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A STUDY ON THE HOT-RUN TEST FOR THE ENTIRE 1ST STAGE PROPULSION SYSTEM OF
ZQ-2 LAUNCH VEHICLE

Abstract

“ZQ-2” is a medium-scale liquid oxygen/methane (LOX/LCH₄) launch vehicle developed by LandSpace Technology Corporation Ltd. (referred to as “LandSpace” hereunder), and it is also known as the first Chinese LOX/LCH₄ launcher. The first stage of ZQ-2 launcher has a diameter of 3.35 meters, a total length of 30 meters and configured with four “TQ-12” 80ton thrust-level LOX/LCH₄ engines. In order to test and verify the performance of the first stage propulsion system, LandSpace conducted the Hot-run test of the entire first stage propulsion system. The test verified the key technologies such as Self-Pressurization and transportation system for LOX/LCH₄ Tank, methane circulation precooling, cryogenic launcher POGO, unattended on-site operation during test and launch stage, which provides improvements for the development of LOX/LCH₄ launch vehicle.