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Review Article

A Review of Kinetics of Hydrate Formation and the Mechanism of Effect of the Inhibitors on it

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ABSTRACT

The absence of high degrees below zero in most part of Iran, especially in the Persian Gulf area, provides suitable conditions for the replacement of thermodynamic inhibitors with kinetic inhibitors. Although it is possible to use kinds of LDHIs (Low Dosage Hydrate Inhibitor), especially kinetic inhibitors in most parts of Iran, it is always necessary that the limitations of these materials are checked before using. Hydrate is an aqueous network with a set of empty spaces in a small distance. If some of this space was filled by gas molecules, the hydrate could be considered as a stable solid. In other words, gas hydrates are complex crystalline molecules that are formed from the mixture of water and suitable gas molecules.

Keywords: Hydrate, Thermodynamic Inhibitors, Low Dosage Hydrate Inhibitor, Environmental Benefits.