



STATUS OF IWCS

- Concept Complete Patents Applied For June 1985
- Feasibility Prototype Built and Tested for Pad Operation and Compaction, July, August, 1985
- Contracts let for STS 1-g and Flight Prototypes September 1985 (Whitmore Enterprises, San Antonio) with June 1986 Flight Test
- 1-g Prototype completed and tested For

Reliability

Function

Two Controlled Series with Synthetic Feces

Three Series With Feces

1. Controlled loading with individual samples
2. Actual Usage
3. Crew Compatibility Usage

STATUS OF IWCS

- Flight Prototype tested, accepted, and in storage for flight test.
- 1-g Prototype being converted to automated flight configuration.
- Space Station Mock Up constructed by contractor for Grumman

IWCS TEST RESULTS

Excellent reliability and crew acceptance

Easy to use, maintain

Near minimum expendables

1 each 10 x 10 x .025 in., (2.5 in³), and 0.51 oz. pad per use

Near optimum packing

1/4" x 8" x 8" (16 in³) in. 1-g with ~ 50% filling*

estimated max. of 1/6" x 8" x 8" (10.6 in³) in flight*

may be stored, returned in plastic bags

No complex mechanisms or controls

*(based on mean of ~100 random defecations)

IWCS TEST RESULTS

Manual back up

Weight 40-60 lbs., depending on station configuration

Electric Power

Calculated 250 x 30 watt seconds D.C. during opening, flushing

Measured: 350 watts A.C. for 50 CFM air flow in use.

Calculated 35 watts A.C. for standby (odor control) [can be intermittent]

Can be inexpensive