



Robert J. Schwinghamer Jr.

July 28, 2014

R.J. Schwinghamer Robert John Schwinghamer, Jr., 86, of Huntsville, Alabama, passed away Monday, July 28, 2014 in Huntsville, Alabama. He was born in Jasper, Indiana on March 12, 1928 to Robert J. Schwinghamer, Sr. and Eustella Uebelhor Schwinghamer.

. Mr. Schwinghamer received his BS in Electrical Engineering from Purdue University in 1950, attended Massachusetts Institute of Technology in 1968 and received his Master's in Business from Sloan School. He was a member of Our Lady, Help of Christians Roman Catholic Church and was Associate Director Technical at NASA George C. Marshall Space Flight Center. Mr. Schwinghamer was stellar amongst the nation's foremost experts in the field of aerospace materials and process engineering. He entered Federal service in 1957 with a U.S. Army agency as a member of the Dr. Wernher von Braun rocket research and development team. He transferred with that team to the National Aeronautics and Space Administration's George C. Marshall Space Flight Center when it was formed in 1960.

His career was characterized by brilliant achievements in both the managerial and technical fields of endeavor. He served as Associate Director Technical at NASA's George C. Marshall Space Flight Center and participated with the director in managing major laboratories, unique research and test facilities, and the work of 2,000 scientists and engineers, dedicated to the national space program. Research fields in which he specialized include advanced metal forming and joining, compatibility of materials in liquid and gaseous

oxygen, space environmental effects on materials, and research in special materials and processes for space vehicles. He was the author or co-author of over 50 technical papers and holds 12 U.S. and 7 foreign patents.

Early in his career, Mr. Schwinghamer made a number of far reaching and lasting technical contributions to the Saturn-Apollo Program. He pioneered the use of intense transient magnetic fields for forming aerospace materials and has several basic patents on these devices. He also invented the magnetomotive hammer, which continues to exceed expectations when applied to the difficult metal working problems of large tanks and is still considered to represent the leading edge of magnetomotive forming.

Mr. Schwinghamer developed a solar shield to provide temperature control and retain the habitable environment in the Skylab interior when the micrometeoroid shield malfunctioned and caused overheating inside Skylab. When the Space Shuttle was on the pad for its first launch in 1981, the external tank thermal protection material came loose and its quality for flight became highly questionable. Mr. Schwinghamer was charged with investigating the thermal protection material and finding an immediate solution for bonding the deficient materials at the launch pad.

In the immediate aftermath of the Challenger accident, Mr. Schwinghamer headed the MSFC investigation of the solid rocket motor failure. Working for six months with only one day off, his team continued testing of the o-ring materials, seeking, on an international basis, the best possible material for the redesigned solid rocket motor.

In 1996, he headed the MSFC team assigned to the overall NASA Tethered Satellite Failure Investigating Team. Within eight weeks, his team deduced the failure mode and reproduced the Tether material failure in extensive laboratory tests. In the fall of 1996, the National Transportation Safety Board requested NASA assistance in the investigation of the TWA-800 disaster. In response, extensive analysis and testing of materials from TWA-800 was done by the Marshall Space Flight Center Team, headed by Mr. Schwinghamer.

Subsequently, NTSB Chairman Jim Hall wrote to NASA Administrator Goldin,

praising the MSFC Team and Mr. Schwinghamer for the professionalism, cooperation and their timely contribution to the investigation.

Mr. Schwinghamer retired from the position as Associate Director Technical of Marshall Space Flight Center of NASA in January, 1991 after 41 years of Federal Service. After retirement, he served as an Aerospace Consultant for NASA and consulted on 14 reviews and investigations. Survivors include his wife of 63 years, Constance Gramelspacher Schwinghamer; daughters, Elizabeth Tomlin (Henry B. III) of Greenville, SC and Robyn Hilborn (Richard) of Texarkana, TX; and grandchildren, Henry B. Tomlin, IV, Peter Tomlin, Mary Elsa Tomlin, James Hilborn, Joseph Hilborn, Thomas Hilborn and Ann Marie Hilborn. He was preceded in death by his parents, Robert J. Schwinghamer, Sr. and Eustella Schwinghamer and daughters, Denise Schwinghamer and Toni Schwinghamer.

Funeral services for R.J. Schwinghamer will be held at 11:00 a.m. Thursday, (August 7, 2014), in St. Joseph Catholic Church with burial to follow in Fairview Cemetery in Jasper. Visitation will be from 5:00 to 8:00 p.m. Wednesday, (August 6, 2014) at the Becher-Kluesner Downtown Chapel in Jasper. In lieu of flowers, memorials may be made to your favorite charity. Condolences may be made at www.becherkluesner.com.

Tribute Wall



“ *Robert J. Schwinghamer Jr.*

January 01, 2023 at 10:54 AM



“ *Our Sincere Sympathy! Been long time since met, attending funeral mass, not sure who was Connie. Visited with Stella many times with Cora, Glen & by myself taking cakes, cobblers. Representing at mass, Eugene Schott, my uncle, going to Purdue with Bob, Cora & Glen, Bob & Stella, God Bless Them & all of you. Would have sent card, don't have your address. Love & Prayers, Barbara & Dave Thomas*

DAVE& BARBARA THOMAS - August 08, 2014 at 12:00 AM



“ *I'm so sorry for your loss. He was a great man. I was lucky to have worked for Bob for a lot of years, from the time I first started at NASA. My best NASA stories all involve him in some way. Not only was he technically brilliant. He was extremely honest & had the courage to remain his authentic self. He was a great man.*

L Carr - August 07, 2014 at 12:00 AM



“ *Our deepest and sincere sympathy goes out to your family at the loss of your husband, father and grandfather. Vincennes University Alumni and Foundation Staff*

Vincennes University Alumni and Foundation Staff - August 07, 2014 at 12:00 AM