Past Experiences and Future Trends for Composite Aircraft Structure

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Abstract
Applications of composite materials in aircraft products have spanned several decades. These products include small airplanes, propellers, rotorcraft, military jets, and transport aircraft. Historical perspectives on composites used in airframe structure will be summarized, including thoughts on product development, certification, production and service difficulties. This will include a review of critical design, manufacturing, maintenance, and cost issues for composite aircraft structures. An introduction to the damage tolerance of composite aircraft structure will be given some emphasis. The technical challenges and barriers to expanding, new applications will also be discussed as related to career opportunities.

Speaker Bio
Dr. Larry Ilcewicz is the FAA Chief Scientific and Technical Advisor for Composite Materials. He started work with the FAA in 1998. Since joining the FAA, he supported many new small airplane, rotorcraft and transport aircraft certification programs. He has also worked on accident investigations and service problems involving composites. These experiences helped Larry develop an international plan for composite safety and certification initiatives to work with industry, academia and other government groups in pursuit of guidance, training and standardization. Larry came to the FAA from Boeing, where he worked 17 years on various programs in the commercial transport aircraft division. This included support to 737, 757, 767 and 777 aircraft in various stages of development, production and service.

Dr. Ilcewicz holds a dual PhD degree in Mechanical Engineering and Wood Physics from Oregon State University. He has authored/co-authored more than 70 technical papers and is the Co-chairman for Composite Material Handbook 17 (CMH-17).


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2–2:50 PM, COVELL 117 (MIME LIBRARY)
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