

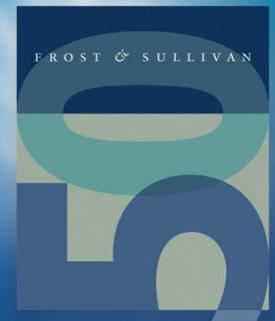
Oil & Gas Technology (TechVision)

Recent Advances in Cryogenic Distillation

“Cryogenic Distillation Technologies Drive the Air Separation Market to Offer Highly Pure End Products ”

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Innovations in Cryogenic Distillation Technologies

GFED Series

Cosmodyne, Inc., USA—Separation plant producing purified liquid oxygen

Cryogenic air is screened by cryogenic distillation to produce liquid oxygen and liquid nitrogen. It is a small separation plant.

Technology Profile

The GFED Series is a cryogenic distillation plant which is installed by Cosmodyne Inc.

Who

Where

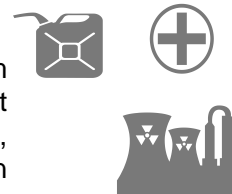
The distillation unit consists of pre-piped and prewired modules: the main air compressor has been developed in California.

What

The GFED Series is a distillation platform which has been developed to offer ultra pure oxygen and nitrogen by cryogenic distillation. The technology offers a molecular sieve type air clean-up system which purifies the air.

Potential Applications

The cryogenic distillation platform can be used in a host of different applications which include medical, industrial, oil field and military in extremely remote regions.



Funding

WesPac Midstream LLC has funded Cosmodyne LLC to develop the cryogenic distillation facility. The funding has been of an undisclosed amount which enables Cosmodyne to expand its facility.



Innovation Attributes

The GFED Series can efficiently tackle control of primary plant functions in an automatic mode without any hassles.

Service Offerings

The following are the service packages that are offered by Cosmodyne:

- On-site or in-factory operator training
- ...

Analyst Perspective

Cosmodyne Inc., USA offers a high potential solution for the end user in the cryogenic distillation platform. GFED has ample licensing opportunities in and across the globe. Some of the recent licensers include TÜV Rheinland in Germany

STRATEGIC INSIGHTS

Strategic Insights (continued)

Drivers

- ✓ High purity product recovery is the key benefit that is driving the cryogenic distillation market over other gas separation technologies
- ✓ ..

Restraints

- ✗ Better regulatory framework is needed for this technology for its promotion, especially in North America and Asia.
- ✗ ...

R&D Focus Areas

- Designing the separation unit and enhancing its functionality to increase the end product purity and its ability to function in critical operating conditions.
-

Key Funding



- Both Significant public and private funding have been observed in the domain of cryogenic gas separation
- ...

The 2020 Scenario

- In , cryogenic distillation will impact the air separation market significantly. Better distillation unit designs in addition to high technical know-how will accentuate more pure and energy efficient gas recovery operations.
- ...

KEY PATENTS