

During the year 2010 the Swiss Tunnelling Society has organized and carried mainly the following events:

Swiss Tunnel Congress in June 2010. This annual main event has attracted more than 820 participants and took place in the prestigious Lucerne Congress Hall. The congress dealt with general and technical features of the Gotthard Base Tunnel and other projects in Switzerland and foreign countries. Next to this lectures a colloquium was held on the previous day with the topic 'Concrete Technology'. The congress was combined with extended visits to five construction sites in Switzerland. The proceedings of this conference are available on our website. In 2005, www.swisstunnel.ch.

The STS organises each year two excursions. The excursion in May paid visit to the Bypass Biel /Bienne and the excursion in October to Nant de Drance, a pump storage power plant in Martigny. Excursions are open to everyone and both were well attended.

STS organised in 2010 two evening lectures: Prof. Pavlos Marinos, NTU Athens, delivered a presentation about Tunnelling through karstic rocks and Mr. Ing. Remo Grandori, President of Seli SpA, spoke about TBM excavation and TB design for rock tunnels under high cover in critical geological conditions. Both lectures were held at the ETH Zurich.

Interaction with other national underground industry societies took place in two parts: The meeting with the tunnelling societies of the German speaking countries in September (the German DAUB and ITA Austria) in Zurich Switzerland organised by STS and in November with AFTES, ABTUS, AETOS, SIG und CPT in Bruxelles, organised by ABTUS. Beside the general exchange of information the scope of these meetings included also a study day with the topic "Large tunnels projects abroad".

On the international level, STS members were active in different working groups and committees of ITA.

WTC 2013: The Swiss Tunnelling Society is pleased to welcome to Geneva for the ITA-AITES 2013 World Tunnel Congress and the 39th ITA-AITES General Assembly, which will be held at the International Conference Centre, Geneva (ICCG) from 31st May - 5 June 2013.

International Tunnelling Awards 2010: Representing the Swiss Underground Community, the Swiss Tunnelling Society picked up the NCE International Tunnelling Award for the Project Gotthard Basetunnel, on December 2010 at the Grosvenor House in London.

In 2005, STS started publishing the 'Bulletin', which is edited twice a year. The 'Bulletin' can be downloaded from www.swisstunnel.ch.

Projects

1. Gotthard Base Tunnel - World record on the Gotthard! : The longest railway tunnel in the world has become a reality. On 15 October 2010 in the east tunnel, 30 km from the north portal and 27 km from the south portal, the final breakthrough of the Gotthard took place. The tunnel boring machine, drilling from Faido, broke through the last meter of rock on the route to Sedrun.

Next steps in the Gotthard Base Tunnel: The final breakthrough does not end work in the Gotthard base tunnel. Before timetabled operations can commence, probably in December 2017, the interior work on the tunnel must be done. The plan is to have all the tubes and shafts lined and the concreting finished by 2014. Shell construction specialists will equip the tunnel with mechanical and electromechanical installations such as doors, gates, and ventilation and other technical systems. These will ensure that the tunnel can be operated and maintained safely. In parallel to the last shell construction and installation, railway infrastructure will be fitted. This work started back in May 2010 at the south portal of the Gotthard base tunnel, in the Faido-Bodio-west section. The railway equipment comprises the track itself, the overhead line, power supply cables, telecommunications and radio installations, train control and automation systems, and signalling technology. -

www.alptransit.ch

2. Ceneri Base Tunnel: In the north portal of the Ceneri Base Tunnel at Vigana, driving under the A2 motorway continues. At Sigrino, the north-west drives in the caverna operativa (CAOP) are complete. In the south-west tunnel, driving continues with good advance rates. www.alptransit.ch

3. Cross-City Link Zurich: The Weinberg Tunnel, the under crossing of the southern part of the main station Zurich, with mining and cut-and cover methods and the crossing of the Sihl for the station Löwenstrasse are the core construction sites of the Cross-City Link in Zurich and under construction now. Commissioning will be in 2013. infra.sbb.ch/bauarbeiten/weinbergtunnel.htm

4. Bypass Biel, A5 Eastern Branch: Together with the construction of the Western branch the Bypass Biel will influence the city for at least twelve years. The Eastern Branch under construction consists of the 1.5 km long Büttenberg tunnel and the 2.5 km long Längholtunnel. www.a5-biel-bienne.ch

5. Nant de Drance : The Nant de Drance project involves constructing a pumped storage power station in an underground cavern between the existing Emosson and Vieux Emosson reservoirs, a pair of lakes situated in the community of Finhaut. The power station is designed to generate electricity at times of peak consumption. Water from Vieux Emosson will be channelled through turbine generators to the Emosson reservoir 300 meters below. At night and at weekends, when demand for electricity is lower, the water will be pumped back from the lower to the upper reservoir. Equipped with 600-megawatt turbines, the Nant de Drance power station is expected to generate around 1500 million kWh of peak energy a year. The pumps will require some 1800 million kWh of energy.

6. Kraftwerk Limmern : A new underground machine aggregate center will be created about 600 m inside the mountain at the foot of the dam for Lake Limmern, at approx. 1700 m above sea level. Two pressure tunnels will connect Lake Mutt to the machinery center, and the centre will be connected to lake Limmern by two underwater tunnels measuring about 500 m in length. Access to the underground machinery centre from Tierfehd is via a 4 km long access tunnel, equipped for this purpose with a cable car.

Other tunnel projects in Switzerland:

the list of tunnels under design or construction sees many more projects. To mention just a few of them:

- Tunnel Engelberg, www.zentralbahn.ch
- Umfahrung Lugano (Veduggio-Caserte)
- Zentralbahn Lucerne, tunnels Hubelmatt and Allmend, www.ausbau-zentralbahn.lu.ch
- A8 Umfahrung Lungern, Tunnel Lungern, www.a8-ow.ch
- A13 Umfahrung Roveredo, Tunnel San Fedele, www.gr.ch
- A28a Umfahrung Saas, www.gr.ch
- A16 Transjurane, tunnel Moutier, tunnel Neu-Bois, tunnel de Bure. www.a16.ch
- Bypass Visp, Tunnel Visp, Tunnel Eyholz, www.a9-vs.ch
- CEVA, www.ceva.ch