PROCESS FOR SEPARATING AND RECOVERING ETHANE AND HEAVIER HYDROCARBONS FROM LNG

Abstract:

A process for extracting heavier components, e.g., NGL from liquid/fluid streams such as Rich LNG (RLNG) stream(s) with the streamlined economy. The process involves heating the RLNG stream in heat exchanger(s) (LNGX) against column overhead vapour stream; not requiring separation of Feed streams into feed and reflux by splitting either pre- or post- of heat LNGX. The source liquid RLNG is processed producing liquid NGL and at same time returning purified Lean LNG (LLNG) product in its Liquid LNG form. The process operates essentially without the need for compression equipment. The process further provides without compressors vaporized natural gas at pipeline pressure and specifications. This is a system that can flexibly change product compositions and specifications of product NGL/Lean LNG/Pipeline Gas and operate in both Pipeline Specification deep 99% Ethane (C2) Extraction and Ethane (C2) Rejection NGL recovery modes with economy of equipment and energy requirements.

[Figure 1A]