

Title (en)

A system for analyzing operation of power plant units and a method for analyzing operation of power plant units

Title (de)

System zur Analyse des Betriebs von Kraftwerkseinheiten und Verfahren zur Analyse des Betriebs von Kraftwerkseinheiten

Title (fr)

Système pour analyser le fonctionnement d'unités de centrale électrique et procédé pour analyser le fonctionnement d'unités de centrale électrique

Publication

EP 2644850 A1 20131002 (EN)

Application

EP 12461509 A 20120328

Priority

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Abstract (en)

A computer-implemented method for analyzing the operation of power plant blocks, in which, on the basis of collected operational data, the deterministic models (202) of operation of individual blocks are examined and characteristics (203) of operational parameters are created. The selected operational parameters are examined by calculating for them the deviation of heat rate in time on the basis of the deterministic model and the characteristic of the parameter, destructions of exergy in various process points of the block are calculated; for various points of the process and for various power plant blocks, the calculated deviations of heat rate and the destruction of exergy are presented in a graphical form.

IPC 8 full level

F01K 13/00 (2006.01); **G05B 17/00** (2006.01); **G05B 23/02** (2006.01)

CPC (source: EP)

F01K 13/00 (2013.01)

Citation (applicant)

"The International Association for the Properties of Water and Steam", 2007, LUCERNE, article "Revised Release on the IAPWS Industrial Formulation 1997 for the Thermodynamic Properties of Water and Steam"

Citation (search report)

- [IY] EP 0389132 A2 19900926 - HITACHI LTD [JP]
- [IY] US 2001034582 A1 20011025 - UMEZAWA SHUICHI [JP], et al
- [Y] US 2009043406 A1 20090212 - GAUDER MARKUS [DE], et al
- [Y] US 2010064688 A1 20100318 - SMITH DOUGLAS W P [CA]
- [A] JP 2007231808 A 20070913 - TOKYO ELECTRIC POWER CO
- [A] US 4214451 A 19800729 - COOMBES GRAHAM E [US], et al
- [A] DE 102009004255 A1 20090716 - GEN ELECTRIC [US]
- [A] WO 9826160 A1 19980618 - SIEMENS CORP RES INC [US]

Cited by

CN114060113A; CN113394814A; CN113095591A

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

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