

PROJECT

TUNNEL SCHUMANN JOSAPHAT BRUSSELS, BELGIUM



PROJECT NAME

Compensation grouting in the Ilôt des Maisons Place Plasky

CLIENT

INFRABEL

ENGINEER

BELIRIS Direction Transports

GENERAL CONTRACTOR

JV THV Plasky



SPECIALIST CONTRACTOR

RODIO GmbH Neusäß

CONTRACT VALUE

EURO 2.30 Mio. CHF 3.50 Mio.

BEGINNING OF WORKS

September 2009

END OF WORKS

March 2012

■ JOB DESCRIPTION

The establishment of a new connection between the railway tunnels of the line 26, built in 1911, and the new Schumann Josaphat railway requires the construction of a 105 m long branch line nearby Eugene Plasky place. This tunnel passes under a triangular isle of brick houses of three to four floors. To avoid possible damages underneath the existing buildings, due to the construction of new tunnel, it has been planned a large injection campaign to compensate possible settling of buildings. The horizontal drillings have been performed from inside two round shafts. The maximum drill depth was about 56 m. The holes were equipped with 2" 1/8 steel sleeved pipes. The injection was carried out using double-packers from a fully computer controlled grouting container with 10 pumps. In the houses was installed an electro-hydraulic leveling system with a total of 150 measuring points. Specially designed computer software controls the programming of the injection quantities and enables the permanent monitoring of all measurements with automatic alarms when defined settlement and/or rotations are exceeded.

■ WORK QUANTITIES

3.480 m of grouting holes equipped with steel TAM pipes
100 shifts of pre-grouting and 140 shifts of compensation grouting

■ MAIN EQUIPMENT

1 Soilmec PSM8 drill rig
1 fully computerized grouting container CIRO 10 with 10 pumps
1 GERTEC GERMIX CM 280 mixing plant
Recording of drilling parameters via LUTZ LT3 system



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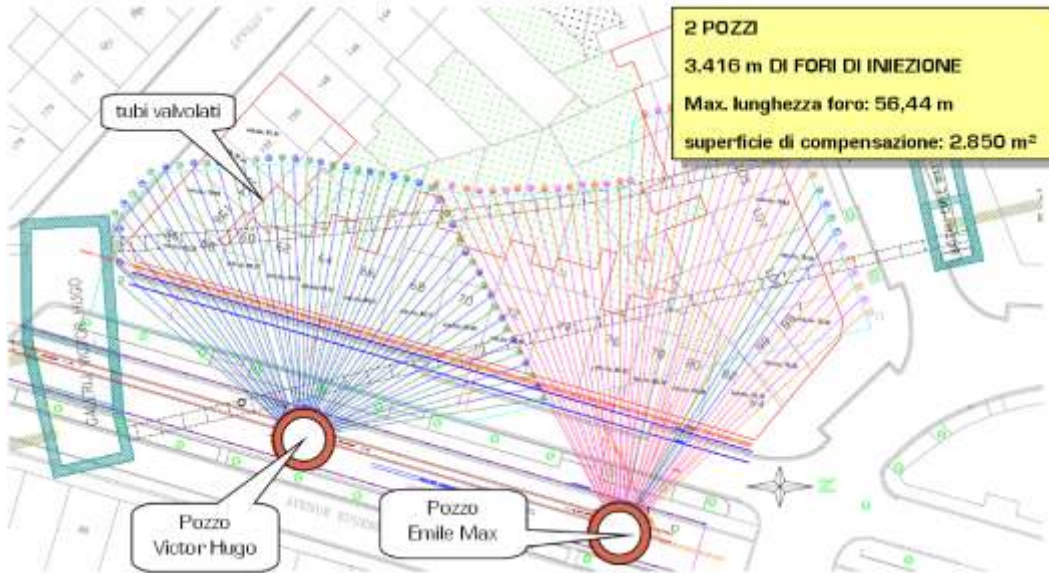


Compensation Grouting



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Plan view of TAM pipe fans with the two drill shafts



Electro-hydraulic leveling point mounted on an external wall



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