

Abstract:

PLATE-CRYSTALLINE TUNGSTEN CARBIDE-CONTAINING HARD ALLOY,
COMPOSITION FOR FORMING PLATE-CRYSTALLINE TUNGSTEN CARBIDE
AND PROCESS FOR PREPARING SAID HARD ALLOY

Disclosed are a plate-crystalline tungsten carbide-contain-
ing hard alloy which comprises 4 to 40 % by volume of a
5 binder phase containing at least one of iron group metals
selected from Co, Ni and Fe as a main component; and the
balance of a hard phase comprising tungsten carbide alone,
or tungsten carbide and 50 % by volume or less of a com-
pound with a cubic structure selected from at least one of
10 carbide and nitride of the 4a (Ti, Zr and Hf), 5a (V, Nb
and Ta) or 6a (Cr, Mo and W) group element of the periodic
table and mutual solid solutions thereof, and inevitable
impurities,

wherein when peak intensities at a (001) face and a
15 (101) face in X-ray diffraction using $K\alpha$ rays with Cu being
a target are represented by $h(001)$ and $h(101)$, respective-
ly, the tungsten carbide satisfies $h(001)/h(101) \geq 0.50$,
a composition for forming a plate-crystalline tungsten car-
bide, and a process for preparing the plate-crystalline
20 tungsten carbide-containing hard alloy.