

METHOD FOR REPAIRING GAS TURBINE BLADES AND GAS TURBINE BLADE

ABSTRACT

5 A method for repairing gas turbine blades includes: a
thickness-reduced portion removing step S101 of working a
surface of a blade tip 10a into a flat surface 13 by removing a
thickness-reduced portion 12 of the blade tip 10a; a build-up
welding step S102 of forming a built-up portion 14 with a
10 predetermined thickness by melting powder of a build-up
material higher in ductility than a base material forming the
gas turbine blade 10 by a laser beam and building up the melted
powder in multiple layers on the blade tip 10a whose surface is
worked into the flat surface 13; a forming step S103 of working
15 the built-up portion 14 into the same shape as a shape that the
blade tip 10a originally has before suffering a thickness loss;
and a heat-treatment step S104 of removing a residual strain
caused by laser welding in the build-up welding step S102.

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Figure 3