

Title (en)
oxygen gas manufacturing apparatus

Title (de)
Apparat zur Herstellung von Sauerstoffgas

Title (fr)
Dispositif de fabrication de gaz d'oxygène

Publication
EP 0745817 A1 19961204 (EN)

Application
EP 95303744 A 19950601

Priority
EP 95303744 A 19950601

Abstract (en)

The apparatus includes a fractionating tower (58) for liquefying and separating compressed air cooled by heat exchangers (56,57) to an ultralow temperature, a liquid oxygen takeout path (72) for guiding liquid oxygen from the above-mentioned fractionating tower to the above-mentioned heat exchangers to gasify so as to become oxygen gas, and a product oxygen gas takeout path (74) which extends from the upstream end of the above-mentioned liquid oxygen takeout path and increases the temperature of the above-mentioned oxygen gas so as to obtain a product oxygen gas. The liquid oxygen takeout path is provided with an oxygen gas pressurizing pump (73), and the product oxygen gas takeout path on the side upstream the above-mentioned heat exchangers is provided with an expansion turbine (75). In the present invention, the liquid oxygen taken out from the fractionating tower is pressurized in a liquid state, then introduced into the expansion turbine to generate cold, which cold is fed to the heat exchangers and used as a cold source for the entire equipment to reduce the cost of refrigeration. <IMAGE>

IPC 1-7
F25J 3/04

IPC 8 full level
F25J 3/04 (2006.01)

CPC (source: EP)

F25J 3/04024 (2013.01); **F25J 3/0409** (2013.01); **F25J 3/04139** (2013.01); **F25J 3/04193** (2013.01); **F25J 3/04254** (2013.01);
F25J 3/04321 (2013.01); **F25J 3/04381** (2013.01); **F25J 3/0443** (2013.01); **F25J 3/04478** (2013.01); **F25J 3/04781** (2013.01);
F25J 3/04818 (2013.01); **F25J 3/04866** (2013.01); **F25J 2210/50** (2013.01); **F25J 2235/50** (2013.01); **F25J 2240/20** (2013.01);
F25J 2280/10 (2013.01)

Citation (search report)

- [X] DE 3307181 A1 19840906 - LINDE AG [DE]
- [X] US 4560397 A 19851224 - CHEUNG HARRY [US]

Cited by

CN104833174A; EP0899528A1; CN104534812A; DE19748966B4; CN112984955A; FR2776057A1; US6141990A; DE19910871B4

Designated contracting state (EPC)
DE FR GB NL

DOCDB simple family (publication)

EP 0745817 A1 19961204; EP 0745817 B1 20010926; DE 69522927 D1 20011031; DE 69522927 T2 20020411

DOCDB simple family (application)

EP 95303744 A 19950601; DE 69522927 T 19950601