Sponge Petroleum Coke

Today the Aluminum production in Iran is around 400 thousand tons per year which requires around 200 thousand tons of sponge petroleum coke. According to “Iran 1404 Vision” with 1/5 million tons of Aluminum production, we will need nearly 515 thousand tons of calcined petroleum coke. Raw steel production in the country is around 15 million tons yearly which needs around 45 thousand tons of needle petroleum coke and the 1404 forecasts shows that 55 million tons of steel will be produced annually which will need 135 thousand tons of needle coke.

Regarding the importance of increasing the production of Aluminum and steel in development programs of Iran, regardless of global market, it's obvious that the development of a part of material supply chain in the country's primary industries heavily dependent on petroleum coke and Aluminum and steel production industries will be vulnerable at high capacities in the absence of this material supplement within the country and survival and development in these sectors will be associated with significant risks. On the other hand with the production of this substance, we will prevent nearly 100 million dollars going out of the country each year.

With regard to these issues, dedication and determination for petroleum coke production was formed in IMIDRO and in 2005 the board approved a petroleum coke production plant establishment in Iran. Later that year, it was sent to MPO (Management and Planning Organization) in the form of development projects of the fourth development plan of the country.

After a long pause at the beginning of the new wisdom and hope government, Mehdi Karbasian, the chairman of the board of management of IMIDRO communicated a resolution based on updating the studies for calling investment notifications and in the same year investment committee resolution with an emphasis on sustainable supply of raw materials and in parallel the ground allocation and purchasing and negotiations with technologist was announced.

In this regard all probable refinery and non-refinery feedstocks for coking unit were studied and the most suitable feed was determined. Then based on this feed (vacuum bottom of unit 200 of Abadan refinery mixed with CSO from Arak refinery) a bench unit with a capacity of 20 Kg of feed per day was established in 2014 and the coke was produced. At the same time the
updating of technical and economic studies were started. Then with the admirable collaboration of the advisor, Research Institute of Petroleum Industry (RIPI), the negotiations and tracking of license allocation of feed from oil ministry successfully conducted in May 2014.

Meanwhile negotiations for purchasing the land for construction of industrial unit in Arvand free zone has been done and the contract was signed.

In collaboration with the ministry of industry, mine and trade and oil ministry in petroleum coke pilot plant launching, the first step of IMIDRO and RIPI for provision of required coke for steel and aluminum industries fructify.

Petroleum coke pilot plant construction project as one of the development projects of IMIDRO with the aim to achieve petroleum coke production technology to supply an important part of steel and aluminum industries requirement chain was put into operation on September 22, 2015.

The advantage of this plant is the production of petroleum coke for the first time in the country which has been done with indigenous technology. Also with overcoming the technical problems rising in handling feeds with high sulfur and metal contents and their impact on the product qualities, implementation of industrial plant will be technically easier.

This project which is running with favorable collaboration of RIPI so far, consists of 8 subprojects. The first 3 have been finished and the others will be completed by May 2016.

The industrial part of petroleum coke production plan is in the negotiation stage in order to attract the financers, achieving to the basic engineering and finally implementation of the factory. This part will be started in 2016 and become operational in 2019.

Annual design capacity of this plant is more than 200 thousand tons petroleum coke and approximately one million tons of liquid products. The raw materials will be provided from VB of Abadan and CSO of Arak refineries which will be converted to petroleum coke and valuable liquid products such as LPG, light and heavy naphtha and gasoil, etc.

Once again we invite all investors and technology owners to be with us in this profitable project. Iran and regional market of these valuable products is an evidence of profitability of this project.