

SIEMENS Logo

Ref. No. 241 15.04.2014

REFERENCE

To the activity of EL KONTROL EOOD

SIEMENS EOOD issues the present Reference to verify that within the period 2012 – 2013 EL KONTROL EOOD company has implemented Contract No. P.00023/ 01.03.2012 for **Delivery of materials and equipment, installation and commissioning the following facilities: Substation No. 9 at Troyanovo-3 Mine; Substation Gipsovo and Substation Gledachevo in Troyanovo-Sever Mine; Substation No. 10; Substation Gledachevo; 9 Excavators type RS2000; 9 mobile substations; manufacture of 20 kV complete distribution switchgears for outdoor installation – 35 units.** Contract is related to the Project for Rehabilitation of main transformer stations and construction of new mobile substations with the relevant distribution devices and connecting equipment for increase of power supply from 6 kV to 20 kV in Troyanovo-Sever Mine, and Troyanovo-3 Mine located in Maritsa East Mines EAD.

Contract amounts at 1 148 015 euro, and its scope includes the following activities combined by sub-projects:

1. Substation 110/20/6.3 kV No. 9 in Troyanovo-3 Mine
 - Dismantle of 110/6.3 kV power transformers – 2 units
 - Installation of 110/20/6.3 kV power transformers – 2 units
 - Primary and secondary commutation of 110 kV equipment
 - Installation of 20 kV condenser-type batteries
 - Secondary wiring and installation of 20 kV Switchgears – 14 units
 - Secondary wiring and installation of 6.3 kV Switchgear – 2 units
 - Erection of MV busbar system
 - Pulling and connection of power and control cables
 - Construction of grounding installation
 - Remaking of relay panels, control panels, and MV panels
 - Control tests of the installed equipment
 - Manufacturing and installation of SCADA panel
 - Control tests of SCADA equipment
2. Substation 110/20/6.3 kV No. 10 in Troyanovo-Sever Mine
 - Installation of 110/20/6.3 kV power transformer – 2 unit
 - Installation of 20/0.4 kV power transformers – 2 units
 - Primary and secondary commutation of 110 kV equipment
 - Secondary wiring and installation of 20 kV Switchgears – 18 units
 - Erection of MV busbar system
 - Pulling and connection of power and control cables
 - Construction of grounding installation

- Remaking of relay panels, control panels, and MV panels
 - Control tests of the installed equipment
3. Substation 110/20/6.3 kV Gipsovo in Troyanovo-Sever Mine
- Dismantle of 110/6.3 kV power transformers – 2 units
 - Installation of 110/20/6.3 kV power transformers – 2 units
 - Primary and secondary commutation of 110 kV equipment
 - Installation of 20 kV condenser-type batteries – 2 units
 - Secondary wiring and installation of 20 kV Switchgears – 18 units
 - Erection of MV busbar system
 - Pulling and connection of power and control cables
 - Construction of grounding installation
 - Remaking of relay panels, control panels, and MV panels
 - Control tests of the installed equipment
 - Manufacturing and installation of SCADA panel
 - Control tests of SCADA equipment
4. Substation 110/20/6.3 kV Gledachevo in Troyanovo-Sever Mine
- Dismantle of 110/6.3 kV power transformers – 2 units
 - Installation of 110/20/6.3 kV power transformer – 1 unit
 - Primary and secondary commutation of 110 kV equipment
 - Installation of artificial star centre transformer – 1 unit
 - Installation of star center grounding resistor on 6 kV side- 1 unit
 - Retrofit of 6 kV cubicles – 9 units
 - Retrofit of 20 kV cubicles – 9 units
 - Erection of MV busbar system
 - Pulling and connection of power and control cables
 - Construction of grounding installation
 - Installation of lighting system
 - Remaking of relay panels, control panels, and MV panels
 - Control tests of the installed equipment
 - Manufacturing and installation of SCADA panel
 - Control tests of SCADA equipment
5. Excavators type RS2000, 9 units
- Installation of 20/6 kV power transformer
 - Substitution of current collector from 6.3 kV to 20 kV
 - Remaking the transformation ratio of the cable drum aligner
 - Secondary wiring and installation of 20 kV Switchgears – 18 units
 - Installation of 20 kV condenser-type batteries – 18 units
 - Delivery and installation of control panels – 9 units
 - Pulling and connection of power and control cables
 - Construction of grounding installation

- Installation of lighting system
 - Control tests of the installed equipment
6. 20/6.3 kV Mobile Substations, 9 units
- Delivery of el. houses and installation thereof onto a prefabricated platform
 - Installation of 20/6 kV power transformers
 - Secondary wiring and installation of 20 kV Switchgears – 18 units
 - Secondary wiring and installation of 6.3 kV Switchgears – 56 units
 - Installation of resistance and MV transformer
 - Installation of 20 kV condenser-type batteries – 9 units
 - Installation of 20 kV accumulator batteries – 9 units
 - Delivery and installation of control switchboard – 9 units
 - Delivery and installation of MV panels – 9 units
 - Pulling and connection of power and control cables
 - Construction of grounding installation
 - Installation of lighting system and fire protection system
 - Control tests of the installed equipment
 - Air-conditioning of the premises
7. Installation of 20 kV complete distribution switchgear for outdoor installation – 35 units
- Manufacture of carriage “sledge” type platform with mounted covered container for 20 kV mobile complete distribution switchgear (outdoor installation);
 - Secondary wiring and installation of 20 kV Switchgear – 35 units
 - Control tests of the installed equipment

Assigned works were implemented professionally, in conformity with the legal requirements, and the requirements of the Assignor. Agreed time-terms for implementation of works were strictly observed.

We express our content with the workmanship of EL KONTROL EOOD, and have no objections over implementation of the contract. We are willing to continue our cooperation with EL KONTROL EOOD for realization of forthcoming projects.

The present Reference is issued to be submitted in tenders and procurement procedures.

Date: 15.04.2014

Manager:

Signed: *(B. Manolova)*

(Round seal of SIEMENS EOOD)