

# ITALY

## ACTIVITY REPORT 2013

**Società Italiana Gallerie (Italian Tunnelling Society)**  
c/o DIATI – Dipartimento di Ingegneria dell'Ambiente, del Territorio e delle  
Infrastrutture del Politecnico, Corso Duca degli Abruzzi n. 24, I 10129 Torino

E-mail : [info@societaitalianagallerie.it](mailto:info@societaitalianagallerie.it)  
Web: [www.societaitalianagallerie.it](http://www.societaitalianagallerie.it)

**SIG is a scientific, not-for-profit association; its function is to promote, coordinate and spread studies and research in the field of tunnelling and other underground works. SIG was founded in 1974.**

**As of December 2013 our members were 606, 517 are individuals and 89 are corporate members which represent Universities, Clients, Consultants, Contractors, Manufactures.**

**Expotunnel 2013 – Bologna – 17-19 October 2013**  
**International Congress on “Tunnelling and underground space in Europe development”**

**S. Barbara, training course - Rome, 3 December 2013 on “the problems associated with the realization of underground works in Rome”**

**Technical visits 2013:**

**10 May – Illustration of the final project “Genova eave” - Milano**

**31 May – Metro Line 5: Milan Garibaldi/San Siro extension**

**21/22 November – Motorway A14 Bologna-Bari-Taranto extension to third lane**



**Società Italiana Gallerie**  
Italian Tunnelling Society

### Railway tunnels

#### **Milan-Genoa High Speed railway line**

27 km base tunnel: 2 single track tunnel configuration with 1 underground safe area (about 35x2 km of underground tunnel in total).

Works started in 2013.

#### **Genoa railway junction upgrading**

The work concerns:

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

Excavation works are in progress.

#### **High Speed Milan-Naples Railway line: Florence junction underground pass**

The works include a 5km EPB bored twin tunnel with an underground station. The works are foreseen to restart in 2015.

#### **Brenner Base tunnel**

55 km base tunnel between Austria and Italy: the works include the construction of two single track tunnel (9 m dia.) with underground safe area every 20km and a central exploratory/service tunnel (6 m dia.). Excavation works are in progress (exploitation 2026).

#### **Torino-Lione railway line – Mont d’Ambin base tunnel**

57 km base tunnel between France and Italy: the works include the construction of two single track tunnel with underground safe area every 20km. Exploratory tunnel (Maddalena Tunnel) undergoing Italy side.

### Undergrounds

#### **Naples Underground, Line 1, Garibaldi-Capodichino extension)**

Line twin tunnel of 6.7 m in diameter (excavation by EPB TBM and cut and cover method).

#### **Naples underground, Line 6 (Mergellina-Municipio extension)**

The work concerns:

- A single tube tunnel of about 3,400 m to be excavated via an EPB shield of 8.30 m in diameter;
- 4 stations.

Excavation works started

#### **Naples underground, Line 6 (Campegna – Porta Del Parco extension)**

The work concerns:

- a single tube tunnel of about 3,800 m to be excavated 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)**

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.

Excavation works started between Linate and Forlanini.

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

The work progress of the line twin tunnel (6,755 m in length and 6.8 m dia.)and of 10 stations is 50 %. The line twin tunnel is over. Excavation Works of the stations are at 90%.

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

Line twin tunnel of 6.7 m in diameter, approx. 3 km in length, and two underground station. Excavation works are going 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 diameter) are over. Excavation works of 12 underground stations are in progress.

### **Rome underground, Line C (Fori Imperiali - S. Giovanni section)**

Excavation works of 2 underground stations and line tunnels (3 Km of twin tunnels, 6.75 m dia.) are going to start.

### **Road tunnels**

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

Two tunnels (Grandate and Morazzone, 2,450x2 Km total length, 16 m dia. Works are 60 %.

#### **Modernisation of Motorway A1 Milan-Rome-Naples, Valico by-pass**

Four twin tunnels (Val di Sambro, Grizzana, Quercia, Sparvo) (each tube about 180 m<sup>2</sup> cross-section. Excavation of Grizzana and Quercia tunnels is over. Excavation of Val di Sambro tunnel is 65%. Excavation of the Sparvo tunnel (2.5x2 km in length, 15.55 m in diameter), done by using an EPB-TBM (the world's largest TBM) is 70%.

#### **Salerno-Reggio Calabria motorway**

6° macro lot tunnelling works are in progress (400x2 m remaining out of 5000x2 m).

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

Tunnelling works are over.

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

Works are in progress.

### **Frejus safety tunnel**

The works for the excavation of a tube about 8 m in diameter and 12.87 km in length, are in progress.

### **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. Final design is in progress.

### **S.S. 212 “della Val Fortòre” and ex s.s.369 “Appulo Fortorina”**

Work include excavation of no. 4 tunnels, 15.20 m dia., and 2,700 m. total length). Excavation works of Cerzone and Fuciello tunnels are over. Excavation works of San Pietro and Monte Leone tunnels (approx. 1.2 km of total length) are over.

### **S.S. 106 Jonica (Sibari – Roseto Capo Spulico)**

Two twin tunnel; total length about 5x2 km.

Final design in approving.