CLAIMS

1. A powdery composition based on silica for ceramic welding, in particular by projection, comprising

a) from 10 to 90% of a phase of siliceous particles comprising at least 80% by weight of cristobalite and at most 20% by weight of tridymite based on the total weight of the composition,

b) from 90 to 10% by weight of conventional additives forming a binding phase, based on the total weight of said composition,

said siliceous particles having an average particle size by sifting d_{50} comprised between 350 and 800 µm.

2. The composition according to claim 1, wherein said siliceous particles have a particle diameter comprises between a $d_{3\ min}$ of 150 µm and a $d_{3\ max}$ of 1,100 µm.

3. The composition according to any of the preceding claims, wherein said siliceous particles have an SiO_2 content greater than or equal to 97% based on the total weight of siliceous particles.

4. The composition according to any of the preceding claims, comprising from 20 to 85% by weight of phase of siliceous particles and from 80 to 15% by weight of binding phase, based on the total weight of the composition.

5. The composition according to any of the preceding claims, comprising from 50 to 85% by weight of phase of siliceous particles and from 50 to 15% by weight of binding phase, based on the total weight of the composition.

6. The composition according to any of the preceding claims, wherein said binding phase comprises at least one of the following elements or compounds: Al, Si, Mg, Ca, Fe, Cr, Zr, Al_2O_3, SiO_2, MgO, CaO, Fe_2O_3, Cr_2O_3, ZrO_2, BaO, SrO, CaO_2, MgO_2, BaO_2, SrO_2.

7. The composition according to claim 6, wherein said binding phase comprises at least one of the elements or compounds selected from the group consisting of CaO, MgO, xCaO.yMgO wherein x and y represent mass fractions for which $x+y \leq 100$.

8. The composition according to claim 6 or 7, wherein said binding phase comprises at least MgO, or MgO from the mixed oxide xCaO.yMgO and wherein X and Y represent mass fractions for which $x+y \leq 100$.

9. A method for preparing a powdery composition based on silica for ceramic welding, in particular by projection comprising the steps:

a) preparing a phase of siliceous particles comprising at least 80% by weight of cristobalite and at most 20% by weight of tridymite, based on the total weight of the phase of siliceous particles;

b) mixing said phase of siliceous particles with one or more conventional additives forming a binding phase in ceramic welding,

said step for preparing said phase of siliceous particles comprising a supply of the quarry quartz sand particles having a d_{50} comprised between 350 and 800 µm, in a rotary furnace attaining 1,400°C to 1,500°C in an area called the hottest area and for baking for a predetermined period of time with said phase of siliceous particles being obtained.

10. The preparation method according to claim 9, wherein said quarry quartz sand particles have a particle diameter between a $d_{5\ min}$ of 150 µm and a $d_{5\ max}$ of 1,100 µm.

11. The preparation method according to any of claims 9 to 10, wherein said quarry quartz sand particles have before baking, an SiO_2 content greater than or equal to 97% based on the total weight of quarry quartz sand particles.

12. The preparation method according to any of claims 9 to 11, wherein the area called the hottest area has a temperature greater than or equal to 1,430°C.

13. The preparation method according to any of claims 9 to 12, wherein said siliceous particles have a $d_{3\ max}$ of 1,100 µm.

14. The preparation method according to any of claims 9 to 13, wherein said siliceous particles have a $d_{3\ min}$ of 150 µm.

15. The preparation method according to any of claims 9 to 14, wherein said siliceous particles have an SiO_2 content greater than or equal to 97% based on the total weight of siliceous particles.

16. The preparation method according to any of claims 9 to 15, wherein said phase of siliceous particles comprise at least 80% by weight of cristobalite and at most 15% by weight of tridymite, based on the total weight of siliceous particles.

17. The preparation method according to any of claims 9 to 16, wherein, during said mixing step, 20 to 85% by weight of phase of siliceous particles and 80 to 15% by

weight of binding phase, based on the total weight of the composition are brought into a mixing tank.

18. The preparation method according to any of claims 9 to 17, wherein, during said mixing step, 50 to 85% by weight of phase of siliceous particles and 50 to 15% by weight of binding phase, based on the total weight of the composition are brought into a mixing tank.

19. The preparation method according to any of claims 9 to 18, wherein said binding phase comprises at least one of the following elements or compounds: Al, Si, Mg, Ca, Fe, Cr, Zr, Al_2O_3, SiO_2, MgO, CaO, Fe_2O_3, Cr_2O_3, ZrO_2, CaO_2, MgO_2, BaO_2, SrO_2.

20. The preparation method according to claim 19, wherein the said binding phase comprises at least one of the elements or compounds selected from the group consisting of CaO, MgO, xCaO.yMgO wherein the x and y represent mass fractions for which $x+y \leq 100$.

21. The preparation method according to claim 19 or 20, wherein said binding phase comprises at least MgO, or MgO from the mixed oxide xCaO.yMgO wherein x and y represent mass fractions for which $x+y \leq 100$.