

ABSTRACT

In a single-crystal diamond material, a concentration of non-substitutional nitrogen atoms is not more than 200 ppm, a concentration of substitutional nitrogen atoms is lower than the concentration of the non-substitutional nitrogen atoms, and the
5 single-crystal diamond material has a crystal growth main surface having an off angle of not more than 20° . In a single-crystal diamond chip, a concentration of non-substitutional nitrogen atoms can be not more than 200 ppm, a concentration of substitutional nitrogen atoms can be lower than the concentration of the non-substitutional nitrogen atoms, and the single-crystal diamond chip can have a main
10 surface with an off angle of not more than 20° . A perforated tool includes a single-crystal diamond die, wherein in the single-crystal diamond die, a concentration of non-substitutional nitrogen atoms is not more than 200 ppm, a concentration of substitutional nitrogen atoms is lower than the concentration of the non-substitutional nitrogen atoms, and the single-crystal die has a low-index plane represented by a Miller
15 index of not less than -5 and not more than 5 in an integer, a perpendicular line of the low-index plane having an off angle of not more than 20° relative to an orientation of a hole for wire drawing.