

Title (en)
PROCESS AND APPARATUS FOR THE MANUFACTURE OF A COOKING VESSEL BY ROLL FORMING

Title (de)
VERFAHREN UND VORRICHTUNG ZUM HERSTELLEN EINES KOCHGEFÄSS DURCH WALZFORMEN

Title (fr)
PROCEDE ET DISPOSITIF DE FABRICATION D'UN RECIPIENT DE CUISSON PAR PROFILAGE

Publication
EP 0821626 A1 19980204 (EN)

Application
EP 96910981 A 19960419

Priority
• FI 9600213 W 19960419
• FI 951882 A 19950420

Abstract (en)
[origin: WO9633030A1] The invention is related to a process and apparatus for the manufacture of a cooking vessel, such as a frying pan (12) or a kettle from a metal blank. According to the invention, the vessel is manufactured by roll forming techniques by using a lower tool (3) that rotates around its axis (2), the form face (6, 7) of the lower tool being designed so that it corresponds to the outer surface of the thus created vessel, and an upper tool (5) that rotates around its axis (4), the surface (9, 10) of the upper tool having a profile that corresponds to the inner surface formed to the vessel. The blank is placed on the form face of the lower tool and the tools (3, 5) are then made to rotate so that the blank rotates along with the lower tool (3), and the surface of the upper tool (5) is in linear roll contact with the blank, whereby the metal is formed in the slot between the tools, spreading out into the desired form of the vessel. In the manufacture of the frying pan (12), the blank may be a straight piece of sheet, whereby the rising sides of the pan are formed in the roll forming with the blank spreading radially outwards at its edges. In connection with the forming, the outer and inner surfaces of the vessel can be provided with patterns consisting of protrusions and/or recesses.

IPC 1-7
B21D 22/18; **B21D 51/22**; **B21J 9/02**

IPC 8 full level
A47J 36/02 (2006.01); **B21D 22/14** (2006.01); **B21D 22/16** (2006.01); **B21J 9/02** (2006.01); **B21K 23/04** (2006.01); **B21H 1/02** (2006.01)

CPC (source: EP KR)
B21D 22/14 (2013.01 - EP); **B21D 22/18** (2013.01 - KR); **B21D 51/22** (2013.01 - EP); **B21J 9/025** (2013.01 - EP); **B21K 1/00** (2013.01 - EP); **B21K 23/04** (2013.01 - EP); **B21H 1/02** (2013.01 - EP)

Citation (search report)
See references of WO 9633030A1

Designated contracting state (EPC)
AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE

DOCDB simple family (publication)
WO 9633030 A1 19961024; AU 5400696 A 19961107; CA 2221583 A1 19961024; CN 1185125 A 19980617; CZ 329597 A3 19990512; EE 9700243 A 19980415; EP 0821626 A1 19980204; FI 100580 B 19980115; FI 951882 A0 19950420; FI 951882 A 19961021; HU P9802948 A2 19990329; HU P9802948 A3 20000529; JP H11503973 A 19990406; KR 19990007885 A 19990125; NO 974818 D0 19971017; NO 974818 L 19971222; PL 322829 A1 19980216

DOCDB simple family (application)
FI 9600213 W 19960419; AU 5400696 A 19960419; CA 2221583 A 19960419; CN 96193375 A 19960419; CZ 329597 A 19960419; EE 9700243 A 19960419; EP 96910981 A 19960419; FI 951882 A 19950420; HU P9802948 A 19960419; JP 53129396 A 19960419; KR 19970707408 A 19971020; NO 974818 A 19971017; PL 32282996 A 19960419