

Cargo MPS Task Group

7/28/2020

10:00 AM

WEBEX

Type of meeting: Task Group Meeting

Note taker: Dhaval Dadia

Attendees: Dhaval Dadia, Stephen Happenny, Calvin Ko, Louise Speitel, George McEachen, Pat Baker, David Shaw, Marlene Boettger, Andre Freiling, Rainer Beuermann, Ian Campbell, Adam Chattaway, Antonio Chiesa, Chen Long, Liz Zhiqiang, Sidney Teixeira, Suresh Sampath, Michael Diakostefanis, Michael Meyer, Yifang Xiong, Yu Xinhua.

Minutes

Agenda item: Next Meeting

Discussion:

Next meeting will be on Aug. 26.

Action items

Person responsible

✓ Prepare an agenda for the next meeting

Dhaval Dadia

Numerical Analysis of the MPS (University of Cranfield Presentation)

Andre

- New agents available

Halon Handbook Sections

- Establish Timeline to complete sections.
- CCHRAG - informative report by mid 2021
 - Working paper for 41st assembly - Fall 22
- Contact individuals for their report
 - Send report timeline to group

Appendix

Completion status of the report thus far.

1. Introduction
 - a. Purpose Dhaval
 - b. Background Dhaval
 - c. Scope Dhaval
 - d. Agent Selection Guidance Dhaval George
 - i. Environmental
 - ii. Toxicology
 - iii. Safety Risks (Material compatibility, toxicity)
 - e. Prerequisite Testing (Highly advised to conduct)
 - i. Pressure Vessel Testing Adam
 - ii. Flame Tube (Speed of flame front)*

2. Halon Replacement Handbook

a. Cargo Compartment Halon Replacement

- i. Leak Rate Tests **Dhaval, Karsten**
 1. Natural leak rate + U-Tube
- ii. Unsuppressed Fires **Adam**
- iii. **Halon Baseline Pat**
- iv. Acceptance Criteria **George, Adam, Pat (aerosol can rewording, surface burning fire details - send)**
- v. Halon Simulant Baseline
- vi. **Suppression System Design (Concentration Tests) Ian**
- vii. ~~Suppression System Activation~~
- viii. ~~Test Duration~~
- ix. **Bulk Load Fire David**
 1. **Toxicity Measurements Nels**
- x. **Containerized Fire Dhaval**
- xi. **Surface Burning Fire Adam**
- xii. **Aerosol Can Explosion Simulation Dhaval**
- xiii. Battery Fire* Multiple Fuel Test* **Enzo**

3. Appendices

- a. FAA Regulations
- b. Approval Process
- c. Regulatory Methodology Used by Other Countries
- d. **Cargo Test Cell Details and Instrumentation (U-Tube, Instrumentation, Permanent Gas Analysis) Nels**
- e. **Example of Water Mist Concentration Tests Karsten**
- f. **Toxicity Measurement Details and Sample Calculation Nels**
- g. **Ignition Source & Fire Load Details Pat**
- h. **Temperature and Pressure Compensation for Agents David, Terry**
- i. Pan Construction **Dhaval**
- j. **Aerosol Can Simulator Construction Details Dhaval**
- k. **LD3 Container Construction Details Dhaval**
- l. Cargo Test Results Analysis Example **Dhaval, Karsten**
- m. **Example calculation for leak rate calculation Dhaval**
- n. **Long Version of Aerosol can Explosion simulation Dhaval**