



POLITECNICO DI TORINO
Dipartimento di Georisorse e Territorio



GEORESOURCES AND ENVIRONMENT ASSOCIATION



ITALIAN TUNNELLING ASSOCIATION

INTERNATIONAL CONGRESS
MECHANIZED TUNNELLING: CHALLENGING CASE HISTORIES

Politecnico di Torino, 16 – 19 November 2004

**THE REHABILITATION OF LINE 1
OF THE ST. PETERSBURG METRO**

Abstract

The rehabilitation of Line 1 of the St. Petersburg Metro in the 770m long section between the stations Lesnaya and Ploschad Muzhestva is one of the most challenging project even realized with mechanized tunnelling in urban areas. After the interruption in 1995 due to the collapse of the existing tunnels, a new section was designed and built in very complex geotechnical conditions, where the combination of very poor geotechnical conditions, great depth and water pressure on the tunnel at the level of 5,5bars and more contributed to a unique combination of difficult conditions. The paper illustrates the key aspects of the project starting from the preliminary studies for selecting the new alignment to the construction phase. The Line 1 was reopened to the normal traffic in June 2004.