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Elaboration and Tribological study of WC-35wt%(Fe-Co-NI)hard metal alloys obtained by liquidphase sintering

Fares Djematene, Boubakeur Djerdjar, Ali Mameri

Abstract : this study concerns on the mechanical behavior(friction wear) of WC-35wt% (Fe-Ni-Co)hard alloy. The alloywas prepared by liquid phase sintering process with atemperature of 1350 ° C under argon. Haw ever This alloy isworking under severe conditions of wear and friction. haveundergo a series of dry friction tests involving multipleparameters. Interesting results have been obtained (good wearresistance and a stabilization of the friction coefficients). Thewear rate (mm3 / m) increases with increasing of the applied load5N and 10N, these results open up broad prospects for their jobsin the petrochemical fields (drilling tools, turbine parts).

Keywords : friction, WC, phase, alloys, Sintering, wear