CLAIMS

1. A scribing wheel comprising:

a scribing wheel base material that is formed with a ridge line along a circumferential portion thereof and has a blade edge including the ridge line and tapered surfaces of both sides from said ridge line;

a diamond film formed on the tapered surfaces of said scribing wheel base material; and

annular grooves formed in annular areas corresponding to boundary regions between side surfaces and the tapered surfaces having the diamond film formed thereon in both sides of said scribing wheel base material.

2. A method for manufacturing a scribing wheel that is formed with a ridge line along a circumferential portion of a disk and has a blade edge including the ridge line and tapered surfaces of both sides from the ridge line, the method comprising:

grinding the both sides of side surfaces along a circumference of a disk-shaped scribing wheel base material in a manner of mutually and obliquely cutting from the both sides of the side surfaces to thereby form a blade edge portion including the tapered surfaces and the ridge line at the circumferential portion;

forming a diamond film on the tapered surfaces of the scribing wheel base material; and

cutting off annular areas corresponding to boundary regions between the side surfaces and the tapered surfaces having the diamond film formed thereon, thereby removing the diamond film on the annular areas of the side surfaces and forming annular grooves.

3. The method for manufacturing the scribing wheel according to claim 2, wherein the annular grooves of the side surfaces of the scribing wheel base material are formed by irradiating the annular areas with laser beams.

4. The method for manufacturing the scribing wheel according to claim 2, wherein the diamond film is formed on the tapered surfaces

of a plurality of scribing wheel base materials by alternately contacting the plurality of scribing wheel base materials each of which has a blade edge portion formed thereon with spacers that are in contact with the entire side surfaces of each of the scribing wheel base materials.

5. The method for manufacturing the scribing wheel according to claim 2, wherein the diamond film is formed on the tapered surfaces of a plurality of scribing wheel base materials each of which has a blade edge portion formed thereon by mutually contacting the side surfaces of the scribing wheel base materials in a face-to-face state, and outside both ends of the scribing wheel base materials, contacting a pair of spacers with entire outer both side surfaces of the both sides of the scribing wheel base materials.

6. The method for manufacturing the scribing wheel according to claim 3, wherein the annular grooves of the scribing wheel base material are formed by irradiating the side surfaces of the scribing wheel base material with laser beams in parallel to the side surfaces of the scribing wheel base material.

7. The method for manufacturing the scribing wheel according to claim 3, wherein the annular grooves of the scribing wheel base material are formed by irradiating the side surfaces of the scribing wheel base material with laser beams perpendicularly to the side surfaces of the scribing wheel base material.