Serbian power utility EPS Elektroprivreda Srbije owned coal mine Kolubara is realizing its biggest investment cycle funded by loan arrangements of EBRD & KfW banks.
Within the package A of the Project “Environmental Protection and Improvement in Coal Basin Kolubara”, which includes the designing, manufacturing and mounting of the ECS system for the future open pit mine Field “C”, the majority of equipment has been delivered and there are ongoing intensive works on the mounting and transport of a part of the equipment to the place of its future operation. The package A is worth 80 million euros, it is funded through a loan of the European Bank for Reconstruction and Development and it is a part of a wider project consisting of a spreader and a coal quality management system. The total value of the project is 182 million euros. In addition to the EBRD, the German bank KfW and the EPS also participate in its funding.
The Package A consists of four parts: A1 is an excavator with the capacity of 6.600 cubic meters per hour, A2 includes four belt conveyors with the length of five kilometers, A3 is a spreader and A4 is the power supply. As for the excavator, around 65 percent of the project has been finished. The contractor is “Thyssen Krupp“. A significant portion of the equipment is in the erection yard, which enables undisturbed mounting and a maximum engagement of capacities. The works are carried out in two shifts and on weekends, and even the expected worsening of weather conditions will not stop the works, transmits the EPS corporate magazine.
There are ongoing erection works on the completion of the substructure, which represents the bottleneck of the entire project. When the substructure has been finished, as well as the welding and machining of the ball race and the toothed rim, and when the slewing deck has been placed upon it, the deck having been completed, this will make the big progress in the excavator erection obvious at first sight. After the completion of works on the substructure, further erection will continue. At the end of October, conditions should be created for the beginning of electrical installation. The excavator completion deadline is October 2016.
The Package A2 consists of four conveyors, and the contractor is the company “Kopex“. The condition for the completion of this package is a complete preparation of the route at the place of future operation in the mine.
The elements of each separate conveyor have been completed to the degree which enables the dispatch of equipment to the operation route. The existing problems are primarily related to the necessary preconditions at the very place of operation. It is an aggravating circumstance that we are entering the period of extreme autumn and winter conditions. The equipment is being gradually moved to the mine, where it will be connected into the system and where a constant activity related to the passing of heavy machinery vehicles will be

necessary. Therefore, access roads need to be provided – says Dobrivoje Stefanovic, Project Manager for the Project A.

When it comes to the status of erection works, the drive stations of the first and the second connecting conveyor have been finished and they should be accepted by the technical committee. The transport of the second connecting conveyor drive station to the place of operation has been scheduled and, afterwards, the transport of the first connecting conveyor drive station, too. The other two stations have been 99 percent completed and they are expected to be dispatched to the field successively, in the last week of October and the first week of November. The return stations have been finished, the first and the second connecting station have already been mounted on the route, whereas, the preparation of route is awaited for the other two. The bench conveyor is in the yard and the preparation of route is awaited. All route elements have been finished and they are in the auxiliary erection yard.

On the dump conveyor OT1.4, on the very route where it will operate, 80 percent of segments and rails have been placed. On the second connecting conveyor, all segments have been placed, as well as the tilted segment. On the first connecting conveyor, 80 percent of segments have been placed, as well as the bridge conveyor. The hopper car has been mounted, and the rest will be mounted after being transferred to the route. The transport platform, used for carrying the stations, has been completely mounted. The additional condition for this package is the completion of the tripper car from the Package A3, which should not cause any difficulties.

The route vulcanization began on 15th October. The Central Control Room, which consolidates the operation of the whole system and which will be located in a new building, should be finished at the end of November, if all equipment is on the route so that the elements can be connected with the Central Control Room.

When it comes to the Package A3, i.e. the spreader, for which the contractor is “Sandvik”, around 70 percent of equipment has been mounted. The electrical and mechanical works should be finished by the end of November.

– As for the spreader, the substructure has been completed; the intermediate conveyor, the counter-balance boom and the mobile mast have been set up. In terms of large assemblies, what remains is to continue the erection of other segments of the discharge conveyor with anchor ropes and the mounting of the receiving conveyor. For December, we have planned the functional tests in the erection yard, transport to the operating position, fitting into the system, commissioning, the optimization period and afterwards the trial run, and within it, the time availability test – Stefanović explains.

The completion of the Package A4, i.e. the power supply, for which the contractor is “Montprojekt“, can be expected together with other packages, considering that it serves for supplying the system with electricity from a new facility. The works within this package are at the final stage. The laying of cables up to the place of operation, the turning on of voltage and the connection with the system parts are impending.
The previously set deadlines for the Packages 2, 3 and 4 are still valid, as it has been planned that, in the first phase, the system should operate with the existing excavator “SRs 1200“, which is currently engaged on the preparation of route for the bench conveyor.
According to the plan, 14th March is the deadline for the delivery of the complete system, except for the excavator. The connecting, the functional tests and certain checks should be finished by this date, except for the performance test, which is expected when the new excavator has been finished. All contractors will take part in the performance test, which, according to the plan, is expected at the end of 2016.
Functional tests should begin intensively already during January 2016, the commissioning and the test run within the new system in February, whereas, the availability test ensues at the end.
On the excavator substructure, the welding of large components that encircle the substructure ring frame has been finished and the welding of additional elements is underway. The mounting of impact walls and the impact pulley is also ongoing. On the loading unit, the welding of the substructure steel structure, the support platforms and the pylon steel structure has been finished and the machining of the opening for connection with other structure elements is underway. The machining of the slewing deck ball race has been finished and the drilling of the opening for fastening the ball race segments has begun, Dobrivoje Stefanović explains.