

Title (en)

RECOVERED-SAND COOLING SYSTEM AND RECOVERED-SAND COOLING METHOD

Title (de)

KÜHLSYSTEM FÜR ZURÜCKGEWONNENEN SAND UND KÜHLVERFAHREN FÜR ZURÜCKGEWONNENEN SAND

Title (fr)

SYSTÈME DE REFROIDISSEMENT DE SABLE RÉCUPÉRÉ ET PROCÉDÉ DE REFROIDISSEMENT DE SABLE RÉCUPÉRÉ

Publication

EP 3513887 A4 20200325 (EN)

Application

EP 17850794 A 20170907

Priority

- JP 2016179243 A 20160914
- JP 2017114143 A 20170609
- JP 2017141398 A 20170721
- JP 2017032307 W 20170907

Abstract (en)

[origin: EP3513887A1] [Problem] To provide a return sand cooling system and return sand cooling method capable of reliably cooling return sand.[Solution] Provided is a return sand cooling system 1 that cools return sand and adjusts the moisture content of cooled return sand, wherein the return sand cooling system 1 comprises: a sand moisture and temperature measuring instrument 2 that measures the moisture content and temperature of the return sand; a control device 3 that determines an appropriate water addition amount, which is an amount of water to be added to the return sand; a water-sprinkling cooling device 4, 5 that adds water of the appropriate water addition amount to the return sand and cools the return sand by the latent heat of vaporization of water to obtain the cooled return sand; an air introducing device 6 that introduces air into the water-sprinkling cooling device 4, 5; and an introduced air temperature and humidity measuring instrument 7 that measures the temperature and humidity of introduced air to be introduced into the water-sprinkling cooling device 4, 5; the control device 3 determining the appropriate water addition amount on the basis of the moisture content and temperature of the return sand, and the temperature and humidity of the introduced air.

IPC 8 full level

B22C 5/08 (2006.01); **B22C 5/18** (2006.01); **B22C 5/10** (2006.01); **B22C 5/16** (2006.01)

CPC (source: EP KR US)

B22C 5/08 (2013.01 - KR US); **B22C 5/085** (2013.01 - EP US); **B22C 5/18** (2013.01 - EP US); **B22C 5/10** (2013.01 - EP US); **B22C 5/16** (2013.01 - EP US)

Citation (search report)

- [XY] WO 2013118477 A1 20130815 - NARA MACHINERY CO LTD [JP]
- [Y] JP S5750236 A 19820324 - AMANO CORP, et al
- [A] JP S5686648 A 19810714 - SINTOKOGIO LTD
- [A] JP 2007289969 A 20071108 - SINTOKOGIO LTD
- See references of WO 2018051891A1

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

DOCDB simple family (publication)

EP 3513887 A1 20190724; **EP 3513887 A4 20200325**; BR 112019004825 A2 20190604; CN 109715314 A 20190503; CN 109715314 B 20201208; KR 20190044632 A 20190430; MX 2019002661 A 20190715; TW 201811460 A 20180401; US 2019193141 A1 20190627; WO 2018051891 A1 20180322

DOCDB simple family (application)

EP 17850794 A 20170907; BR 112019004825 A 20170907; CN 201780056706 A 20170907; JP 2017032307 W 20170907; KR 20197006889 A 20170907; MX 2019002661 A 20170907; TW 106131255 A 20170912; US 201716327052 A 20170907