Title (en)

DOUBLE WALL LANCE

Title (de)

ZWEI-RÖHRIGE LANZE

Title (fr)

LANCE A DOUBLE CORPS

Publication

EP 4283233 A1 20231129 (EN)

Application

EP 23184934 A 20120301

Priority

- JP 2011279954 A 20111221
- EP 18181898 A 20120301
- EP 12860851 A 20120301
- JP 2012055893 W 20120301

Abstract (en)

A lance 4 for injecting a fuel through a tuyere 3 is a double tube. Pulverized coal is injected through an inner tube 21 of the double wall lance 4. Oxygen is injected through an outer tube 22 of the double wall lance 4. Notches 23 are formed in a injecting front end of the inner tube 21 of the double wall lance 4. The concentration of oxygen in a gas composed of a carrier gas for the pulverized coal and a gas injected through the outer tube is 35% by volume or more. Even in an operation using pulverized coal having a volatile matter content of 25 mass% or less at a high pulverized coal ratio of 150 kg/t or more, the combustion temperature can be increased, and consequently CO₂ emissions can be reduced. The specific oxygen consumption can be suppressed by decreasing the oxygen concentration to less than 70% by volume. The notches 23 may be circumferentially evenly spaced in the inner tube 21 of the double wall lance 4 and further improve combustion efficiency.

IPC 8 full level

F27D 3/16 (2006.01); **C21B 5/00** (2006.01); **C21B 7/16** (2006.01)

CPC (source: EP)

C21B 5/003 (2013.01); **C21B 7/163** (2013.01); **F27D 3/16** (2013.01); F27D 2003/169 (2013.01)

Citation (applicant)

- JP 4074467 B2 20080409
- KR 20020047359 A 20020622 - POSCO [KR]
- JP H06100912 A 19940412 - KAWASAKI STEEL CO

Citation (search report)

- [XI] US 2010001443 A1 20100107 - KROEMMER YVAN [LU], et al
- [XI] KR 100431868 B1 20040520
- [XI] US 6319458 B1 20011120 - JUNG JIN KYUNG [KR], et al

Designated contracting state (EPC)

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DOCDB simple family (publication)

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