

Advanced Headform Total Inward Leakage Test System – FY12 (927ZKQY)

Objective

Develop and validate a total inward leakage (TIL) test system using headforms that have human-like characteristics and movements.



Applicable Standards related activities

- 42 CFR 84
- ISO TC94 SC 15

Key Partners

- AFRL (funding)
- BARDA (Funding)
- Hanson Robotics, Inc.

Stakeholders

- ISO
- Respirator Manufacturers
- Respirator Users

Project Scope

- Define objectives and optimal characteristics for a novel headform TIL test system
- Design and construct the test system
- Compare fit factors between manikins and human test subjects

Milestones FY12

- Q1 Obtained static headform
- Q2 Complete medium static headform benchmark testing
- Q3 Obtain IRB approval on test protocol. Complete benchmark testing on articulated headform
- Q4 Complete Phase 1 fit testing (subjects vs. static headform)

Outputs

- Manuscript published or submitted to peer-reviewed journals **(0)**
- Presentations to stakeholders or conferences **(0)**
- Standards committee meetings & public meetings **(0)**

Outcomes

- Project outputs will be used by ISO, ANSI, FDA, and NIOSH in the development of new standards
- Other researchers utilize the project outputs to initiate new research related to TIL testing

Updated: 04 April 2012