dard operations maintenance instructions. When damage is found on the sealing surface, the condition is documented.

A new AN reconditioning tool is set up to cut and remove the surface damage. It is then inspected to verify the fitting still meets drawing requirements. The tool features a cone-shaped interior at 36.5°, and may be adjusted at a precise angle with go-no-go gauges to insure that the cutting edge could be adjusted as it wore down. One tool, one setting block, and one go-no-go gauge were fabricated. At the time of this reporting, the tool has reconditioned/returned to spec 36 AN fittings with 100-percent success of no leakage.

This tool provides a quick solution to repair a leaky AN fitting. The tool could easily be modified with different-sized pilot shafts to different-sized fittings.

This work was done by Jason Lopez of Kennedy Space Center. Further information is contained in a TSP (see page 1). ***KSC-13235***

Active Response Gravity Offload System

Lyndon B. Johnson Space Center, Houston, Texas

The Active Response Gravity Offload System (ARGOS) provides the ability to simulate with one system the gravity effect of planets, moons, comets, asteroids, and microgravity, where the gravity is less than Earth's gravity. The system works by providing a constant force offload through an overhead hoist system and horizontal motion through a rail and trolley system. The facility covers a 20- by 40-ft (≈6.1- by 12.2-m) horizontal area with 15 ft (≈4.6 m) of lifting vertical range.

The overall design and implementation of the ARGOS system is unique and is at the time of this reporting the only known system of its kind. The interface of ARGOS to the human test participant is critical and is provided by a gimbaled system that was developed to align the pitch, yaw, and roll axes, and offload force provided by ARGOS, with the center of gravity of the object or person being lifted. This gimbaled system greatly improves the realistic feel of the simulated gravity to the person in the simulation. Therefore, the system allows the person to perform tasks such as walking as if the individual was on the surface of the celestial body being simulated. The system has been used for bipedal walking robots and human testing in a variety of simulated gravitation fields.

This work was done by Paul Valle, Larry Dungan, Thomas Cunningham, Asher Lieberman, and Dina Poncia of Johnson Space Center. Further information is contained in a TSP (see page 1). ***MSC-24815-1/24-1***