

Translation from Bulgarian

Repair and Reconstruction Company KOEHNE S.A.

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Ref. No 220/ 23 March 2011

REFERENCE

Repair and Reconstruction Company KOEHNE S.A., city of Sofia, issues the present reference to **AVIS ENGINEERING EOOD**, city of Plovdiv, in confirmation of the fact that the company was a **subcontractor** for site: “General repair of Tunnel No.3 on third main railway truck – study, design and construction /engineering/ – Part: Overhead Lines” – with **Employer State Company Railway Infrastructure**.

Period of execution:

- September 2009 – November 2009;
- July 2010 – September 2010

Value of Construction and Installation works (CIW), VAT excl.:

- On contract dated 01 Sept. 2009 – 1 010 121.05 BGN
- Additional CIW – 223 271.07 BGN.

The following types of works were executed in the above-mentioned parts:

- Dismantling of existing overhead lines and tunnel fastenings;
- Installation of new corrosion-resistant tunnel fastening to hold the overhead lines and rigid anchoring with stainless steel anchors;
- Installation of special tunnel insulators, contact wires, catenaries, rigid and compensation anchors for chain overhead lines.
- Installation of new corrosion-resistant main group grounding system along the whole tunnel, connected to the rail truck in compliance with Instructions for grounding of facilities in the electrified sections, of SC Railway Infrastructure, March 2009.
- Testing and commissioning for regular use of the reconstructed tunnel overhead lines.

For the first time a new technology was used for determining the design location of overhead line support points – by means of geodetic mapping for non-existent railway truck. The installation of the new overhead lines was executed from the

Uli



ground, without any railway built. Only the final zigzag and height regulation of the overhead lines was executed after the construction of the railways.

This new technology and methodology for construction of overhead lines in tunnel enables a simultaneous construction of overhead lines and railway truck, which reduces the completion time for the whole project.

AVIS ENGINEERING EOOD has highly-qualified staff and specialized machines which enables the company to perform quality and timely installation works in compliance with technical, technological and statutory requirements.

The present **Reference** is issued to **AVIS ENGINEERING EOOD** to serve for participation in tenders, competitions and procurement procedures for assigning and execution of sites.

Eng.Georgi Georgiev /signed/
Executive Director for RRC KOEHNE S.A.
SEAL

I, the undersigned Iliana Hristeva Levi, in my capacity of official translator, hereby certify that the above instrument, consisting of 2 pages is a true and complete translation into the English language of the attached official document, originally composed in the Bulgarian language. In testimony thereof I have hereunto set my hand and affixed the official seal of the company.

Translator:

Iliana Hristeva Levi:

