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(54) Title: DUAL PHASE TIALSiBN COATING FOR CUTTING APPLICATIONS

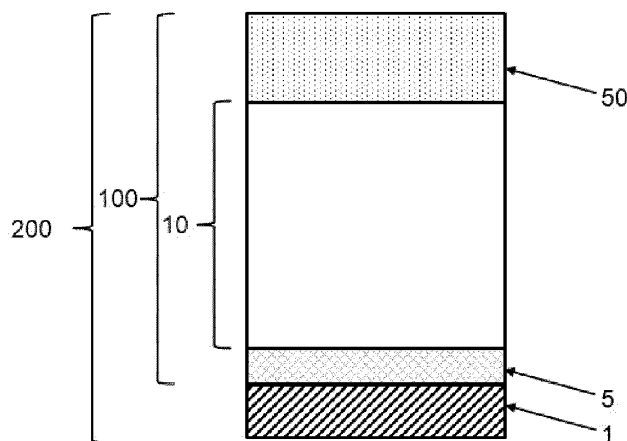


Figure 1

(57) **Abstract:** The present invention relates to a TiAlSiBN coating deposited on a surface of a substrate (1), the coating (100) comprising three different coating sections along its coating thickness, a first section (5), a second section (10) and a third section (50), said first section (5) deposited closer to said surface of the substrate (1) than the second and third sections, said second section (10) deposited directly on the outermost surface of said first section (5), and a third section (50) deposited directly on the outermost surface of said second section (10), wherein said first section (5) formed of one or more layers, in any case formed by at least one adhesion layer, wherein the first section (5) exhibiting fully crystalline cubic phase, or exhibiting a mixture of crystalline phases comprising crystalline cubic phase, and crystalline hexagonal wurtzite phase, wherein if a mixture of crystalline phases, exhibiting mainly cubic phase, and the at least one adhesion layer comprising titanium and nitrogen; and wherein said second section (10) formed of one or more layers, in any case formed by at least one support layer, wherein the second section (10) exhibiting fully crystalline hexagonal wurtzite phase, or exhibiting a mixture of crystalline phases comprising crystalline cubic phase and crystalline hexagonal wurtzite phase, wherein if a mixture of crystalline phases, exhibiting mainly wurtzite phase, and the at least one support layer being comprising titanium, aluminum,

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nitrogen, and at least one chemical element selected from boron and silicon; and wherein said third section (50) formed of one or more layers, in any case formed by at least one functional layer, wherein the third section (50) exhibiting fully crystalline cubic phase, or exhibiting a mixture of crystalline phases comprising crystalline cubic phase and crystalline hexagonal wurtzite phase, wherein if a mixture of crystalline phases, exhibiting mainly cubic phase, and wherein the at least one functional layer comprising titanium, silicon and nitrogen.