

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
4 September 2003 (04.09.2003)

PCT

(10) International Publication Number
WO 03/072844 A1

(51) International Patent Classification⁷: **C23C 4/00**, 4/04, 4/12, F02B 77/02, F02F 3/14, F16J 9/26

(21) International Application Number: PCT/EP02/02151

(22) International Filing Date: 28 February 2002 (28.02.2002)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (for all designated States except US): **MAN B & W DIESEL A/S** [DK/DK]; Teglhølmmsgade 41, DK-2450 Copenhagen SV (DK).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **MOCZULSKI, Lech** [DK/DK]; Klydevej 16, DK-2650 Hvidovre (DK). **BENZON, Michael, Eis** [DK/DK]; Endrupvej 31, DK-3480 Fredensborg (DK).

(74) Agent: **AWAPATENT AB**; Box 11394, S-404 28 Göteborg (SE).

(81) Designated States (*national*): AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK (utility model), SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

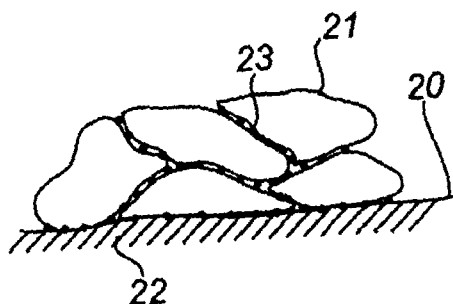
(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: THERMAL SPRAYING OF A MACHINE PART



(57) Abstract: The invention discloses a machine part surface (22), coated at least partly with a coating material by a thermal spray process. Said coating material has been exposed to heat treatment at an elevated temperature and for a time effective to at least partially diffuse said coating material into underlying surface thereby creating necks between the coating material and the underlying surface. Additionally coating material layers (24) are applied and subject to successive heat treatments of each said coating material layer in order to provide on said machine part surface (22) a plurality of layers (24) of same said coating material (so that the coating material forms necks (23) in contact points between particles (21) and layers in at least said coating. A method for making such coating on a machine part surface is also disclosed.

WO 03/072844 A1