

Rock Mechanics Lab.

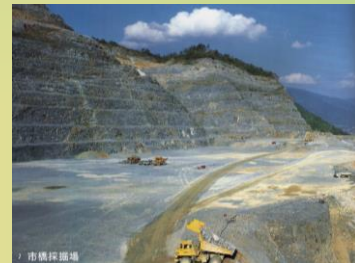
Challenging the Earth

Resource Development



Underground mining

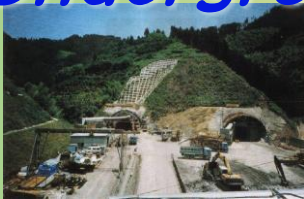
Excavation Mining



Open-pit mining

Underground Frontier

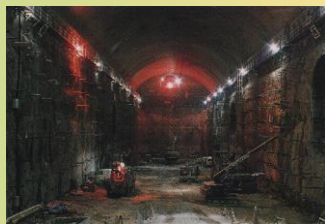
Construction



Shimizu No.3 Tunnel



Tunnel Boring Machine



Okumino Underground
Power Station

Threat of Disasters

Design & Management



Collapse of Oya
Stone Quarry



Collapse of Toyohama
Tunnel

Mastering Rock Failure

Predicting
Rock Failure
100 Years into
the Future

Simulating
Pressures at
1,000 Meters
Below

Breaking Rock
with 100 Tons
of Force

Testing Rock
Behavior Under
Precise Control

Testing Rock
Under True
Triaxial Stress

Detecting the
Sound of Rock
Fracturing

Cutting Rock
with High-
Pressure Jets



Creep Testing
Machine



Triaxial
Pressure Vessel



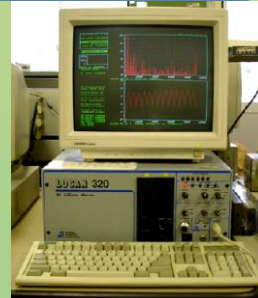
Uniaxial
Compressive
Testing Machine



Universal Material
Testing Machine



True Triaxial
Compressive
Machine



Acoustic Emission
Analysis System



High-Pressure
Water Pump