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(54) **MASTER-SLAVE SYSTEM USING 4-DOF PARALLEL MECHANISM**

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(58) **Field of Classification Search**

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See application file for complete search history.

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(57) **ABSTRACT**

A master-slave system using a 4-degree of freedom (DOF) parallel mechanism includes: a master device having a 4-DOF parallel mechanism which generates 1-DOF translation and 3-DOF rotation by the manipulation of a user; a slave device having a 4-DOF parallel mechanism which generates 1-DOF translation and 3-DOF rotation according to the movement of the master device; and a controller for receiving a behavior signal generated by the master device and outputting a driving signal to the slave device so that the slave device moves according to the movement of the master device. The master-slave system may be utilized as a remote needling robot with excellent manipulation and precision.

15 Claims, 6 Drawing Sheets