

EPC – ethylene, helium and beyond

In the early 2010s, a client – an independent oil company that had been dynamically developing for over twenty years – conducted laboratory research and discovered ethane in its extracted oil in volumes sufficient for its industrial use in the petrochemical industry. The idea of commercial development of associated gas for the construction of an ethylene and polyethylene production plant was born. By the beginning of 2018, it was decided to organize a tender to select a leading internationally recognized contractor to enter into a contract with the winning participant for engineering, manufacture and supply of production equipment and commissioning work.

Project and Participants

The goal of the project was to build an ethylene production unit with a capacity of over 500,000 tons of ethylene and polyethylene per year. Leading European, US, Chinese and Japanese engineering companies with licensed technology for ethane pyrolysis and production of the finished product on an industrial scale were allowed to participate in the tender.

Participation in the Project and Expertise

Our firm's participation in the project began in December 2017, during negotiations in Houston, Texas, with the aim of concluding the necessary license agreements for the production of ethylene and polyethylene. The main stage of legal work began in March 2018 with the discussion and consulting of the client in the process of agreeing on conditions of basic design and project financing from each of the foreign tender participants. The summer of 2018 was devoted to preparing the main conditions of an EPC contract, with the involvement of specialized Russian research institutes responsible for preparing and approving working and project documentation. In the early autumn of 2018, our firm helped prepare the documentation that formalized the choice of the tender winner and began designing and coordinating the project documentation with the tender winner. For your understanding, we are talking about hundreds, if not thousands, of pages of documents that detail all aspects of engineering and design work, ordering and delivering equipment manufactured for the designated plant, conducting commissioning work and launching production.

Helium+

An inexperienced reader may ask – what does helium have to do with the project? Plant construction projects are complex and multifaceted. To successfully operate a polyethylene production plant, at least five more plants are required for fractionating ethane from oil, subsequent ethane cracking, and the polymerization process of the corresponding gas fraction to obtain polyethylene. In addition, helium can be present in natural gas extracted alongside oil. It is obtained from associated natural gas by fractional distillation. Each of the described processes requires the construction of a separate plant and obtaining a license. Our firm helped the client throughout 2018 to design and agree on a wide range of documents, including the production of helium and the distribution of liquefied hydrocarbon gas.

Project Completion

The project documentation was successfully approved and signed at the end of 2018 and the beginning of 2019. For example, the signing of documentation for ethylene took 48 hours of continuous work without rest or sleep. This was the first time in the company's history when the client was surprised to see a bill that indicated the duration of work as 24 hours in a day. Currently, the client company is successfully

implementing its project, while our lawyers recall more than nine months of negotiations, sleepless nights, flights to see their families on weekends, and returning to the client's office early Monday morning to continue negotiations and consulting.

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