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(21) International Application Number: PCT/IB97/01090 (22) International Filing Date: 12 September 1997 (12.09.97) (71) Applicant (for all designated States except US): BALZERS AKTIENGESELLSCHAFT [LI/LI]; FL-9496 Balzers (LI). (72) Inventors; and (75) Inventors/Applicants (for US only): BRAENDLE, Hans [CH/CH]; Schlosstrasse 14, CH-7320 Sargans (CH). SHIMA, Nobuhiko [JP/JP]; Narita Works, Hitachi Tool K.K., 13-2, Shinizumi, Narita-shi, Chiba-ken 286 (JP). (74) Agent: TROESCH SCHEIDEGGER WERNER AG; Siewerdtstrasse 95, CH-8050 Zürich (CH).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published With international search report.
(54) Title: TOOL HAVING A PROTECTIVE LAYER SYSTEM (57) Abstract There is proposed a tool with a tool body and a wear resistant layer system, which layer system comprises at least one layer of MeX. Me comprises titanium and aluminum and X is a nitrogen or carbon. The tool is a solid carbide end mill, a solid carbide ball nose mill or a cemented carbide gear cutting tool. Thereby, in the MeX layer the quotient Q_1 as defined by the ratio of the diffraction intensity $I(200)$ to $I(111)$ assigned respectively to the (200) and (111) plains in the X ray diffraction of the material using the $\theta-2\theta$ method is selected to be ≤ 2. Further, the $I(111)$ is at least twenty times larger than the intensity average noise value, both measured with a well-defined equipment and setting thereof.		

