

论文

液力机械自动变速箱起步过程控制

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摘要:

为研究液力机械自动变速箱起步过程的换挡离合器控制, 在对装用液力机械自动变速箱的车辆起步过程进行动力学分析的基础上, 阐明了液力变矩器和换挡离合器在起步过程中的工作机理, 指出选用不同档位起步或同一档位不同路面阻力条件起步, 起步过程会有差异, 针对不同的起步过程制定了换挡离合器的控制策略, 结合两组试验数据对控制策略进行了分析, 验证了控制策略的正确性.

关键词: 液力变矩器 换挡离合器 起步过程动力学 起步控制策略

Start process control of a hydrodynamic-mechanical automatic transmission

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Abstract:

In order to study the control strategy of the clutch in the start process of a hydrodynamic mechanical automatic transmission, the hypostasis of the torque converter and the shift clutch in the start process was clarified according to the detailed analysis of the dynamic model of the start process of a vehicle with a hydrodynamic-mechanical automatic transmission. There are different start processes if different start gears were chosen or different road resistances at the same start gear were put forward in this viewpoint. The control strategy of the clutch was designed for different start processes. According to the contrast of two kinds of test data of the start process, the control strategy was analyzed, and the validity of the control strategy was proved.

Keywords: torque converter shift clutch dynamics of start process control strategy of start process

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