

(54) Title of the invention : A METHOD FOR DESIGN AND INVESTIGATION OF COMPLIANT MECHANISM IN ROBOTIC GRIPPER

<p>(51) International classification :B25J0009160000, B25J0015000000, B25J0015020000, B25J0015100000, B25J0015120000</p> <p>(86) International Application No :PCT// Filing Date :01/01/1900</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number :NA Filing Date :NA</p> <p>(62) Divisional to Application Number :NA Filing Date :NA</p>	<p>(71)Name of Applicant : 1)Mr.V.Pandayaraj Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Sri Sai Ram Engineering College, Sai Leo Nagar, West Tambaram, Chennai-600044, Tamilnadu, India ----- 2)Mr. S. Ravindran 3)Mr.S. Ganapathy 4)Ajay Shrinivas N 5)D.Prabu 6)Arul Prakash M 7)Vetri Velmurugan K 8)Ranjith Kumar V Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Mr.V.Pandayaraj Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Sri Sai Ram Engineering College, Sai Leo Nagar, West Tambaram, Chennai-600044, Tamilnadu, India ----- 2)Mr. S. Ravindran Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Sri Sai Ram Engineering College, Sai Leo Nagar, West Tambaram, Chennai-600044, Tamilnadu, India ----- 3)Mr.S. Ganapathy Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Sri Sai Ram Engineering College, Sai Leo Nagar, West Tambaram, Chennai-600044, Tamilnadu, India ----- 4)Ajay Shrinivas N Address of Applicant :Student, Department of Mechanical Engineering, Sri Sai Ram Engineering College, Sai Leo Nagar, West Tambaram, Chennai-600044, Tamilnadu, India ----- 5)D.Prabu Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Sri Sai Ram Engineering College, Sai Leo Nagar, West Tambaram, Chennai-600044, Tamilnadu, India ----- 6)Arul Prakash M Address of Applicant :Associate Professor, Department of Mechanical Engineering, Sri Sai Ram Engineering College, Sai Leo Nagar, West Tambaram, Chennai-600044, Tamilnadu, India ----- 7)Vetri Velmurugan K Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Sri Sai Ram Engineering College, Sai Leo Nagar, West Tambaram, Chennai-600044, Tamilnadu, India ----- 8)Ranjith Kumar V Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Sri Sai Ram Engineering College, West Tambaram, Chennai - 600044 -----</p>
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(57) Abstract :

The present invention relates to the field of a method for design and investigation of compliant mechanism. The invention more particularly relates to a method for design and investigation of compliant mechanism in robotic gripper comprising of the following steps: designing and developing a robotic gripper; designing kinematics of the robotic gripper; designing the robotic gripper parameters; estimating the robotic gripper with linear time-variant system; estimating compliance by RLS approach; estimating compliance of hard objects by experimental data; and wherein contact force sensing is attached to the gripper finger to measure the contact force.

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