WHAT IS CLAIMED IS:

1. A substrate processing method for processing a substrate having a metal formed on a planned dividing line along the planned dividing line, the substrate processing method comprising:

a processed groove forming step of forming a processed groove in the substrate along the planned dividing line; and

a burr removing step of, after the processed groove forming step is performed, making an etchant that includes at least an oxidizing agent and to which an ultrasonic vibration is imparted come into contact with the substrate, suppressing ductility of a metallic burr generated on a periphery of the formed processed groove and increasing fragility of the burr by modifying the burr by the oxidizing agent included in the etchant, and removing the burr by the ultrasonic vibration.

2. The substrate processing method according to claim 1, wherein

the etchant further includes an organic acid.

3. The substrate processing method according to claim 2, wherein

the etchant further includes an anticorrosive.

4. The substrate processing method according to

claim 1, wherein

the burr removing step immerses the substrate in which the processed groove is formed or a plurality of chips divided as individual pieces by the processed grooves in a tank retaining the etchant and including an ultrasonic oscillating unit that imparts the ultrasonic vibration.

5. The substrate processing method according to claim 3, wherein

a rate at which the burrs are etched in the burr removing step is controlled by a composition ratio of the etchant including the oxidizing agent, the organic acid and the anticorrosive.