

#### §1 PROVISION OF AUXILIARY EQUIPMENT

- 1. For Pipe Jacking the lessee has to supply the following items for installation of the Equipment.
- 1 mounting bracket for the Target to be fixed inside the TBM
- 1 mounting bracket for the laser / theodolite (as per the construction drawings supplied by the owner)
- 3 mounting brackets for the prisms (as per the construction drawings supplied by the owner).
- 1 support for the inclinometer (as per the construction drawings supplied by the owner).
- Coordinated Survey pillar in the start shaft, together with 2 visible coordinated reference stations.
- Suitable auxiliary devices (clamping rings, screws, dowels etc.) for the secure fixing of components in the pipes.
- 230V/AC power supply at the laser station and at the PC.

For Segmental Tunnelling the lessee has to supply the following items for installation of the Equipment.

- Min. 3 mounting brackets for the laser / theodolite (as per the construction drawings supplied by the lessor).
- Suitable auxiliary devices (clamping rings, screws, dowels etc.) for secure fixing of components in the pipes.
- 230 V/AC power supply at the laser station and at the PC.
- 2. During the installation and training phase the lessee has to provide to the engineer of the lessor an always accessible, suitable and clean work place (desk) in a heatable office, the suitability of such working area being determined by the engineer.
- 3. The lessee makes telephone, fax and e-mail services available to the engineer for the scope of his business.

# §2 INSTALLATION, COMMISSIONING AND CONTROL MEASUREMENTS

- 1. The date of commissioning of the Equipment in each phase, as well as any control surveys has to be agreed upon by the lessor and the lessee. The lessee has to give written order to the lessor, at least 3 working days (in countries requiring a visa at least 7 working days) before the agreed date.
- 2. The installation of the Equipment, the survey control measurements and subsequent calculations require a standstill of excavation. Generally this takes at least 6 hours.
- 3. The commissioning of each phase requires the presence of an engineer of the lessor on the site of works for usually two working days.
- 4. For the installation of the system the lessee has to provide qualified personnel for installation work (mechanical and electronic works) and assistance for survey.

# §3 TRAINING AND INSTRUCTION OF PERSONNEL ON SITE

The future operating personnel will be trained during commissioning of each of the operating phases. The lessee has to care for the appropriate willingness of his personnel for learning, handling and operating the system.

#### §4 AGENT OF THE LESSOR

The lessor may engage an agent who will help him to fulfil the commitments of the Rental Contract

### §5 MAINTENANCE AND CARE OF THE EQUIPMENT

The proper and professional maintenance and care of the Equipment the lessee is responsible for particularly comprises

- 1. Care for inspection during operation according to the regulations for the prevention of industrial accidents (UVV) for the equipment
- 2. Protection of the electronic components against water, bentonite, excavated material, hydraulic oils and other liquids.
- 3. Care for all the optical components being maintained in a clean operating condition.
- 4. Protection of the system against the excavated material.
- **§6.** Staff members or assistants of the lessor are not entitled to perform services, in particular survey measurements, which are not covered by the services stipulated in the Sales Contract, even as an act of courtesy, without written agreement between the parties. The lessor shall not be liable for any reason whatsoever for any damages caused by such works.

### §7 EXCEPTIONS FOR SEGMENTAL TUNNELLING

Sections 2 and 3 do not apply for Segmental Tunnelling.