

ABSTRACT

An yttrium-based powder for thermal spraying and an yttrium-based thermal spray coating formed from the yttrium-based powder are proposed. The yttrium-based powder includes an yttrium-based compound and an optimally controlled amount of an oxide additive, SiO_2 . The yttrium-based powder inhibits formation of black spots or prevents the yttrium-based compound from turning black through plasma spray coating. The yttrium-based powder enables formation of a thermal spray coating with a desired color and improved mechanical properties.

FIG. 3