

Online Estimation of Clutch Drag Torque in Wet Dual Clutch Transmission Based on Recursive Least Squares

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Abstract : This paper focuses on developing an estimation method of clutch drag torque in wet DCT. The modelling of clutch drag torque is investigated. As the main factor affecting the clutch drag torque, dynamic viscosity of oil is discussed. The paper proposes an estimation method of clutch drag torque based on recursive least squares by utilizing the dynamic equations of gear shifting synchronization process. The results demonstrate that the estimation method has good accuracy and efficiency.

Keywords : clutch drag torque, wet DCT, dynamic viscosity, recursive least squares

Conference Title : ICAE 2016 : International Conference on Automotive Engineering

Conference Location : Prague, Czechia

Conference Dates : July 07-08, 2016