

Title (en)

Integrated process for air separation and energy generation and plant for carrying out the process

Title (de)

Integriertes Verfahren zur Luftzerlegung und Energieerzeugung und Anlage zur Ausführung des Verfahrens

Title (fr)

Procédé intégré de séparation d'air et de génération d'énergie et installation pour la mise en oeuvre d'un tel procédé

Publication

EP 1223396 A1 20020717 (FR)

Application

EP 01403287 A 20011218

Priority

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Abstract (en)

The procedure for producing oxygen-rich and optional nitrogen-rich fluids uses a plant comprising at least one air separator with two distillation columns, and first and second air compressors, combustion chambers and expansion chambers, and a third air compressor. At least 20 per cent of the air processed by the first separator comes from the third compressor in nominal operating conditions, and at least 80 per cent during reduced operating conditions. The procedure for producing oxygen-rich and optional nitrogen-rich fluids uses a plant comprising at least one air separator with two distillation columns, and first and second air compressors (13, 15), combustion chambers (17, 23) and expansion chambers (19, 25), and a third air compressor (21). The first two air compressors deliver compressed air to the two combustion chambers and the first air separator, while compressed air from the third compressor also goes to the first separator. Combustion gas (27, 29) is fed to the first and second expansion turbines from the two combustion chambers, and nitrogen-rich gas, optionally pressurized, is fed from the second air separator to a point upstream of the first expansion turbine and/or the second expansion turbine. At least 20 per cent of the air processed by the first separator comes from the third compressor in nominal operating conditions, and at least 80 per cent during reduced operating conditions. An Independent claim is included for a plant in which the above process is performed.

Abstract (fr)

Dans un procédé intégré de séparation d'air, une installation comprend au moins un premier appareil de séparation d'air (1,101), un premier compresseur d'air (13), une première chambre de combustion (17), une première turbine de détente (19), un deuxième compresseur d'air (15), une deuxième chambre de combustion (23) et une deuxième turbine de détente (25) et un troisième compresseur d'air (21) dans lequel de l'air comprimé est envoyé du premier compresseur d'air à la première chambre de combustion et au premier appareil de séparation d'air, de l'air comprimé est envoyé du deuxième compresseur d'air à la deuxième chambre de combustion et au premier appareil de séparation d'air. <IMAGE>

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Citation (search report)

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