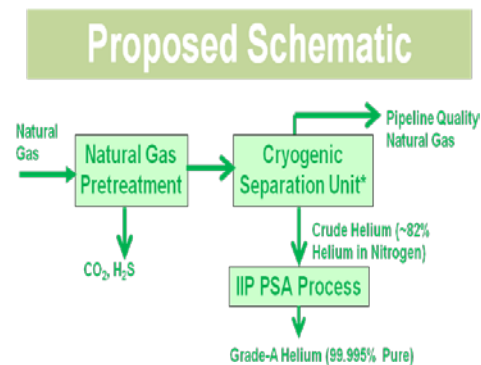


Indigenous Technology for Recovery of Helium from Natural Gas by Hybrid Cryogenic-Adsorption Process

Objectives

To develop indigenous technology to recover Grade 'A' (99.99 mol%) Helium from natural gas

IIP has developed a hybrid process involving cryogenic and PSA steps targeting helium bearing stream found in Southern region of the country. The process consists of three sections namely Pre treatment of feed, Cryogenic recovery unit and PSA section



* Cryogenic Separation Unit Simulated by Aspen Plus

General Impact / Strategic Impact,

The expertise and knowledge base developed on demonstration of indigenous technology for helium recovery in the country will give a quantum boost to our capabilities to undertake development and design of indigenous PSA technology to enter the global market.

Development of indigenous technology will lead towards self reliance for such a strategically important commodity.

As such with the upcoming Helium production facilities like Eastern Siberia, Darwin Australia, Saskatchewan, Canada, there lies ahead huge opportunities wherein IIP's developed helium technology along with support from companies like ONGC could be offered. This expertise can also be employed for helium recovery at ONGCL's gas assets worldwide.

Output/ Outcome

Developed a *Cryogenic –PSA Hybrid Process for the recovery of Grade 'A' helium. Preliminary feasibility study*

Design of a Field Demonstration Unit (FDU) has been prepared and report has been submitted to ONGC

ONGC Energy Centre and Heavy Water Board may consider setting up of a Demonstration Unit based on this process