

Title (en)

Method for converting energy in an energy conversion cycle for the steam produced by a sodium-cooled fast neutron reactor, and corresponding steam turbine installation.

Title (de)

Verfahren zur Umwandlung von Energie in einem Energieumwandlungszyklus für durch einen natriumgekühlten schnellen Neutronenreaktor erzeugten Dampf, und entsprechende Dampfturbineanordnung

Title (fr)

Procédé de conversion d'énergie dans un cycle de conversion d'énergie pour la vapeur produite par un réacteur à neutrons rapides refroidi par sodium, et installation de turbines à vapeur correspondante.

Publication

EP 2711508 A1 20140326 (EN)

Application

EP 13184602 A 20130916

Priority

FR 1258804 A 20120919

Abstract (en)

The present invention relates to an energy conversion cycle for the steam produced by a sodium-cooled fast neutron reactor having a first stage, in which a first expansion of steam coming from a steam generator (2) associated with the reactor (1) is performed to bring the steam from a "fossil fuel cycle" initial state (21) to an intermediate state of temperature and pressure of said steam corresponding to a "nuclear cycle" initial state (22), a second stage in which a second expansion of the steam from the intermediate state (22) is performed until steam in a first wet state (23) situated below the steam saturation curve (S) is obtained, a third stage in which the steam is dried and super-heated, and a fourth stage in which a third expansion of the steam is performed from the super-heated state (24) thereof to a second wet state (25).

IPC 8 full level

F01K 7/22 (2006.01); **F22B 1/06** (2006.01)

CPC (source: EP)

F01K 7/223 (2013.01); **F22B 1/063** (2013.01)

Citation (search report)

- [A] EP 0163564 A1 19851204 - COMMISSARIAT ENERGIE ATOMIQUE [FR]
- [A] EP 0147304 A2 19850703 - COMMISSARIAT ENERGIE ATOMIQUE [FR]

Cited by

WO2024130919A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 2711508 A1 20140326; **EP 2711508 B1 20170705**; CN 103670552 A 20140326; CN 103670552 B 20160316; FR 2995628 A1 20140321; KR 101548142 B1 20150828; KR 20140037778 A 20140327; RU 2013142429 A 20150327; RU 2561839 C2 20150910

DOCDB simple family (application)

EP 13184602 A 20130916; CN 201310552440 A 20130918; FR 1258804 A 20120919; KR 20130111774 A 20130917; RU 2013142429 A 20130917