Turbidity Treatment Facilities for Power Plant Construction and Tunnel Inlet Construction and Slope Cutting
Lahar Layer Water Pumping and Pump Test Inside Shafts
Measurement Management Plan for Large-section Tunnels in Shirasu Soil
Preparations Before PS Anchor Installation
Verification After Completion of PS Anchors in the Underground Arch of the Power Plant