4. The powder as claimed in any one of the preceding claims, in which:
   - the size dispersion index $(D_{90}-D_{10})/D_{50}$ is greater than 0.7, and/or
   - the specific surface is less than 0.5 m^2/g.

5. The powder as claimed in any one of the preceding claims, in which the relative density of the particles is greater than 0.4.

6. The powder as claimed in the preceding claim, in which the bulk density of the particles is greater than 2.25 g/cm^3.

7. A process for the manufacture of a powder as claimed in any one of the preceding claims, in particular intended to be used as feed powder for thermal spraying, said process comprising the following stages:
   a) granulation of particles so as to obtain a powder formed of granules having a median size D_{50} of between 20 and 60 microns and comprising more than 99.8% of a rare earth metal oxide and/or of hafnium oxide and/or of an yttrium-aluminum oxide, as percentage by weight on the basis of the oxides;
   b) injection of said powder formed of granules, *via* a carrier gas, through an injector as far as a plasma jet generated by a plasma gun, so as to obtain molten droplets;
   c) cooling said molten droplets, so as to obtain a feed powder according to any one of the preceding claims;
   d) optionally, particle size selection, preferably by sieving or by air classification, of said feed powder.

8. The process as claimed in the immediately preceding claim, in which said plasma gun is configured in order to generate said plasma jet around an axis X forming an angle α of less than 30° with a vertical line.

9. The process as claimed in either one of the two immediately preceding claims, in which a cooling fluid, preferably air, is injected into said plasma jet so as to cool said droplets, the cooling fluid being injected toward the downstream direction of the plasma jet and the angle γ between the path of the droplets and the path for the cooling fluid being less than or equal to 80°.

10. The process as claimed in the immediately preceding claim, in which an annular stream of cooling fluid is generated around the axis X.