NovaUCD

Technology Licensing Opportunity

Blocking Gas Hydrate Crystallisation in Hydrocarbon Pipelines with Peptides

- Represents a cost effective and efficient approach to pipeline flow assurance

Opportunity:

Gas hydrates are non-stoichiometric crystalline structures in which a water host lattice encases small gas molecules within cavities. The formation of hydrate crystals in oil and gas pipelines is a major process engineering problem as they negatively effects pipeline flow assurance and cause blockages.

Thermodynamic inhibitors (THIs) and kinetic inhibitors (KHIs) are currently used to control the formation of these blockages. However the removal of these inhibitors downstream is costly, as some inhibitors are toxic.

Researchers at University College Dublin and Queen's University Belfast have discovered a method to block the formation of gas hydrates using peptide fragments isolated from a methylotrophic bacteria.

Applications:

The inhibition of the formation of gas hydrates in gas and oil pipeline networks. Peptides represent a cost effective and efficient approach for pipeline flow assurance.

Key Features/Advantages:

- Peptides represent a cheaper and more efficient approach for pipeline flow assurance.

FUNDERS: SFI Science Foundation Ireland

Value Proposition:
Peptides block the formation of gas hydrates to ensure oil and gas pipeline flow assurance.

Market:
Oil and Gas supply companies.

Lead Inventor:
Professor Niall English
UCD School of Chemical and Bioprocess Engineering.

IP Status/Publication:
PCT Application.

Contact:
Dr Stephen Donoghue
Case Manager
Knowledge Transfer
t: + 353 1 716 3720
e: stephen.donoghue@ucd.ie