WHAT IS CLAIMED IS:

1. A yttrium-based thermal spray coating formed on a base material by thermally spraying an yttrium-based powder for thermal spraying,

in which an yttrium-based compound is selected from Y_2O_3, YOF, YF_3, $Y_4Al_2O_9$, $Y_3Al_5O_{12}$, and $YAlO_3$,

and an oxide additive SiO_2 is included in an amount of more than 10 wt% but 30 wt% or less,

and the yttrium-based thermal spray coating has an L value of 80 to 95, an *a* value of -3.0 to 5, and a *b* value of -1.0 to 10 in chromaticity representation of a colorimeter (CIE Lab).

2. The yttrium-based thermal spray coating according to claim 1, wherein photoluminescence (PL) peaks of the yttrium-based thermal spray coating appear at 380 nm to 440 nm and 780 nm to 840 nm.

3. The yttrium-based thermal spray coating according to claim 1, wherein a difference between 2θ of an X-ray diffraction (XRD) peak of the yttrium-based thermal spray coating and 2θ of a standard peak is -0.10 to 0.10.

4. The yttrium-based thermal spray coating according to claim 1, wherein the yttrium-based thermal spray coating has a porosity of less than 1% and a hardness of 500 Hv to 700 Hv.

5. The yttrium-based thermal spray coating according to claim 1, wherein the thermal spraying is plasma spraying performed at a distance of 50 mm to 400 mm from the base material.