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A STUDY OF MODEL FOR REGOLITH IN-SITU ROVER

Abstract

Regolith is a material that distributed on the surface of the moon which composed of 87The Moon has a large quantity of regolith as it's covered on the surface of the Moon. With these characteristics, it is convincible to manufacture the infrastructure efficiently with appropriate cutting-edge equipment and technologies to collect the regolith and manufacturing for self-sufficient. Drilling in-situ method is studied for regolith extraction. The KLS-1 uses which is the closest to the distribution of particle size of Moon soil 14163 which satisfies the main items and performance index of replicate Moon Soil specified by the international standard artificial moon soil accredited, NASA Marsall Space Flight Center (MSFC). And the drilling method was applied to a rover with storage, delivering, and production functions that increase high applicability. It was developed and tested, and this paper will cover model of rover, specification and design of situ pipe with theoretical values from simulation and calculation. It is expected this rover could improve to add additional functions for example, the regolith brick production process with regolith in-situ.