**WHAT IS CLAIMED IS:**

1. A wafer processing method for processing a wafer including a reverse side which has an annular protruding portion on an outer circumferential portion thereof and a circular recessed portion in a region surrounded by the annular protruding portion, the wafer processing method comprising:

a wafer unit forming step of forming a wafer unit by fixing a sheet including no glue layer to a face side of the wafer and fixing an annular frame to an outer circumferential portion of the sheet;

a holding step of holding the wafer on a holding table via the sheet, after the wafer unit forming step;

a dividing step of forming a dividing groove in the circular recessed portion of the wafer and separating the annular protruding portion from the wafer, after the holding step; and

a removing step of removing the annular protruding portion from the sheet, after the dividing step,

wherein, in the removing step, a plurality of removal claws are inserted to a boundary between the sheet and the annular protruding portion, and the annular protruding portion is peeled off from the sheet by the plurality of removal claws.

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

in the wafer unit forming step, the sheet is fixed to the wafer by being heated, pressed against, and thermocompression-bonded to the wafer.

3. The wafer processing method according to claim 1 or claim 2, wherein, in the removing step, the plurality of removal claws are rotated along an outer circumference of the wafer, and the plurality of claws are moved upward.