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MASS AND CONSUMABLE LOSS ANALYSIS OF EVA SPACESUIT CCPO SYSTEM

Abstract

Mass and consumable loss evaluation models for the extravehicular activity (EVA) spacesuit combined cooling-power-oxygen (CCPO) system were built up. Based on these models, the mass and consumable loss of the CCPO system were calculated at three typical lunar thermal environments, and then compared to other two kinds of cooling, power and oxygen systems. The conclusion indicates that, in reducing consumable loss, the CCPO system has obvious advantage over the other two kinds of systems, and the mass of the CCPO system is acceptable.