

Title (en)
SYSTEMS AND METHODS FOR PROCESSING GASES

Title (de)
SYSTEM UND VERFAHREN ZUR VERARBEITUNG VON GASEN

Title (fr)
SYSTÈMES ET PROCÉDÉS POUR TRAITER DES GAZ

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Application
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- US 202063019851 P 20200504
- US 202063052524 P 20200716
- US 2021014563 W 20210122

Abstract (en)
[origin: WO2021150859A1] The invention includes a gas processing system for transforming a hydrocarbon-containing inflow gas into outflow gas products, where the system includes a gas delivery subsystem, a plasma reaction chamber, and a microwave subsystem, with the gas delivery subsystem in fluid communication with the plasma reaction chamber, so that the gas delivery subsystem directs the hydrocarbon-containing inflow gas into the plasma reaction chamber, and the microwave subsystem directs microwave energy into the plasma reaction chamber to energize the hydrocarbon-containing inflow gas, thereby forming a plasma in the plasma reaction chamber, which plasma effects the transformation of a hydrocarbon in the hydrocarbon-containing inflow gas into the outflow gas products, which comprise acetylene and hydrogen. The invention also includes methods for the use of this gas processing system.

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Citation (search report)

- [YA] US 2019046947 A1 20190214 - STROHM JAMES J [US], et al
- [YA] US 2019185325 A1 20190620 - TANNER DAVID [US], et al
- See references of WO 2021150859A1

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