Serbia: 130M USD Project of desulphurization in "Kostolac B", with works to the contemporary block, China CMEC as key contractor the project report

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The contract value is 130 million dollars, and the deadline to complete the implementation is the end of 2014th - The plant for flue gas desulphurization (FGD) uses wet limestone – gypsum method

The project of flue gases desulfurization in Thermal power plant “Kostolac B” at the recently organized “The Energy Fair" in Belgrade, was presented by mr Nebojsa Misic, coordinator of the first phase implementation of the package projects in the "Kostolac B”. He pointed out that the system objectives, which has being built in collaboration with a Chinese company "China Machinery Engineering Corporation " (CMEK), were to provide reliable unit operation with 150.000 working hours, achieving a nominal unit capacity of 348.5 MW with increased unit efficiency, ensuring availability at the level of modern world's units, shortening the planned time for overhauls, increasing energy efficiency, as well as coordinating the work with the environment protection.

- The contractor on the plant construction is the Chinese company " China Machinery Engineering Corporation " (CMEK) from Beijing , the designer is " Northeast Electric Power Design Institute " from Changchun , and subcontractor is " Beijing Boqi Electric Power Sci-Tech Co, Ltd " - explained mr Misic. - The value of the contract is 130 million dollars, and the deadline to complete the implementation is the end of 2014th. The primary obligation of CMEK Company is to deliver plant, which would be fully functional and reliable in operation, where it would be also completed all project criteria. The goods and services supply will be done in accordance with proven engineering principles, while taking into account the latest technology and performance requirements set by the contract.

Misic stressed that plant for flue gas desulphurization (FGD) uses wet limestone – gypsum method and also uses a buffer for a boiler. The capability of flue gas processing in the FGD system is the gas flow when one boiler is at 100 percent load. System for the lime sludge preparation, gypsum dewatering system and other systems are auxiliary parts in FGD plant.

- Projected efficiency of the plant for the flue gases desulphurization is at least 97.5 percent at nominal load during the projected coal use. The emission of SO2 is not over 200 mg/Nm3 in the projected conditions - said mr Misic. There is a bypass channel for flue gas within it with a load of 100 percent for the safe function of thermal power plant in each operation mode of the plant for flue gas treatment. The availability of plant for flue gas treatment is at least 95 percent, and the service life is 15 years.

According to our source, the project of flue gas desulfurization (FGD) is based on the limestone and gypsum process. FGD system consists of the following subsystems: absorber

system, system for flue gas, system for the lime sludge preparation, system of gypsum collection and transport to the gypsum landfill, connection, drainage and discharge system. The subject of the projected device for FGD includes the following: the absorbing process, electro energetics, hydraulic transport, fire protection, heating, ventilation and air conditioning (HVAC), communications, construction and architectural solutions. The design phase includes drafting of the preliminary project, main project and project of accomplished status.

- Processing system include: design and construction of the absorber system, the flue gas flow system, limestone preparation system (including storage system, milling and limestone transport), the gypsum drainage system, systems for industrial water and cooling water, discharge and drainage system and system for compressed air instruments - explained Misic. - Among other systems it is necessary to mention one more system for the lime sludge preparation, as well as system for gypsum removal, drying and transport. Gypsum is retrieved from the storage by wheel loaders and transported to the area below the soil surface, in underground funnel. Belt feeder is designed below underground hopper. Gypsum will be transported by belt feeder to one-way belt conveyor, which will transport gypsum to the waste disposal site in open pit mine - said mr Misic.

Modern technology

Plant for the flue gases refinement will be built in the "Kostolac B" under the latest technology and will meet all the requirements, which are current at this moment, related with the environment protection. Solving the flue gases refinement concerning sulfur oxides , as well as reducing nitrogen oxides and dust emissions along with other measures for land and water protection, the company "TE -KO Kostolac " will fill under deadline all environmental requirements that are placed in front of a modern power plants .

Source; Serbia Energy/EPS