

Title (en)

Power plant and method of operating a power plant

Title (de)

Kraftwerk und Verfahren zum Betrieb eines Kraftwerks

Title (fr)

Centrale électrique et son procédé de fonctionnement

Publication

**EP 2351914 A1 20110803 (EN)**

Application

**EP 10150416 A 20100111**

Priority

EP 10150416 A 20100111

Abstract (en)

A fossil fuel fired power plant (PP) can provide an improved dynamic response by means of condensate stop and optionally with indirect firing. The power plant (PP) having a water steam cycle comprises six condensate preheaters (21-26) arranged in series for the preheating by heat exchange with steam extracted from the steam turbines (7-10). Steam extraction lines (23'-26') have a quick-action valve (23"-26") able to stop the extraction steam flow, whereby the additional steam flowing through the turbines enables a large load increase up to 10% within a short time of 10 seconds. In case of a coal-fired power plant (PP), the power plant (PP) comprises a supply silo (45) for pulverized coal that enables a quick increase in supply rate of coal to the boiler (1) and of the firing rate. This allows the load increase to be maintained over a longer time period.

IPC 8 full level

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CPC (source: EP)

**F01K 7/40** (2013.01); **F01K 13/02** (2013.01); **F22D 1/003** (2013.01); **F22D 1/325** (2013.01)

Citation (applicant)

- DE 4344118 A1 19950629 - ABB PATENT GMBH [DE]
- EP 1368555 A1 20031210 - SIEMENS AG [DE]

Citation (search report)

- [XY] DE 102005034847 A1 20070208 - STEAG SAAR EN AG [DE]
- [XY] US 4003205 A 19770118 - MATSUMURA JUBE
- [Y] DE 102008004400 A1 20090723 - STEINMUELLER INSTANDSETZUNG KR [DE]
- [Y] DE 19524171 A1 19970109 - RAUSCHER GEORG [DE]
- [Y] DE 3616797 A1 19871119 - KOERTING AG [DE]

Cited by

WO2013007802A1; FR2977916A1; EP2868872A1; EP2660511A4; DE102012204288A1; JP2020002931A; CN102635413A; CN111206965A; EP2899374A1; CN113217130A; CN106765441A; CN110107489A; WO2019166839A1; WO2013005071A1; WO2016019927A1; EP2851616A1; US10288279B2

Designated contracting state (EPC)

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 SE SI SK SM TR

Designated extension state (EPC)

AL BA RS

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