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Modern system implemented in the Delayed Coking Unit

Rompetrol Rafinare, a KMG International Group (Rompetrol) member company, has recently finalized modernizing the Delayed Coking Unit (Cx) of the Petromidia refinery, by implementing a new drilling/cutting system of petroleum coke, but also the automation of the production flow. The total value of the investment was about 13 million dollars.

"Through these works, we manage to bring the Delayed Coking Unit to a new technological stage, an important progress in terms of efficiency, reliability, and operational safety. Such projects show that the turnaround does not only mean maintenance and recertifications, but also the fact that Rompetrol Rafinare has foreseen an important development component, through the investments made", said Florian Pop, General Manager of Rompetrol Rafinare.

The project, implemented during the turnaround, involved replacing the system with a state-of-the-art one, fully automated, supplied by a German company with experience and expertise in such equipment.

The new system represents a technological advantage, making it possible to reduce the cutting cycle by approximately 30 minutes, reducing electricity consumption, and all maneuvers can be performed semi-automatically and automatically, remotely. In addition, the investment contributes to reducing the impact on the environment, but also to increasing the degree of protection and safety of employees, with benefits including in the operation of the unit.

All the equipment related to the new system (the equipment of the maneuvering system and the supporting and guiding metal structures) are located at heights between 45 and 88 meters. Given the considerable heights, the implementation of the project represented a challenge from a mechanical and execution point of view, with strict safety regulations being followed at every stage.

The works were coordinated by Rominserv specialists, the general contractor of the KMG International Group (Rompetrol) and were executed by seven companies with expertise in the field, who assigned 140 people to the project.

The Delayed Coking Unit contributes to the superior valorization of crude oil and obtaining semi-finished products with added value, part of which are transferred to and processed in other units in the Petromidia Navodari and Vega Ploiesti refineries.



Petroleum coke is a solid, carbon-rich, low-sulfur end product obtained in the Delayed Coking Plant. It is used for heating by the general population, commercial companies and public institutions. Having a high calorific value - approximately 8,200 kcal/kg, more than twice as high as average firewood, it is recommended to be used in special installations, in combination with other firewood.

In operation for nearly 40 years, the unit underwent in 2013 an extensive modernization project costing more than 50 million dollars, which resulted in a 90% reduction of technological consumption, an annual decrease of losses of approximately 3 million dollars, and a decrease in energy consumption.

The most recent modernization works were performed in 2020, when a new light diesel recovery system was installed at the fractionation column.

As part of this year's general turnaround, Rompetrol Rafinare also implemented other important projects, such as changing the reactors in the Middle Distillate Hydrotreating Unit (HDV) or replacing the main equipment in the Hydrogen Plant. The two, cumulatively, involved an investment effort of more than 25 million dollars.

This year, the Petromidia refinery marks 45 years of operation, during which it processed about 150 million tons of raw materials, the refinery in Navodari being a pillar of stability for the national energy sector.

The significant shareholders of Rompetrol Rafinare SA are KMG International (54.63% - directly and indirectly) and the Romanian State, through the Ministry of Energy (44.7%).

Corporate Communication and Public Relations

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