

# JET GROUTING



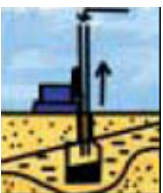
**GFWA**  
SUSTAINABLE TECHNOLOGY



Jet Grouting is a very effective technique for minimizing ground settlements, stabilizing excavations or creating impervious surfaces.

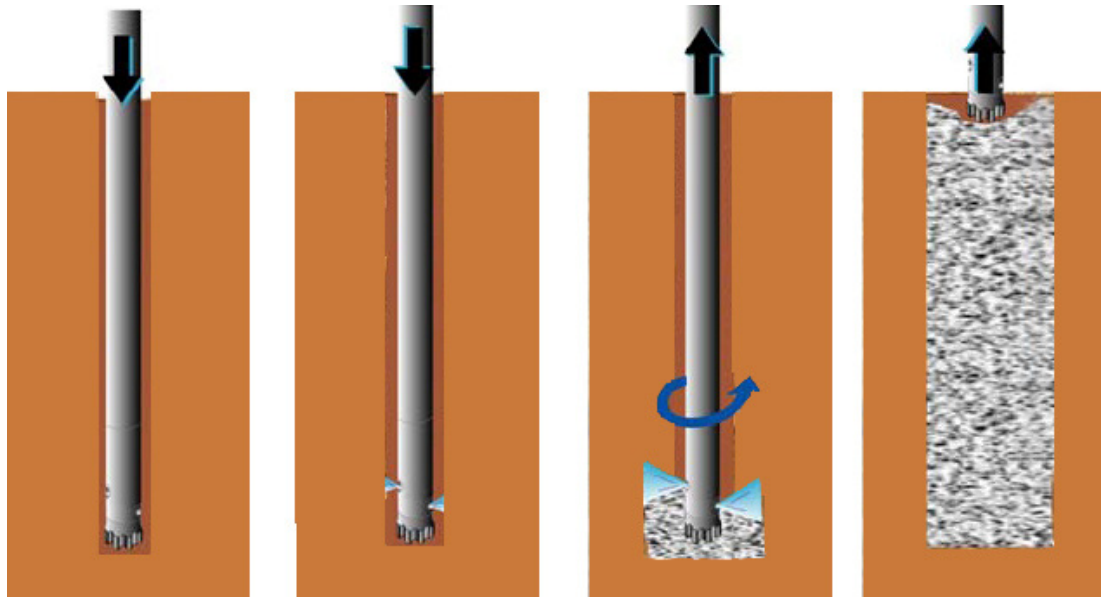
This technology comprises of a specialized in-situ mixing of soil and cement grout. In this technique, after drilling to the required depth, the drill rods are rotated and raised to the ground surface while cement grout is injected at a high pressure (about 450 bars). The high pressure grout erodes the soil matrix and forms the jet grout column. The column diameters can be more than 2 m.

When placed in tangential rows, the columns can be configured to provide selective treatment or mass-treatment of the soil.



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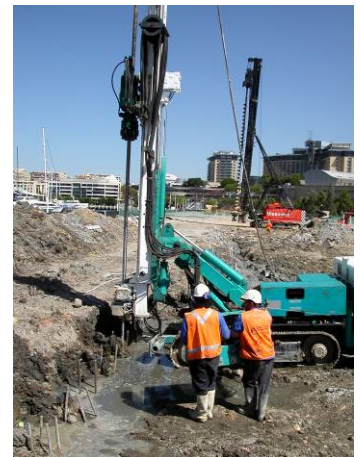
### Work procedure for Jet Grouting



### Some Applications of Jet Grouting



- Foundations of structures
- Ground treatment when there are nearby utilities
- Pre-arching tunnels
- Reinforcement of existing structures' foundations
- Working in limited space and height
- Constructing impervious curtains
- Stabilizing excavation walls
- Hard-soft walls



### Recent References

- Runway End Safety Area (RESA), Sydney Airport (NSW, Australia)** – retaining structures, cut-off walls, ground improvement
- Sydney Airport Parallel Runway (NSW, Australia)** - SACL- retaining structure
- Fisherman's Island Wharves 4 & 5 (QLD, Australia)** - Port of Brisbane Corporation- cutoff wall
- Sydney Aquarium (NSW, Australia)** - Sydney Aquarium- retaining structure
- Venetian 7 & 8 (Macau)** – Venetian Group – retaining structure
- Darling Harbour Wharves 8 & 9 (NSW, Australia)** – Wharf Stage 2 – retaining structure

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