

**Hugh M. Reynolds**  
**Retired and a Consultant to Aerospace Companies**



**Industry:** Aerospace Equipment **Univ./degree:** B.S., Mechanical Engineering w/Aerospace option, 1969; M.S., Mechanical Engineering, 1970, University of California at Davis **Current organization:** Retired and a Consultant to Aerospace companies **Title:** Composite Design Specialist **Type of organization:** Design and manufacturing **Major products:** Rocket Motors **Expertise:** 33 years in Design of Rocket Motor Hardware and Composite Structures **Honors/awards:** United Technologies Award for Extraordinary Achievement in Product Design (IUS Rocket Motor Cases), 1979, Co-Recipient of the 1996 Pratt and Whitney Leadership Award for the Thaad Composite Motor Case, Pratt and Whitney Associate Fellow, 2001, Fellow 2004 in Rocket Motor Case Design **Published works:** 15 technical papers concerning rocket propulsion and component design; highlights – “Composite Case Design/Analysis – the State-of-the-Art”, presented at the AIAA 25<sup>th</sup> Aerospace Sciences Meeting, Jan. 1987, Reno, NV and the 39<sup>th</sup> AIAA Joint Propulsion Conference on 20 to 23 July 2003 in Huntsville, Alabama as part of the AIAA Lecture Series; Carbon Fiber Filament-Wound Rocket Motor Case Damage Technology – P&W SP Experience – presented at The 39<sup>th</sup> AIAA Joint Propulsion Conference on 20 to 23 July 2003 in Huntsville, Alabama, Solid Rocket Motor Test/Test Techniques, Filament-Wound Insulated Motor Case Strength Testing – presented at the AIAA 25<sup>th</sup> Aerospace Sciences Meeting, Jan. 1987, Reno, NV and the 39<sup>th</sup> AIAA Joint Propulsion Conference on 20 to 23 July 2003 in Huntsville, Alabama, Composite Case Design and Modeling, presented at the 52<sup>nd</sup> JANNAF Propulsion Conference on May 10-13, 2004 in Las Vegas, Nevada **Patents:** 5 issued for Rocket Motor Technology; Transverse Stiffness Augmentation Bearing - U. S. Patent number 3,936,058, Contemporary Composite Polar Boss - U. S. Patent number 4,807,531, Advanced Composite Polar Boss - U. S. Patent number 4,852,347, Rocket Motor Case Which Meets the Insensitive Munitions Criteria (MIL-STD-2105A) - U. S. Patent Pending (not submitted), Strategically sustainable, Non-Cancer Suspect Epoxy Resins (4) – U. S. Patent 7,044,324, European patent no. 04256361.9, Lightning Strike Mitigation System – U. S. Patent 7,093,787, European Patent awarded No. 04251120.4-2422 **Affiliations:** American Institute of Aeronautics and Astronautics; Society for the Advancement of Materials and Process Engineering

