

PROPOSED AIA CRASHWORTHINESS DEVELOPMENT PROGRAM

OBJECTIVES

The Objectives of the proposed AIA crashworthiness development program are improvements in the state-of-the-art as it applies to aircraft crashworthiness and the determination and evaluation of new and improved methods, equipment, and design characteristics that will substantially increase the passenger's chance of survival in an aircraft accident by:

- (a) Protecting passengers from smoke and toxic fumes and heat inside the aircraft and extending the period of survivable cabin atmosphere.
- (b) Moving passengers to the exits as quickly as possible.
- (c) Providing means by which passengers may reach the ground rapidly and safely.

SCOPE

The following areas will be covered:

1. Fire-resistant materials:
 - Industry Search for Materials Available for Early Incorporation.
 - Test Above Materials.
 - Establish Improved Criteria.
 - Establish Test Methods.
 - Initiate Advanced Material Development Program.
2. Fire-suppressant systems and smoke and fume protection:
 - Foam.
 - Fog.
 - Freon.
 - Powder.
 - Vents.
 - Curtains, Compartments and Masks.
 - Insulation, Walls and Floors.
 - Ventilation Air Flow Control.
3. Emergency lighting and exit awareness:
 - Interior Light Level.
 - Interior Light Intensity Distribution.
 - Exit Awareness.
 - Interior-Exterior Light Interrelation.
 - Warning Systems.
4. Evacuation:
 - Slide Improvement:
 - Flow Characteristics.
 - Fire Resistance.
 - Overwing Exit Passenger Flow Characteristics.
 - Exit Actuation.
 - Study Accident and Evacuation Demonstration Data.

ANTICIPATED PROGRAM TIMING

It is planned that this crashworthiness development program will commence immediately upon enactment of regulatory changes resulting from the NPRM, assuming that such regulations do not supersede the need for development in those areas described herein. Delaying the development program start until enactment of regulatory change could well affect and modify some areas of the proposed development work. However, if the FAA decides that certain of the regulatory areas will be delayed, then industry agrees to start the development program upon receipt of formal notification from the FAA to this effect. This agreement should be so worded as to assure that during the course of the development program undertaken, no regulatory changes will be promulgated by the FAA that would supersede the objectives of the development program.

As described herein, the program will continue for a period of 12 months. AIA/FAA coordination is planned during the program so that as major test or decision milestones are reached, program progress can be monitored. Twelve months from initiation of the program, the AIA will submit the following to the FAA:

- Test reports, including results of the development work and conclusions drawn therefrom.

- AIA proposed wording for regulatory changes in each technical area.

AIA proposes incorporation of the necessary hardware to comply with the suggested regulation changes on all new jet transport aircraft certificated to