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(54) **HEATING DEVICE, HEATER STATE ESTIMATING DEVICE, AND HEATER STATE ESTIMATING METHOD**

(57) To improve accuracy of detecting the state of a heater, such as abnormality of a heating unit, wear of a base, and the like.

A heating device includes: a heater including an electric conductor, a heating unit that generates heat by energization, and a ceramic base that holds the electric conductor and the heating unit so that the electric conductor and the heating unit are buried in the ceramic base so as to be isolated from each other; and an energization unit that causes the heater to generate heat by energizing the heating unit. The heating device includes: a detection unit that detects an electric resistance of the base between the electric conductor and the heating unit; and an estimation unit that estimates a state of the heater on the basis of the electric resistance detected by the detection unit when the heating unit is energized under a predetermined condition.

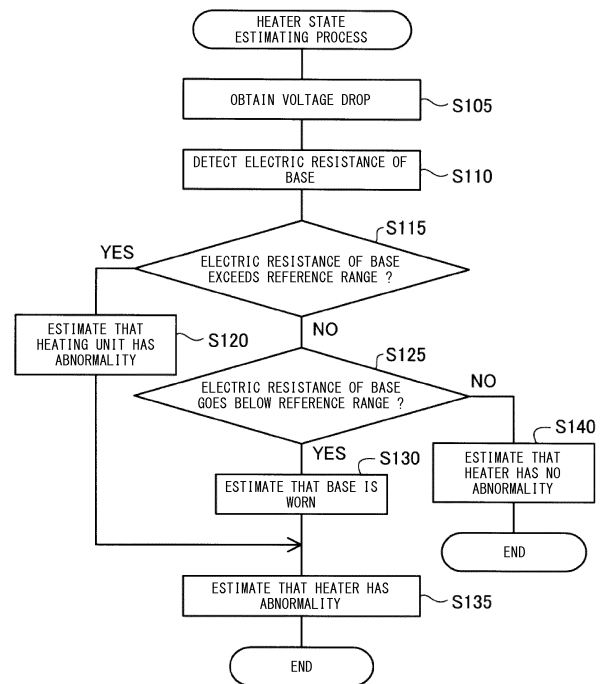


FIG. 6

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EUROPEAN SEARCH REPORT

Application Number
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| The present search report has been drawn up for all claims | | | |
| Place of search Munich | | Date of completion of the search 8 November 2016 | Examiner De Vita, Diego |
| CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document | | T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document | |

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ANNEX TO THE EUROPEAN SEARCH REPORT
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5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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