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“CHINESE STYLE” MANNED LUNAR ROVER “WANGSHU’S CHARIOT” DESIGN

Abstract

A unique manned lunar rover, named as “Wangshu’s Chariot”, was designed by combining traditional Chinese culture with modern technology and following the evolution path of Chinese civilization. This “Chinese style” design was inspired by the bronze chariot and horses from Emperor Qinshihuang’s Mausoleum Site, from which some traditional Chinese elements were borrowed and integrated into the design, such as a pair of large wheels and a multi-functional roof. From the aspect of technology, this design enhances the comfortability and safety of astronauts, offers ample space for carrying more scientific instruments and storing samples. Aside from combining manual and autonomous driving, the rover also incorporated control concepts derived from satellites to solve control challenges ensure the safety and reliability. This paper will introduce the culture background and its fusion with modern technology in detail as well as practical considerations in the design.