State of the art technology for cryogenic application in chemical and petrochemical industries.

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Within a gas processing plant valuable components necessary for gas industry and other industries such as ethane, methane, propane, etc. will be stripped from natural gas. This process requires to handle cryogenic liquids.

The technical challenge was to have a pump which will be able to pump a cryogenic liquid, which was supposed to be under liquid phase considering the thermodynamically behavior of liquid.
Thermodynamic calculations has been made in order to find out if the liquid changes to vapour phase through the partial flow. An adapted construction design has been considered.

Mainly, the low NPSHR value had an important impact on the design of the pump. Technical office had used special calculations in order to find out the best hydraulic and pump design.

At the end multistage canned motor pumps in vertical erection submerged with suction pot has been delivered. The weight of one unit is approximately 16 tons. This pump design allows to pump cryogenic liquids under better conditions due to high vapour pressure as well as very low viscosity.