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PARACHUTE-LANDING RECOVERY TECHNOLOGY OF LAUNCH VEHICLE STAGE

Abstract

Since the emergence of launch vehicle, people always research the technology of reusable launch vehicle. According to the stage return method technology category, the stage recovery are summarized as three types, including parachute-deceleration landing, propulsion-deceleration landing and winged-deceleration landing. Comparing to the other ways, parachute-deceleration landing recovery technology is easy and can be divide to sea-landing, hard ground-landing, air recovery. SRB of Shuttle,K-1 launch vehicle, first stage of Vulcan launch vehicle are typical examples. In this paper, the characteristics and key technologies of three types of parachute-deceleration landing are studied. Finally, The research progress of parachute-deceleration landing in CALT is presented briefly.

Keywords: reusable launch vehicleparachute recovery