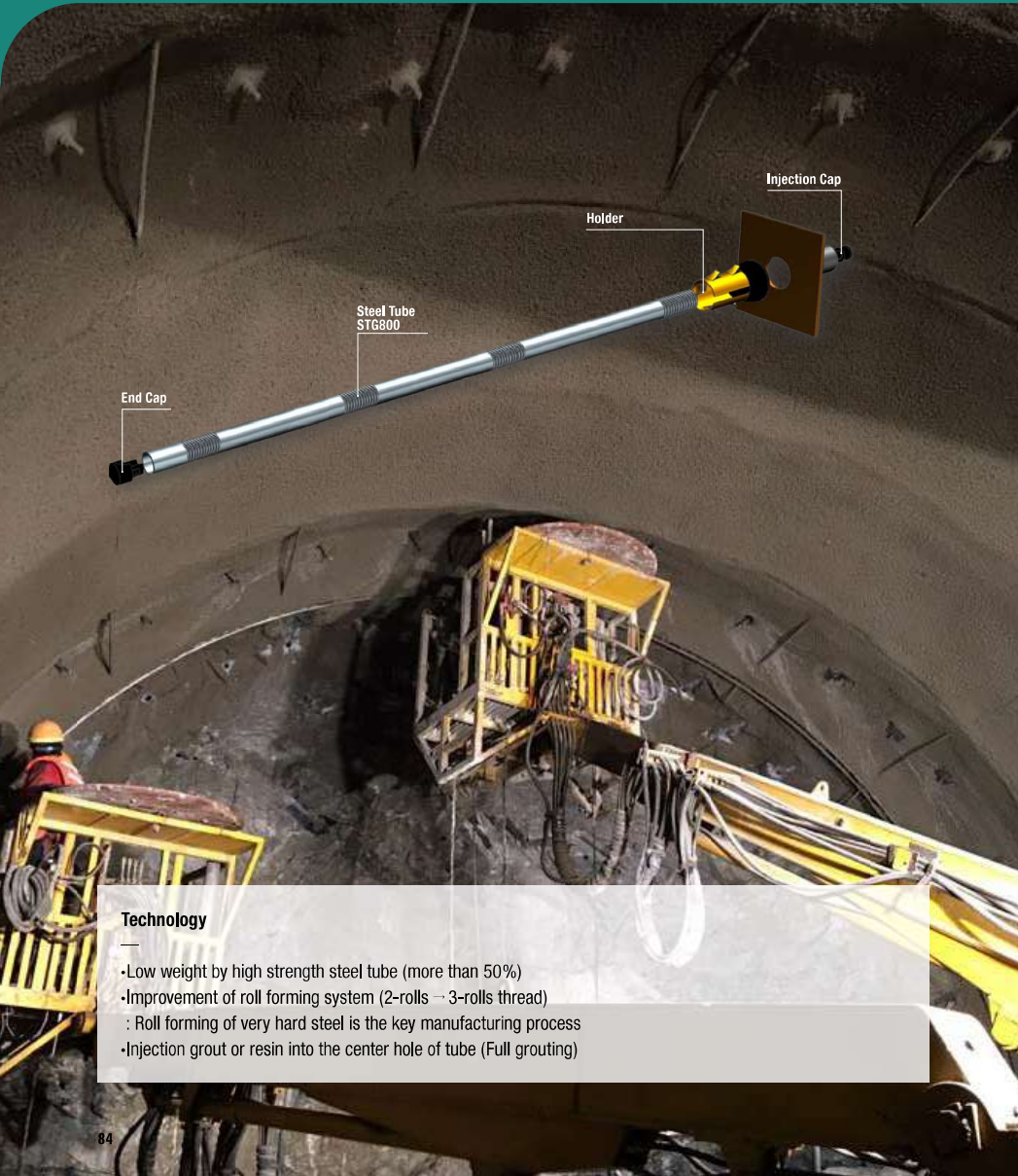


High strength steel tube for reinforcement ground system

# SP Rockbolt

Smart Pipe Rockbolt



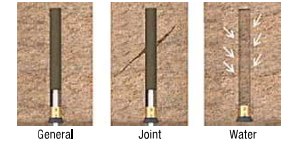
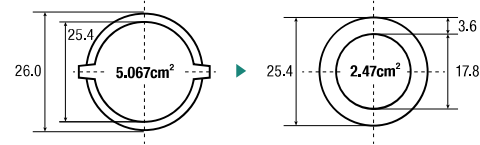
### Technology

- Low weight by high strength steel tube (more than 50%)
- Improvement of roll forming system (2-rolls → 3-rolls thread)  
: Roll forming of very hard steel is the key manufacturing process
- Injection grout or resin into the center hole of tube (Full grouting)

### Characteristic / Advantage

As-is → To-be

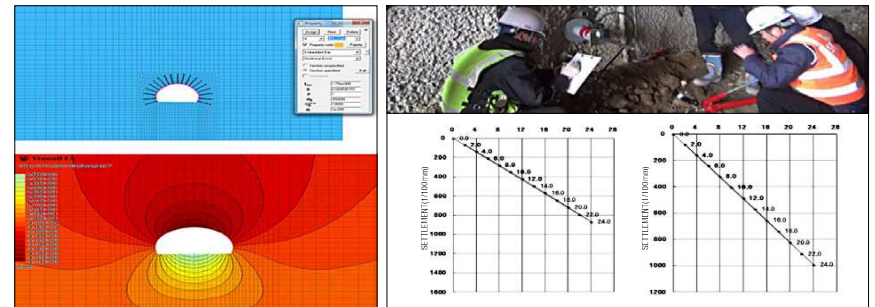
- Improvement of construct ability (50% Low weight)
- Increase of pullout force (Full grouting)



### Spec / Standard

Type	Elastic modulus E(kN/m²)	Cross-section area A(m²)	EA(MPa)	Yield strength (MPa)
Thread Bar(D350)		0.0005067	106.4	350
ERW Tube(G800)	2.1e+08	0.0002464	51.7	800

### Numerical Analysis / Field Test



### Applications

