

- 17 -

ABSTRACT OF THE DISCLOSURE

TITLE OF THE INVENTION

A polycrystal diamond tool

The present invention provides a diamond sintered compact tool, which is excellent in economy as well as cutting edge strength.

A diamond sintered compact cutting tool comprising a diamond sintered compact sintered at an ultra-high pressure and high temperature and a WC-Co type cemented carbide substrate directly bonded to the diamond sintered compact during a step of sintering and brazed to a tool base through the WC-Co type cemented carbide substrate, in which a ratio of the thickness of the WC-Co type cemented carbide substrate to the thickness of the diamond sintered compact layer satisfies the relation of:

$$0.8 \leq \frac{\text{WC-Co type cemented carbide substrate/diamond sintered compact layer}}{\text{compact layer}} \leq 3.0$$

and the diamond sintered compact layer has a thickness of 0.05 mm to 0.5 mm, preferably 0.05 mm to 0.45 mm, more preferably 0.12 mm to 0.36 mm.

(Fig. 1)



162162

G00002

