

(51) International Patent Classification:

B02C 25/00 (2006.01) E02F 9/26 (2006.01)

(21) International Application Number:

PCT/EP2022/058416

(22) International Filing Date:

30 March 2022 (30.03.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

21166179.8 31 March 2021 (31.03.2021) EP

(71) Applicant: SANDVIK SRP AB [SE/SE]; Stationsplan 1, 23381 Svedala (SE).

(72) Inventors: LINDBERG, Mikael; Stationsplan 1, 233 81 Svedala (SE). SUNDSTRÖM, Petra; Stationsplan 1, 233 81 Svedala (SE). RUBIN, Marie; Stationsplan 1, 233 81 Svedala (SE). HOVÉN, Anders; Stationsplan 1, 233 81 Svedala (SE). DAHLBERG, Mats; Stationsplan 1, 233 81 Svedala (SE).

(74) Agent: SANDVIK; Sandvik Intellectual Property AB, 811 81 SANDVIKEN (SE).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

(54) Title: DETERMINING A STATE OF EQUIPMENT

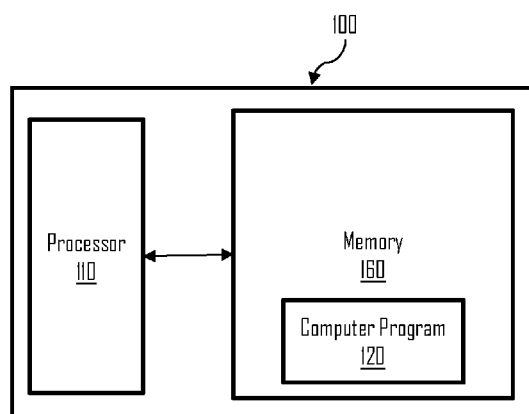


Figure 1

(57) Abstract: An apparatus, method and computer program product for: receiving a first type of information relating to operation of rock processing equipment from a first source of information, receiving a second type of information relating to the operation of the rock processing equipment from a second source of information, determining, based on the first type of information and the second type of information, a state of the rock processing equipment, and providing, in response to determining that the state of the rock processing equipment fulfills at least one criterion, an indication relating to the state of the rock processing equipment.

Published:

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*
- *in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE*

(88) Date of publication of the international search report:

10 November 2022 (10.11.2022)

INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2022/058416

A. CLASSIFICATION OF SUBJECT MATTER

INV. B02C25/00 E02F9/26

ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

B02C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/070137 A1 (SKF AB [SE]; BOERHOUT JOHANNES I [US] ET AL.) 12 September 2002 (2002-09-12) page 1, line 15 - page 5, line 14; figures 1-3 -----	1-3, 6-9, 11-15
X	JP 2020 011160 A (HITACHI GLOBAL LIFE SOLUTIONS INC; KANTO ECO RECYCLE CO LTD) 23 January 2020 (2020-01-23) paragraph [0011] - paragraph [0026]; figure 1 -----	1, 3-5, 10, 11
A	WO 2006/108178 A2 (RODRIGUEZ DAMIAN [US]; SUMMERS MICHAEL [US]) 12 October 2006 (2006-10-12) paragraph [0020] - paragraph [0032]; figures 1-5 -----	1-15



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

19 September 2022

Date of mailing of the international search report

27/09/2022

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2

NL - 2280 HV Rijswijk

Tel. (+31-70) 340-2040,

Fax: (+31-70) 340-3016

Authorized officer

Swiderski, Piotr

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2022/058416

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 02070137	A1	12-09-2002	US 2003178515 A1 WO 02070137 A1	25-09-2003 12-09-2002
JP 2020011160	A	23-01-2020	NONE	
WO 2006108178	A2	12-10-2006	US 2007241920 A1 WO 2006108178 A2	18-10-2007 12-10-2006