

CLAIMS

1. A wafer conveyance unit configured to convey a wafer while holding the wafer in a semiconductor failure analysis apparatus, the wafer conveyance unit comprising:

5 a fixing unit configured to fix a wafer at a predetermined observation position; and

a conveyance unit configured to convey the wafer to the observation position while holding the wafer,

10 wherein the conveyance unit comprises a plurality of holding members provided so as to face a side surface of the wafer, and holds the wafer from the side surface thereof by sandwiching a peripheral portion of the wafer with the plurality of holding members.

2. The wafer conveyance unit according to claim 1, wherein the plurality of holding members comprise at least three of protruding portions configured to abut on a peripheral portion of the wafer.

15 3. The wafer conveyance unit according to claim 2, wherein the plurality of holding members comprise at least four of the protruding portions.

4. The wafer conveyance unit according to any one of claims 1 to 3, wherein the plurality of holding members comprise:

20 a first holding member comprising one or a plurality of protruding portions configured to abut on a peripheral portion of the wafer, and

a second holding member comprising one or a plurality of the protruding portions, and

25 wherein a direction of a force applied to the wafer by the first holding member configured to sandwich the wafer and a direction of a

force applied to the wafer by the second holding member configured to sandwich the wafer are opposite to each other.

5 5. The wafer conveyance unit according to claim 4, further comprising a ratchet portion configured to change a separation distance between the first holding member and the second holding member by fixing a position of only one of the first holding member and the second holding member, the ratchet portion configured to release a sandwiching state of the wafer by the first holding member and the second holding member.

10 6. The wafer conveyance unit according to claim 5,
 wherein the conveyance unit comprises:
 a base portion,
 a ring portion comprising:
 a first portion connected to the base portion via an elastic member,
15 a pair of second portions continuous with the first portion and extending in a first direction while facing each other, and
 a third portion continuous with tips of the pair of second portions and formed in a ring shape so as to partition a housing space for housing a wafer, and
20 a core portion continuous with the base portion and extending in a first direction between the pair of second portions,
 wherein the third portion of the ring portion is provided with the first holding member protruding toward the housing space,
 wherein a tip of the core portion is provided with the second
25 holding member protruding toward the housing space,
 wherein a hole portion configured to be engaged with the ratchet

portion is formed in the pair of second portions of the ring portion, and
wherein the ratchet portion engages with the hole portion to fix a
position of the ring portion to fix a position of the first holding member.

7. A wafer conveyance method for conveying a wafer while holding
5 the wafer in a semiconductor failure analysis apparatus, the method
comprising:

sandwiching a peripheral portion of the wafer with a plurality of
holding members provided to face a side surface of the wafer; and

10 conveying the wafer to a predetermined observation position in a
state where a peripheral portion of the wafer is sandwiched by the
plurality of holding members from the side surface thereof.

8. The wafer conveyance unit according to claim 1, wherein the
conveyance unit holds the wafer solely from the side surface thereof by
sandwiching a peripheral portion of the wafer with the plurality of
15 holding members.

9. The wafer conveyance unit according to claim 1, wherein the
plurality of holding members are configured to be distorted with ascent
of the wafer so as to release the wafer.