## CLAIMS

1. Ceramic particle mixture comprising, as components, a major part by weight of sinterable particles of ceramic material and particles of at least one additive, at least one of said at least one additive being an inorganic solid material, characterised in that said inorganic solid material is absorbent for laser radiation emitting a predetermined energy flow at a predetermined wavelength, and at this predetermined wavelength has a specific absorptivity greater than that of the other components of the ceramic mixture, and said ceramic mixture contains the particles of absorbent inorganic solid matter in the dispersed state, in proportions of less than 5 % and more than 0 % by weight of the dry mixture, the particles of absorbent inorganic solid matter being degradable abruptly, with gaseous emission, in the presence of said laser radiation.

2. Ceramic particle mixture according to Claim 1, characterised in that the absorbent dispersed inorganic solid material has, relative to the other components, an absorptivity differential of the laser radiation which is greater than 0.2, advantageously equal to or greater than 0.4, preferably equal to or greater than 0.5.

3. Ceramic mixture according to either Claim 1 or Claim 2, characterised in that the absorbent dispersed inorganic solid material is a non-binding material.

4. Ceramic mixture according to any of Claims 1 to 3, characterised in that the absorbent dispersed inorganic solid material is stable in the absence of thermal and/or optical stresses.

5. Ceramic mixture according to any of Claims 1 to 4, characterised in that the absorbent dispersed inorganic solid material is totally degradable in controlled thermal conditions, above 400 °C.

6. Ceramic mixture according to any of Claims 1 to 5, characterised in that it contains, as other additive, at least one binder for the particles of ceramic material, in proportions below 5 % by weight and above 0 % by weight of the dry mixture.

7. Ceramic mixture according to any of Claims 1 to 6, characterised in that the absorbent dispersed inorganic solid material is at least partially carbon.

8. Ceramic mixture according to Claim 7, characterised in that the carbon used is advantageously chosen from among the group consisting of graphite, anthracite, carbon black, activated charcoal, carbon nanotubes, graphene foils and mixtures thereof.

9. Ceramic mixture according to any of Claims 1 to 8, characterised in that the sinterable particles of ceramic material are at least partially of ceramic material of the oxide type.

10. Ceramic mixture according to any of Claims 1 to 9, characterised in that the ceramic material is chosen from among alumina, zircon, silica, magnesia, zinc oxide, titanium oxide, mixed oxides, barium titanate, silicates, hydroxyapatite, tricalcium phosphate and mixtures thereof.

11. Ceramic mixture according to any of Claims 1 to 10, characterised in that it is in the form of a powder.

12. Ceramic mixture according to any of Claims 1 to 10, characterised in that it is in the form of a suspension of said particles in a liquid suspension medium.

13. Ceramic mixture according to any of Claims 1 to 12, characterised in that the particles of absorbent dispersed inorganic solid material have a particle size d90 less than 5 µm.

14. Ceramic mixture according to any of Claims 1 to 13, characterised in that the particles of ceramic material have a micron or submicron particle size.

15. Shaped ceramic blank in the green state based on a ceramic mixture according to any of Claims 1 to 14.

16. Machined ceramic blank in the green state based on a ceramic mixture according to any of Claims 1 to 14.

17. Machined ceramic part, which is the sintered state of a ceramic part according to Claim 16.

18. Method for manufacturing ceramic parts comprising

- implementation of a ceramic particle mixture, as components, a predominant portion by weight of sinterable particles made of a ceramic material and particles of at least one additive, at least one of said at least one additive being a solid inorganic material,

characterised in that said inorganic solid material is absorbent for laser radiation emitting a predetermined energy flow at a predetermined wavelength, and at this wavelength has a specific absorptivity greater than that of the other components of the ceramic mixture, in that said ceramic mixture contains the particles of absorbent inorganic solid matter in the dispersed state, in proportions of less than 5 % by weight and more than 0 % by weight of the dry mixture, and in that the method further comprises

- green shaping of this ceramic mixture and obtaining a dry green ceramic blank,

- green machining of the green ceramic blank, by removal of ceramic material, by its exposure to said pulsed laser radiation emitting a predetermined energy flow at said predetermined wavelength, and

- during said exposure to this laser radiation, direct selective absorption of the laser radiation energy by the particles of absorbent dispersed inorganic solid material which degrade abruptly, with gaseous emission, local dislocation of ceramic material from the green ceramic blank, ejection of this dislocated ceramic material and obtaining a machined ceramic part in the green state.

19. Method according to Claim 18, characterised in that the particles of the components are mixed by dry means, forming a powder.

20. Method according to Claim 18, characterised in that it comprises putting the particles of the components in suspension in a liquid suspension medium.

21. Method according to any of Claims 18 to 20, characterised in that the green shaping is performed by extrusion, casting or pressing of the ceramic mixture used.

22. Method according to any of Claims 18 to 21, characterised in that the pulsed laser radiation has a wavelength of 200 nm to 3 μm.

23. Method according to Claim 22, characterised in that the pulsed laser radiation has a wavelength of 900 nm to 1100 nm.

24. Method according to any of Claims 18 to 23, characterised in that the pulsed laser radiation has pulse durations less than 150 ns.

25. Method according to any of Claims 18 to 24, characterised in that it also comprises, after green machining, sintering of the particles of ceramic material of the green machined ceramic part.

26. Method according to Claim 25, characterised in that it comprises, before the sintering, elimination of the absorbent dispersed solid material outside the green machined ceramic part by thermal stress thereon at a degradation temperature of this material.

27. Method according to any of Claims 18 to 26, characterised in that the green machining takes place at ambient pressure, in air.

## CLAIMS

**1**. Method for manufacturing ceramic parts comprising

implementation of a ceramic particle mixture, as components, a predominant portion by weight of sinterable particles made of a ceramic material and particles of at least one additive, at least one of said at least one additive being a solid inorganic material,

wherein said inorganic solid material is absorbent for laser radiation emitting a predetermined energy flow at a predetermined wavelength, and at this wavelength has a specific absorptivity greater than that of the other components of the ceramic mixture, in that said ceramic mixture contains the particles of absorbent inorganic solid matter in the dispersed state, in proportions of less than 5% by weight and more than 0% by weight of the dry mixture, and in that the method further comprises

green shaping of this ceramic mixture and obtaining a dry green ceramic blank,

green machining of the green ceramic blank, by removal of ceramic material, by its exposure to said pulsed laser radiation emitting a predetermined energy flow at said predetermined wavelength, and

during said exposure to this laser radiation, direct selective absorption of the laser radiation energy by the particles of absorbent dispersed inorganic solid material which degrade abruptly, with gaseous emission, local dislocation of ceramic material from the green ceramic blank, ejection of this dislocated ceramic material and obtaining a machined ceramic part in the green state.

**2**. Method according to claim **1**, wherein the particles of the components are mixed by dry means, forming a powder.

**3**. Method according to claim **1**, further comprising putting the particles of the components in suspension in a liquid suspension medium.

**4**. Method according to claim **1**, wherein the green shaping is performed by extrusion, casting or pressing of the ceramic mixture used.

**5**. Method according to claim **1**, wherein the pulsed laser radiation has a wavelength of 200 nm to 3 µm.

**6**. Method according to claim **5**, wherein the pulsed laser radiation has a wavelength of 900 nm to 1100 nm.

**7**. Method according to claim **1**, wherein the pulsed laser radiation has pulse durations less than 150 ns.

**8**. Method according to claim **1**, further comprising, after green machining, sintering of the particles of ceramic material of the green machined ceramic part.

**9**. Method according to claim **8**, further comprising, before the sintering, elimination of the absorbent dispersed solid material outside the green machined ceramic part by thermal stress thereon at a degradation temperature of this material.

**10**. Method according to claim **1**, wherein the green machining takes place at ambient pressure, in air.