

Title (en)
CUTTING SOFT METALS WITH THE AID OF ULTRASOUND

Title (de)
SCHNEIDEN VON WEICHEN METALLEN MITTELS ULTRASCHALL

Title (fr)
COUPE DE MÉTAUX MOUS PAR ASSISTANCE ULTRASONORE

Publication
EP 3894152 A4 20220817 (FR)

Application
EP 19897183 A 20191211

Priority
• CA 3027620 A 20181213
• CA 2019051782 W 20191211

Abstract (en)
[origin: CA3120747A1] Method for cutting soft metals, comprising the use of a cutting tool capable of being set in motion by ultrasonic vibration. The method is employed for cutting components used in the manufacture of an electrochemical storage device, for example a lithium battery. These components include the anodes, the cathodes, the solid electrolytes, the current collectors and the separators. The method is also employed in a system for manufacturing and/or characterizing an electrochemical storage device.

IPC 8 full level
B26D 1/08 (2006.01); **B23D 31/00** (2006.01); **B26D 1/04** (2006.01); **B26D 7/00** (2006.01); **B26D 7/08** (2006.01); **G01N 1/06** (2006.01); **H01M 4/1395** (2010.01); **H01M 4/38** (2006.01); **H01M 4/66** (2006.01); **H01M 4/80** (2006.01); **H01M 10/04** (2006.01); **H01M 10/0562** (2010.01); **H01M 10/0565** (2010.01); **H01M 10/058** (2010.01); **H01M 50/406** (2021.01); **B26D 1/00** (2006.01)

CPC (source: EP KR US)
B23D 15/04 (2013.01 - KR US); **B23D 31/00** (2013.01 - KR); **B23D 33/00** (2013.01 - US); **B23D 36/0008** (2013.01 - KR US); **B23D 79/00** (2013.01 - US); **B26D 1/0006** (2013.01 - EP KR); **B26D 1/04** (2013.01 - EP KR); **B26D 1/08** (2013.01 - EP KR); **B26D 7/08** (2013.01 - EP KR); **B26D 7/086** (2013.01 - EP KR); **H01M 10/04** (2013.01 - EP); **H01M 10/058** (2013.01 - EP); **H01M 10/0585** (2013.01 - KR); **H01M 50/406** (2021.01 - KR US); **B23D 31/00** (2013.01 - EP); **B26D 2001/002** (2013.01 - EP KR); **H01M 2300/0068** (2013.01 - KR); **H01M 2300/0082** (2013.01 - KR); **Y02E 60/10** (2013.01 - EP KR); **Y02P 70/50** (2015.11 - EP KR)

Citation (search report)
• [X] EP 2328001 A1 20110601 - STANLEY ELECTRIC CO LTD [JP]
• [A] US 6030421 A 20000229 - GAUTHIER MICHEL [CA], et al
• [A] NN: "Industrial ultrasonic solutions", 12 April 2016 (2016-04-12), XP055298832, Retrieved from the Internet <URL:http://www.telsonic.com/fileadmin/user_upload/Imagebroschuere_en_2016_low.pdf> [retrieved on 20160831]
• [A] CHEMIEEXPERIMENTE: "Lithium schneiden | Didaktische Medien", 12 December 2009 (2009-12-12), XP055939287, Retrieved from the Internet <URL:https://www.youtube.com/watch?v=XxWGwHQ4UOM> [retrieved on 20220706]
• See references of WO 2020118431A1

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)
CA 3027620 A1 20200613; CA 3120747 A1 20200618; CN 113195181 A 20210730; EP 3894152 A1 20211020; EP 3894152 A4 20220817; JP 2022513794 A 20220209; KR 20210100107 A 20210813; US 2022048122 A1 20220217; US 2024001464 A1 20240104; WO 2020118431 A1 20200618

DOCDB simple family (application)
CA 3027620 A 20181213; CA 2019051782 W 20191211; CA 3120747 A 20191211; CN 201980082356 A 20191211; EP 19897183 A 20191211; JP 2021533519 A 20191211; KR 20217017598 A 20191211; US 201917312971 A 20191211; US 202318469399 A 20230918