

Electroformed Bond Hub Blades

ZH14SERIES

Realizes stable processing under high load conditions

Adoption of the newly developed and highly rigid V1 bond to realize stable processing under high load conditions

The ZH14 series provides improved blade rigidity to realize stable processing without slanted cutting even under high load conditions, which includes processing applications requiring high speed, deep cutting, and long blade exposure.

In addition, for narrow street and high revolution speed processing, improvements in the blade breakage speed limit* and wavy cutting can be expected.

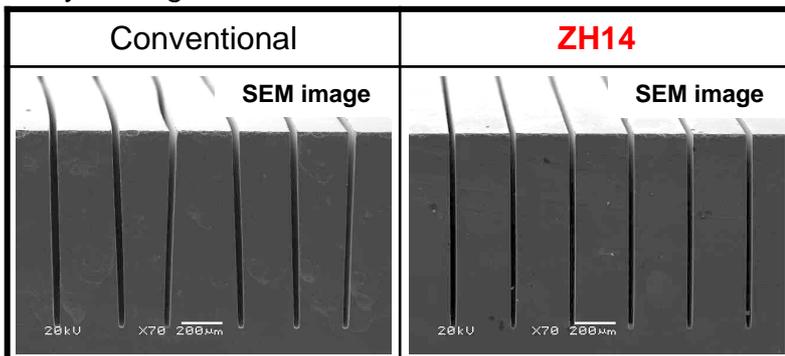


- Reduction in wavy cutting and blade wear under high load conditions.
- Suited for applications which require long blade exposure, such as bump wafer processing
- Improvements in product quality through increased revolution speed

*The maximum cutting speed before blade breakage occurs.

■ Processing quality comparison (0.9 mm thickness Si processing)

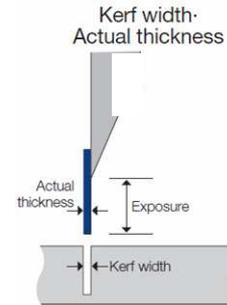
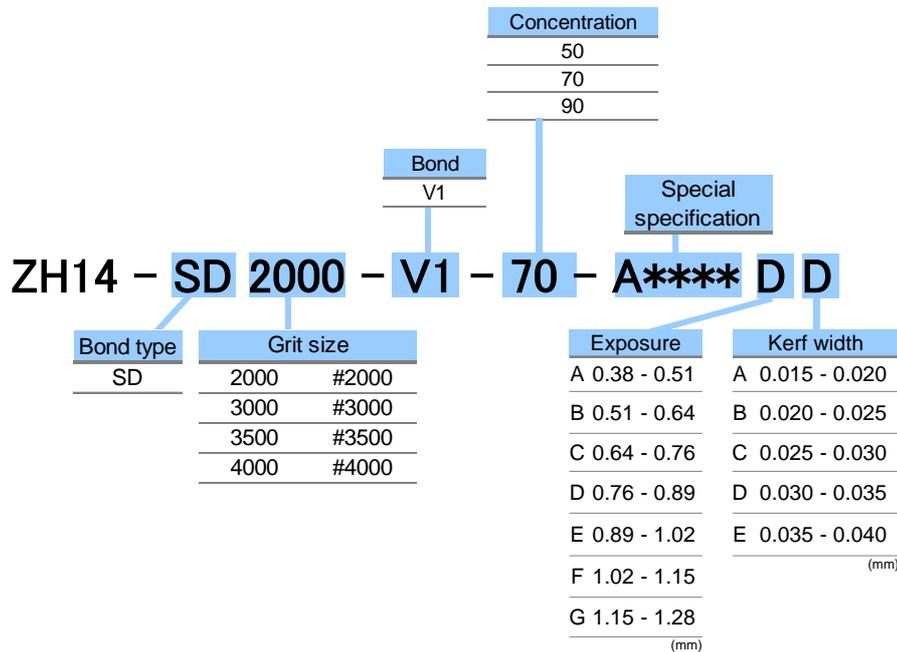
Compared to existing blades, it can be seen that the ZH14 series can process with less slanted and wavy cutting.



Workpiece : Si (thickness: 2 mm)
 Depth : 1 mm
 Feed speed : 110 mm/s
 Spindle revolution : 30,000 min⁻¹
 Blade : SD2000-**-50
 Kerf : 25 µm
 Exposure : 1.28 mm

* For this evaluation, a thin blade with long blade exposure was fabricated to simulate conditions where processing defects are likely to occur.

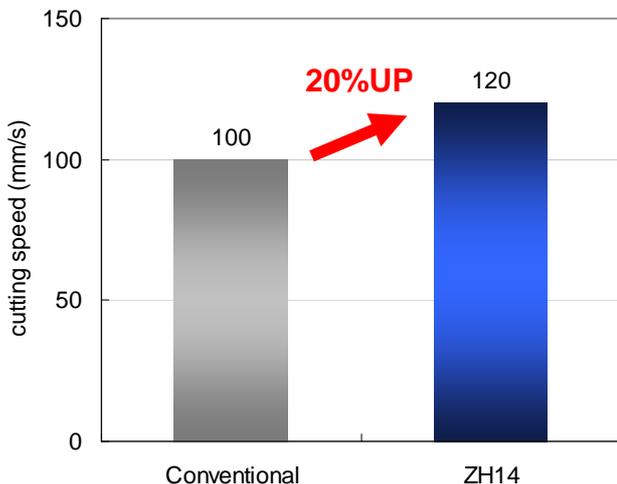
加工対象	Silicon wafers, compound semiconductor wafers (GaAs, GaP, etc.), oxide wafers (LiTaO ₃), and other applications
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Experimental Data

It can be observed that compared to existing blades, the improved rigidity of the ZH14 series means that blade breakage is less likely to occur.

Blade breakage speed limit comparison data



In a test to measure the blade breakage speed limit as the processing speed is increased, it was observed that the breakage speed limit was improved by approximately 20% compared to existing blades.

Workpiece : Si 8"
 Depth : 0.725 mm (full cut)
 Blade : SD3500-**-70 ED
 Spindle revolution : 35,000 min⁻¹

When ordering

Please contact a DISCO representative with your product needs such as type, wheel size, and quantity.

When you place the first order with us, please explain application information such as materials to grind, sizes, machine, type, and other specification.

We are ready to help you to determine which is our most appropriate product type for your application.

Due to improvements in our products, it is possible that product specifications may be changed without advanced notice.

Please confirm the product specifications with a DISCO representative.



To use these DISCO blades and wheels (hereafter precision tooling) safely... Please read carefully and follow the instructions below to prevent any accidents or injuries.

- USE a safety cover (nozzle case, cover), equipped as a standard accessory, to avoid injury.
- DO NOT EXCEED the specified rpm limit indicated on the precision tooling.
- FOLLOW the instruction manual of the equipment to mount the precision tooling properly.
- DO NOT DROP OR HIT the precision tooling. This may cause breakage or injury.
- Always CHECK the precision tooling for chipping or any other damage before starting to use it. DO NOT USE the tooling if there is any damage.
- READ the operation manual of the cutting/grinding equipment before use.
- DO NOT USE the precision tooling with modified or customized equipment.
- DO NOT USE precision tooling that has a different size from the one recommended for your equipment.
- DO NOT USE the precision tooling for any other purpose than grinding, cutting, or polishing.
- Always USE water or coolant to prevent precision tooling damage.