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The most important jobs planned to be done this year in TPP Nikola Tesla in Obrenovac are the rehabilitation and the overhaul of Unit 3 within branch TPPNT A. Even though it was originally planned that the works on rehabilitation of “trojka” start on 1st May, due to devastating floods, the deadline for their beginning was moved to 1st July, when disassembly - assembly works on the turbine plant officially mean the beginning of rehabilitation of the Unit A 3. The comprehensive and complex procedures in this plant will be carried out in 180 days, and the works will be performed by more than 30 domestic and foreign companies.

Upon the completion of all the planned works until 31st December this year, when it is expected that the testings of turbine performance in various working regimes are successfully finished, from 1st January, 2015 the first kilowatt-hours should be expected from Unit A 3. And that is not all. Upon the complete realization of this project, “trojka” should enter the network 23 MW stronger, from current 305 to 328.4 MW, more reliable, with longer lifecycle, higher energy efficiency and alleviated negative impact on the environment (reduction of particulate matter emission and reduction of nitrogen oxides emissions). The total value of the project is 80 million EUR, and the funds are mutually provided by PE EPS and TPPNT company. These goals, as well as the most important phases of the project, divided into nine LOTS, the organization scheme of the team for its management and project time schedule were represented at the first meeting between management and contractors and equipment deliverers, held on 25th June, right before the beginning of this very complex work.

Milan Petković, the Deputy Director of TPPNT Company, stressed the complexity of the project which required the full engagement of all of its participants, maximal coordination and fulfillment of all the deadlines. On that occasion, he expressed his faith that the project would be successfully realized since its participants were all professionals who had proved themselves previously at the similar jobs.

- This is the third unit at the location of TPPNT A which will, upon the rehabilitation, have the greater power, which is very important at the moment since there are no new capacities in Serbia - said Mihailo Nikolić, the Director of TPPNT A, and at the same time the director of the project.

The scope of the works and the most important works, divided into LOTS, within the rehabilitation of Unit A-3, were represented by Sveto Dobrijević, the manager of the project LOT 1-6 and 9. LOT 1 comprises the works on boiler pipeline system which are worth almost

10 million EUR where, as he said, the replacement of the following parts was planned: the part of EKO 1 and 2 (235 t), the part of preheater 3 (30 t), preheater 5 (114 t), MP1 with suspensions (150 t), MP2 (75 t), entering and exiting chambers of EKO 1 and 2, entering and exiting chamber of MP1 and exiting chamber of MP2.

- The works on the turbine are “located” in LOT-2, which is the most expensive LOT (it is worth more than 27 million EUR), which comprises the retrofit of all the three cylinders of the turbine with the power increase to 328.4 MW, overhaul and modernization of auxiliary turbine subsystems (the installation of the new central filter station, modernization of turbine drainage and sealing steam system), the installation of the new system for turbine regulation, replacement of the parts of pipe in the condenser. The new turbine is designed to also work in district heating regime for heating of Obrenovac, in the future upon shutting down of Units A 1 and A 2 - Sveto Dobrijević said.

The works on the generator and electrical energy facilities are planned within LOT-3, where the unique procedure will take place - the replacement of corset generator which has been operating since 10th September 1976, and as of 31st December 2013 it has spent 227,881 hours on network with the number of starts - 1186.

- After the fault of the generator that happened in 1979 when iron and winding of the stator and rotor were damaged, a complete rehabilitation was performed, but since 2003 faults on hydraulic system of the stator winding have become frequent and it was the main reason for starting the corset replacement- said Dobrijević.

In addition to this procedure a factory overhaul of generator’s rotor (replacement of binding caps and slip rings, replacement of under cap isolation, dynamic balancing) will be carried out, then the modernization of the exciting generator system (replacement of thyristor exciter) replacement of the unit’s power protection and 6 kV facilities 3BA and 3BB, replacement of generator circuit and adaptation of 0.4 kV facilities. The value of these deals is more than 13 million euros.

Standard overhaul operations on all facilities will be carried out (overhauls of mills, feeders, fans), LUVVO (installation of the new sealing system of sector boards and installation of new power units with supports) and other facilities of boiler, ash control system, pumps, valves, heaters in turbo halls, electrical power and measuring-regulatory equipment. For this purpose it is envisaged more than 4 million euros.

Construction work value in the LOT 5 is a little more than six million euros worth and here the replacement of the fireproof linings of canals, grids, various holes, thermal insulation and scaffolding works on the boiler, turbine, heaters, steam lines will be carried out, as well as construction-craft works, anticorrosive protection of the steel construction of the boiler support (Gerist) and boiler platforms.

Within the LOT-6 the modernization of the management system worth more than one million euros will be done, the migration of the application software “Siemens THP in T3000,

turbine regulator, "Siemens-SIMADYN", with the regulator "Alstom TGC " and the realization of interface with DCS. A complete replacement of the information data processing system OM 650, with retention and adaptation of the automated system ASD 620, and the replacement of OM650 that also implies a replacement of the software and complete network communication are envisaged.

LOT 7 envisages the replacement of the NOx burner in order to reduce the emission of the nitrogen oxides, about 10 million euros worth. The installation of the system for LHOx, making aerodynamic, thermodynamic and gas calculations of the boiler unit, development of the main mechanical, construction and electrical projects, production and delivery of components of the designed system for the reduction of nitrogen oxides, disassembly-assembly works will be performed.

Construction of electric filter facility with the emissions below 50 milligrams per cubic meter is planned in the LOT 8. Procurement, delivery and works on the reconstruction of electro filter, ash control system EF (main design development, procurement, delivery and installation of equipment), technical control of the main design and EF ash control system are worth 8.5 million euros. At the end of December LOT 9 will also be implemented when the commissioning and trial operation of the facility is envisaged by the scheduled.