Title (en)

Polishing system and method for soft metal surfaces using CO2 snow

Title (de)

System und Verfahren zum Polieren von Weichmetallflächen mittels CO2-Schnee

Title (fr)

Système et méthode de polissage des surfaces de métaux tendres utilisant de la neige carbonique

Publication

EP 0764500 B1 20010822 (EN)

Application

EP 96115274 A 19960924

Priority

US 53341195 A 19950925

Abstract (en)

[origin: EP0764500A1] A system (10) and method for polishing metal surfaces (20), such as gold mirror surfaces, and the like, using CO2 snow (18) is disclosed. The system and method produces sub-Angstrom surface roughness of the polished metal surface. The system includes an enclosure (12) for holding a component (32) having a metal surface (20) that is to be polished. A CO2 jet spray system (11) is provided for producing solid CO2 gas snow (18). An operator-controllable robotic arm (30) is used to position the component (32) within the enclosure (12) and position the CO2 jet spray system (11) relative to the surface (20) to polish it. The CO2 jet spray system (10) polishes the metal surface (20) using mechanical action derived the from the solid CO2 gas snow (18) produced by controlled expansion of liquid CO2. The method comprises disposing the component having the metal surface that is to be polished into an enclosure. Solid CO2 gas snow is generated within the enclosure using the CO2 jet spray system. The CO2 jet spray system is moved to move the solid CO2 gas snow (18) relative to the surface of the component to polish the metal surface. <IMAGE>

IPC 1-7

B24C 1/00

IPC 8 full level

B24B 1/00 (2006.01); **B24C 1/00** (2006.01); **B24C 3/32** (2006.01); **B24C 9/00** (2006.01)

CPC (source: EP)

B24C 1/003 (2013.01); **B24C 3/32** (2013.01); **B24C 9/00** (2013.01); **B24C 9/003** (2013.01)

Cited by

US7538035B2; EP1991364A4; EP2810721A1; DE102008027217A1; DE102008027217B4

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

EP 0764500 A1 19970326; **EP 0764500 B1 20010822**; DE 69614627 D1 20010927; DE 69614627 T2 20011206; IL 119300 A0 19961205; JP H09183064 A 19970715

DOCDB simple family (application)

EP 96115274 A 19960924; DE 69614627 T 19960924; IL 11930096 A 19960925; JP 25350296 A 19960925