### Railway tunnels

Milan-Naples High Speed/Capacity railway line, Bologna feed line The construction of the Underground station of Bologna Centrale (platforms 12-17)in an urban context is at an advanced stage.

### **Genoa Bypass Railway Line**

The work concerns:

- a double track tunnel (2.8 km in length, 13 m in diameter).
- 2 single track tunnels (2 x 1.4 km in length, 8 m in diameter).

Excavation works are in progress.

### <u>Undergrounds</u>

## Naples underground, Line 6 (Campegna - Porta del Parco extension)

The work concerns:

- a single tube tunnel of about 3,800 m to be created via an EPB shield of 8.30 m in diameter;
- 3 stations.

Excavation works is going to start.

### Milan Underground, Line 4 Linate Airport-S.Cristoforo section)

The work concerns:

- a running tunnel of about 11,70 km in length, to be bored by using two EPB shield of 6.36 m in diameter;
- a running tunnel of about 3,70 km in length, to be bored by using an EPB shield of 9.15 m in diameter;
- 21 underground stations.

Final design is in progress.

### Milan underground, Line 5 (Garibaldi-San Siro/Harar section)

Excavation works of the line twin tunnel (6,755 m in length and 6.8 m dia.) and of 10 stations have started. The line twin tunnel is bored by using two EPB TBM. Rome underground, Line B1 (Bologna-Conca d'Oro extension) Excavation of 4 Km line twin tunnel is over The works for the construction of three stations (Annibaliano, Gondar and Conca d'Oro) is over.

### Rome underground, Line B1 (Conca d'Oro-Jonio extension)

Excavation of the line tunnel (9.80 m in diameter) is in progress.

### Rome underground, Line B (Rebibbia - Casal Monastero extension)

Line tunnel of 9.80 m in diameter and about 3km in length. Final design is about to start.

Rome underground, Line C (S. Giovanni-Montecompatri/Pantano section) Excavation works of line tunnels (18.5 Km in length and 6.75 m dia.) by using 4 EPBS are over. Excavation works 12 underground stations are in progress.

## Rome underground, Line C (Venezia - S. Giovanni section)

Final design is in progress; excavation works of line tunnels (3 Km of twin tunnels, 6.75 m dia.) will start in about 1 year.

#### Road tunnels

# Pedemontana Lombarda Motorway, Dalmine-Como, Gaggiolo pass connection

Works are in progress.

# Pedemontana Lombarda Motorway, connection between A8 and A9 motorways.

Excavation of 3 tunnels (3 Km. in total) are in progress.

# Modernisation of Motorway A1 Milan-Rome-Naples, Valico by-pass Excavation works of the base tunnel (8,700 m long) and Manganaccia tunnel are over. Excavation of other four twin tunnels (Val di Sambro, Grizzana, Quercia, Sparvo)(each tube about 180 m2 cross-section) is in progress. Excavation of the Sparvo twin tunnel (2.5 km in length, 15.55 m in diameter) is done by using an EPB-TBM (the world's largest TBM).

### Salerno-Reggio Calabria motorway

6° macro lot tunnelling works are in progress.

### E90 motorway, SS 106 "Jonica" section, 11 tunnels

Excavation works of the twin tunnels (6,671 km in total length, 6.5 m dia.) are in progress.

### Quadrilatero (Umbria-Marche roadworks), 10 tunnels

Tunnelling works are in progress.

# A14 motorway, Widening of 5 existing tunnels from two to three lanes + the hard shoulder

Works are going to start.

### Frejus safety tunnel

Thw works for the excavation of a tube about 8 m in diameter and 12.87 km in length, have started.

### New Colle di Tenda road tunnel

The project, which provides for the widening of the existing tube and the construction of a new 3,200 m long tube has been approved and financed by CIPE. Public tender have to start.

### **Modernisation of Motorway A15 of Cisa**

The preliminary design of underground works (40 Km of road and railway tunnels) is in progress.

## S.S. 212 "della Val Fortòre" and ex s.s.369 "Appulo Fortorina"

Excavation works of 3 tunnels are in progress (about 2,5 km of total length).

### S.S. 106 Jonica (Sibari - Roseto Capo Spulico)

Ten twin tunnel; total lenght about 20 km.

The General Constructor tender is ended. Definitive design is about to start.