

ABSTRACT**HIGHLY OXIDATION RESISTANT HARD COATING FOR CUTTING TOOLS**

An inventive workpiece features on at least parts of its surface a wear resistant hard coating comprising the following composition $Al_{1-a-b-c-d} Cr_a X_b Si_c B_d Z$, where x is at least one element from Nb, Mo, W or Ta; Z is one element or compound from N, C, CN, NO, CO, CNO; and $0.2 \leq a \leq 0.5$; $0.01 \leq b \leq 0.2$; $0 \leq c \leq 0.1$; $0 \leq d \leq 0.1$. Further a PVD process for depositing such a wear resisitant coating is disclosed whereby at least one workpiece is installed in a vacuum coating system and said system is operated in a low pressure argon atmosphere utilizing at least two metal or metal alloy targets with at least temporarily addition of a reactive gas.

Fig. 1



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