



V-22 FIRE PROTECTION UPDATE: DRY BAY ACTIVE FIRE SUPPRESSION AND SHIPBOARD FIREFIGHTING

Presented 1 May 2002 to:

Halon Options Technical Working Conference
Albuquerque, New Mexico

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V-22 Update: Dry Bay Fire Protection



- Additional dry bays identified as candidates for active dry bay fire suppression
- V-22 Program “Way-Forward” efforts include:
 - Technology risk reduction & BHTI trade study
 - Fire suppression commonality emphasis
 - Potential technology candidates include:
 - Chemically active gas generators
 - Aerosol propellant gas generators
 - Simple Passive Extinguisher or “SPEX” concepts
- Block C Implementation Planned (Lot 10/2008)



V-22 Update: Shipboard Fire Fighting



Fire Fighting Complement:

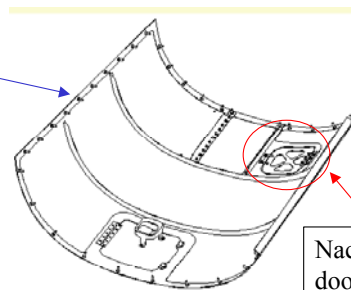
- Flight deck & Catwalk station portables: one 18-lb PKP, one 15-lb CO2 with 7-ft wand.
 - Previous V-22 Sea Trials: Concern raised as to suitability of wand for accessing nacelle and extinguishing a nacelle fire
- P-25 fire truck: AFFF & water (500-gpm), three 20-lb halon 1211 portables.
- NOT SHOWN: AFFF & water 1.5" and 2.5" handlines, 250-gpm and 95-gpm respectively.



V-22 Update: Shipboard Fire Fighting



96.8" deck edge to nacelle CL



Nacelle belly door fire fighter access panel (on fwd side).

IR Suppressor: not available for initial test series.



V-22 Update: Shipboard Fire Fighting



- Results:
 - Existing shipboard wand determined to be unsuitable.
 - Tested representative nacelle fire threats (hydraulic fluid fires).
 - Over-the-Deck: New wand; CO2, Halon 1211, FM-200, FE-36, Novec 1230.
 - Over-the-Water: AFFF & Water from P-25, 2.5” & 1.5” Handlines.

<u>Scenario</u>	<u>No/Moderate Wind</u>	<u>High Wind (30-35 knots)</u>
Over-the-Deck	Tested agents: fire out, no relight	Only Halon 1211 100% successful; CO2 & 1230 ext'd fire, relight followed
Over-the-Water (HL tests were no-fire tests)	P-25: fire out, no relight 2.5” HL: opened door 1.5” HL: door not opened	No fires extinguished, though P-25 opened door (exhausted available AFFF & water to open door)

- Follow-on test series - fleet shipboard firefighter(s) participation:
 - Qualify new wand; also plan to perform mid wing area tests
 - Retest nacelle fires under high winds
 - with IR suppressor
 - Planned discharge test of on-board nacelle HFC-125 extinguishing system