

SYMPOSIUM ON BUILDING BLOCKS FOR FUTURE SPACE EXPLORATION AND
DEVELOPMENT (D3)

Systems and Infrastructures to Implement Future Building Blocks in Space Exploration and Development
(2)

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CONCEPTUAL DESIGN AND CONSTRUCTION ON THE MOON BY POLYMERIC LUNAR
CONCRETE

Abstract

This article concerns a construction of lunar habitat. Human exploration is needed several conditions to live in space. Especially, planetary exploration should be different focus with International Space Satellite (ISS). It is mainly changed situation from the Earth, such as gravity and atmosphere. These elements have generally influence to explore in planet.

In-Situ Resource Utilization (ISRU) concept is how to live on planetary human exploration using by there. Nearest satellite planet, the Moon has 1/6G and vacuum environment. And there are lots of dust to make problem, for example, machine stuck, solar energy collecting disturb, human can get silicosis and so on. Thus, lunar concrete material is based on lunar soil with dust (weight 50

The lunar concrete is one of solutions in middle step which is between delivery 100