CLAIMS:

1. In connection with a multiple blade assembly comprising a plurality of saw blades coaxially mounted on a rotating shaft at axially spaced apart positions, which is used for sawing a rare earth magnet block into multiple pieces by rotating the plurality of saw blades,

the saw blade comprising a core in the form of a thin disk or thin doughnut disk and a peripheral cutting part on an outer peripheral rim of the core, the cutting part being made of a composition comprising an abrasive, a resin binder, and a lubricant for reducing the friction between the cutting part and the magnet block during the sawing operation, the lubricant being selected from the group consisting of boron nitride, molybdenum disulfide, tungsten disulfide, and graphite fluoride, and mixtures thereof, and the lubricant being in particulate form having a particle size in the range of 1 to 200μm.

2. The saw blade of claim 1 wherein the lubricant is in particulate form having a particle size in the range of 10 to 150μm ~~selected from the group consisting of boron nitride, carbon, molybdenum disulfide, tungsten disulfide, graphite fluoride, and polytetrafluoroethylene, and mixtures thereof~~.

3. The saw blade of claim 1 or 2 wherein the lubricant is at least one of the group consisting of: boron nitride at 5 to 30% by weight; molybdenum disulfide at 5 to 30% by weight; tungsten disulfide at 10 to 40% by weight; and graphite fluoride at 10 to 30% by weight, provided that the total amount is from 5 to 40% by weight~~in particulate form having a particle size in the range of 1 to 200 μm~~.

4. The saw blade of any one of claims 1 to 3 in which the composition of the cutting part comprises a structural matrix material in addition to the lubricant, abrasive and resin binder.

5. The saw blade of claim 4 in which the cutting part composition contains from 25 to 50% by weight of the structural matrix material.

6. The saw blade of claim 4 or 5 in which said matrix material is selected from SiC, SiO_2, Al_2O_3, WC, Fe, Ni, Cu and mixtures thereof, in particulate form.

47. The saw blade of any one of claims ~~1~~ 4 to ~~3~~ 6 wherein the cutting part is made of a composition comprising

10 to 40% by weight of diamond and/or CBN as the abrasive,

20 to 60% by weight of a matrix selected from the group consisting of SiC having a particle size of 1 to 100 μm, SiO_2 having a particle size of 1 to 100 μm, Al_2O_3 having a particle size of 1 to 100 μm, WC having a particle size of 0.1 to 50 μm, Fe, Ni and Cu having a particle size of 1 to 200 μm, and mixtures thereof,

10 to 50% by weight of a thermosetting resin as the binder, and

1 to 50% by weight of the lubricant.

8. The saw blade of any one of claims 1 to 7 in which the core is made of cemented carbide.

9. The saw blade of any one of claims 1 to 8 in which the cutting part has a width of 0.2 to 2 mm.

10. The saw blade of any one of claims 1 to 9 in which the resin binder is phenolic resin, formaldehyde resin or urea resin.

~~5~~11. A method for sawing a rare earth magnet block into multiple pieces, comprising the steps of providing a multiple blade assembly comprising a plurality of saw blades coaxially mounted on a rotating shaft at axially spaced apart positions, each saw blade being as set forth in any one of claims 1 to ~~4~~10, and rotating the plurality of saw blades.