DRIVING INNOVATION IN SUSTAINABLE AVIATION FUEL WITH CECO

Empowering the SAF Industry

The aviation industry is undergoing a transformative shift toward sustainability, with Sustainable Aviation Fuel (SAF) emerging as a key solution to reduce carbon emissions. SAF production requires advanced technologies and reliable equipment to ensure efficiency, safety, and environmental compliance. CECO is proud to support this transition by delivering cutting-edge filtration, separation, and process equipment tailored for SAF production facilities.

CECO ENVIRONMENTAL

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ADVANCED SOLUTIONS FOR SAF PRODUCTION

SAF production often relies on Hydroprocessed Esters and Fatty Acids (HEFA) technology, which converts renewable oils and fats into sustainable fuels. This process involves multiple critical steps, including feedstock pretreatment, hydrogenation, and product separation. CECO's equipments are designed to optimize these processes, ensuring high-quality outputs and reliable plant operations. Brand provide expertise in Centrifugal and Vane separation systems to meet steam dryness requirements.

Key Feedstocks Processed in SAF Plants:

- Used Cooking Oil (UCO)
- Palm oil and derivatives (e.g., PFAD)
- Animal fats (tallow)

Core Process Steps:

- Feedstock Pretreatment: Removal of impurities like water, solids, and metals.
- Hydrogenation & Deoxygenation: Conversion of renewable oils into hydrocarbons under high pressure and temperature.
- Product Separation: Fractionation and polishing to meet stringent fuel specifications.

CECO'S EXPERTISE IN FILTRATION & SEPARATION

CECO provides essential equipments to protect critical processes, enhance catalyst performance, and maintain operational excellence in SAF production facilities. Our solutions are engineered to meet the unique challenges of SAF plants, ensuring reliability and efficiency at every stage.

Key Equipment and Functions:

Feed Oil Pretreatment:

- **Feed Filters:** Removes solids from feed oil to protect downstream equipment.
- **Magnetic Filters:** Eliminates metallic contaminants like iron, scale, and rust, safeguarding hydrotreating catalysts and reactors.

Amine Treating System:

- **Lean Amine Filters & Carbon Filters:** Maintains amine quality for efficient acid gas removal.
- **Sand Filters & Sump Filters:** Ensures system reliability and longevity.

Process Gas / Hydrogen System:

- **Coalescers:** Removes liquid mist from gas streams to protect compressors and reactors.
- **Gas Separators:** Ensures effective gas-liquid separation, enhancing hydrogen system reliability.

COMPREHENSIVE PRODUCT PORTFOLIO

We provide comprehensive product support tailored to the needs of the SAF industry:

- **Rotating Equipment:** API Centrifugal Pumps, Vertical Pumps, Compressors, and Blowers.
- **Heat Transfer Equipment:** Shell & Tube Heat Exchangers, Air-Cooled Heat Exchangers, and Electric Heaters.
- **Filtration & Solid Handling:** Leaf Filters, Cyclones, and Powder Handling Packages.
- **Environmental & Utility Packages:** Wastewater Treatment Systems, Cooling Towers, and Air Dryers.
- **Emission Control & Safety:** Thermal Oxidizers.

Why Choose CECO?

- **Comprehensive Solutions:** From feedstock pretreatment to process gas systems, CECO delivers end-to-end equipment for SAF production.
- **Catalyst Protection:** Our filtration systems safeguard catalysts, ensuring optimal performance and extended lifespan.
- **Proven Expertise:** CECO is a trusted partner in sustainable fuel projects, with a strong track record in biorefinery applications.
- **Commitment to Sustainability:** We empower the SAF industry with innovative solutions that align with global sustainability goals.

Partner with CECO for a Sustainable Future

As the SAF industry continues to grow, CECO remains committed to supporting its success with reliable, efficient, and sustainable solutions. Together, we can drive the transition to cleaner skies and a greener future.

Let's build a sustainable tomorrow, today.