

Title (en)

Carrier-free forge lubricant and method of using same.

Title (de)

Trägerfreies Formungsschmiermittel und dessen Verwendung.

Title (fr)

Lubrifiant de forge sans support et méthode pour l'utiliser.

Publication

EP 0403306 A1 19901219 (EN)

Application

EP 90306572 A 19900615

Priority

US 36731189 A 19890616

Abstract (en)

The composition of the present invention is a carrier-free pulverulent forging lubricant having at least one component having adhesive properties at forging temperatures and the method of the invention is a method of forging a workpiece in a die which includes the step of spraying onto at least one of the die and the workpiece a coating of an effective amount of a carrier-free pulverulent lubricant composition at ambient pressure. The use of the composition and method of the invention significantly reduces smoke generation in hot forging operations by eliminating the use of oils or volatile organic compounds as carriers.

IPC 1-7

C10M 111/00; **C10N 40/24**; **C10N 50/08**; **C10N 80/00**

IPC 8 full level

B21J 3/00 (2006.01); **C10M 103/00** (2006.01); **C10M 111/00** (2006.01); **C10M 111/06** (2006.01); **C10N 10/02** (2006.01); **C10N 10/04** (2006.01); **C10N 10/06** (2006.01); **C10N 40/24** (2006.01); **C10N 50/08** (2006.01)

CPC (source: EP)

C10M 101/02 (2013.01); **C10M 103/00** (2013.01); **C10M 103/02** (2013.01); **C10M 105/24** (2013.01); **C10M 107/04** (2013.01); **C10M 107/38** (2013.01); **C10M 107/44** (2013.01); **C10M 109/00** (2013.01); **C10M 111/00** (2013.01); **C10M 2201/003** (2013.01); **C10M 2201/0403** (2013.01); **C10M 2201/041** (2013.01); **C10M 2201/0413** (2013.01); **C10M 2201/042** (2013.01); **C10M 2201/0423** (2013.01); **C10M 2201/0433** (2013.01); **C10M 2201/062** (2013.01); **C10M 2201/087** (2013.01); **C10M 2201/105** (2013.01); **C10M 2201/12** (2013.01); **C10M 2203/10** (2013.01); **C10M 2203/1006** (2013.01); **C10M 2203/1025** (2013.01); **C10M 2203/1045** (2013.01); **C10M 2203/1065** (2013.01); **C10M 2203/1085** (2013.01); **C10M 2205/022** (2013.01); **C10M 2205/0225** (2013.01); **C10M 2205/14** (2013.01); **C10M 2205/183** (2013.01); **C10M 2207/1203** (2013.01); **C10M 2207/1213** (2013.01); **C10M 2207/125** (2013.01); **C10M 2207/1253** (2013.01); **C10M 2207/129** (2013.01); **C10M 2207/163** (2013.01); **C10M 2207/183** (2013.01); **C10M 2207/203** (2013.01); **C10M 2207/243** (2013.01); **C10M 2211/06** (2013.01); **C10M 2213/00** (2013.01); **C10M 2213/02** (2013.01); **C10M 2213/023** (2013.01); **C10M 2213/043** (2013.01); **C10M 2213/0606** (2013.01); **C10M 2213/062** (2013.01); **C10M 2213/0623** (2013.01); **C10M 2217/0403** (2013.01); **C10M 2217/0415** (2013.01); **C10M 2217/0425** (2013.01); **C10M 2217/0435** (2013.01); **C10M 2217/044** (2013.01); **C10M 2217/0443** (2013.01); **C10M 2217/045** (2013.01); **C10M 2217/0453** (2013.01); **C10M 2217/0465** (2013.01); **C10N 2010/00** (2013.01); **C10N 2010/02** (2013.01); **C10N 2040/24** (2013.01); **C10N 2040/241** (2020.05); **C10N 2040/242** (2020.05); **C10N 2040/243** (2020.05); **C10N 2040/244** (2020.05); **C10N 2040/245** (2020.05); **C10N 2040/246** (2020.05); **C10N 2040/247** (2020.05)

Citation (search report)

- [X] GB 905989 A 19620919 - CEFILAC
- [X] GB 1124501 A 19680821 - MINI OF TECHNOLOGY
- [X] US 4780226 A 19881025 - SHEETS LOUIS E [US], et al
- [X] EP 0169413 A2 19860129 - LONZA AG [CH]
- [X] DE 2751222 A1 19790503 - BBC BROWN BOVERI & CIE
- [X] EP 0116882 A2 19840829 - LONZA AG [CH]
- [X] FR 2339671 A1 19770826 - TRW INC [US]
- [X] EP 0201923 A2 19861120 - LICHTENBERG & CO CHEM FAB ZWEI [DE]

Cited by

WO2014033098A1; EP0590959A3; DE4100582A1; GB2257712A; DE4212667A1; DE4112408A1; GB2251862B; EP0468278A1; US5244587A; DE4313961C2; EP2703454A1; JPH0570787A; EP0507449A1; EP0611817A1; US5346634A

Designated contracting state (EPC)

AT BE CH DE DK ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)

EP 0403306 A1 19901219; JP H0350298 A 19910304

DOCDB simple family (application)

EP 90306572 A 19900615; JP 14716390 A 19900605