

HUMAN SPACE ENDEAVOURS SYMPOSIUM (B3)
How Can We Best Apply Our Experience to Future Human Missions? (2)

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WATER RECLAMATION DEMONSTRATION ON THE JEM (KIBO) FOR A FUTURE
LONG-DURATION MANNED MISSION

Abstract

For further manned space exploration, one critical issue is source recycling, especially water reclamation. JAXA is approaching to prepare for an on-orbit demonstration with development of a water reclamation system in 2015. Specification examination of the ISS technical demonstration model of this water reclamation system has been performed. Comparison and examination concerning various methods of water reclamation were conducted. Review of the system had been carried out by using these examination results. Consequently, electrolysis took the leading role and adopted RO and ion exchange bed for the latter part. With integrating all elements, Electric power will be less than 452 W and it's weight is 120 kg.