Analysis of design variables and performance parameters of hydrogen liquefaction process using machine learning

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Hydrogen is the most abundant element in the universe and at the same time has a very high specific energy, proving its value as a new fuel for recent years. However, energy efficiency improvement is necessary in transportation and storage, and various methods are being developed to solve this. Hydrogen liquefaction was judged to be the most appropriate in terms of energy consumption from storage to use, and research for maximizing the energy efficiency of the hydrogen liquefaction process is actively underway. This is closely related to the optimization of the process, and the parameters in the process are represented by the relationship between a number of independent and dependent variables.