

## **ISWP Standards Working Group**

### **May 26, 2015 Meeting Recap**

The ISWP Standards Working Group met by conference call on Tuesday, May 26, 2015 from 12:00 p.m. to 1:00 p.m. U.S. Eastern Time. This document provides objectives, action items and a recap.

#### **Objectives**

1. Discuss test methods that each subgroup of the Standards WG came up with.  
Following are the subgroups:
  - a. Design Guidelines
  - b. Casters
  - c. Rolling Resistance
  - d. Corrosion

#### **Action Items**

1. Receive update from Don on the paint test – corrosion related test.
2. Each subgroup to refine the test methods and discuss in the next meeting.
3. Check if the group can receive additional data from Invacare form the circular track test
4. Investigate failure modes evident in the circular track test
5. Check if Pitt has the resources to develop the circular track with more different surfaces and real-world conditions simulated.

#### **Discussion**

1. Rolling Resistance
  - The group discussed the Cart Ramp problem and concluded that wheel mass and moment of inertia will come into play on softer surfaces
2. Casters
  - Caster rolling resistance test similar to the rear wheel RR test
  - Consider lateral loading of caster during durability test
  - Caster group to design tests for durability and abrasion

- Testing with caster fork in tests for impact and flutter, other tests including only the caster
3. Circular track test
- Possibly prototype the Invacare circular track test with real-world environments
  - Test results in correlation with field observations with tested WCs.
  - Track should simulate real-time speed, have similar conditions of sand and gravel affecting WC performance
4. Corrosion
- Procure results from 1000 hr paint test – Don S.

**Subgroups (for reference)**

- Design Guidelines: Mark Sullivan (interim lead), Daniel Martin, Jon Pearlman, Norman Reese, Chris Rushman, Eric Wunderlich
- Casters: Anand Mhatre (lead), Matt McCambridge, Jon Pearlman, Norman Reese, Don Schoendorfer
- Corrosion: Matt McCambridge, Don Schoendorfer
- Rolling Resistance: Matt McCambridge (lead), Jon Pearlman

## **Participants**

- ✓ Daniel Martin, Shonaquip
- ✓ Matt McCambridge: DEKA (formerly with Whirlwind)
- ✓ Norman Reese, LeTourneau University
- Karen Rispin, LeTourneau University
- ✓ Mark Sullivan, Convoid, Ride Designs and Polus Center (WG Chair)
- ✓ Don Schoendorfer, Free Wheelchair Mission
- Karl-Erik Westman, Handicap International
- ✓ Eric Wunderlich, LDS Church
- Chris Rushman, Motivation
- Dave Mahilo, Invacare
- Dr. Rory Cooper, University of Pittsburgh
- ✓ Anand Mhatre, University of Pittsburgh
- ✓ Dr. Jonathan Pearlman, University of Pittsburgh
- ✓ Nancy Augustine, University of Pittsburgh

Prepared by: Anand Mhatre, University of Pittsburgh