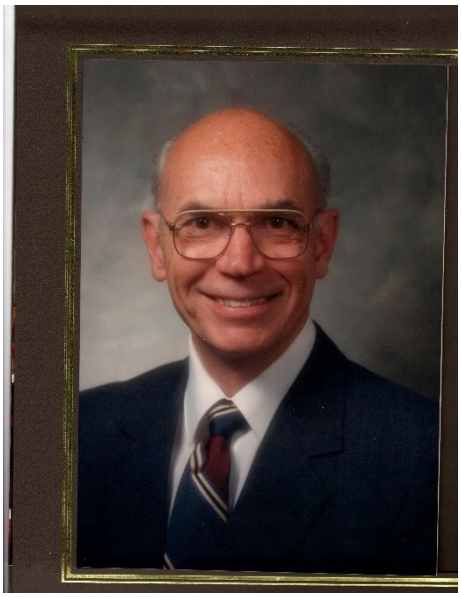
In Memory



Richard Keith Kirby (1927–2013)

In 2013 the thermophysical community lost one of the major contributors to the field of thermal expansion and reference materials, in general.

Mr. Kirby joined the National Bureau of Standards (NBS) in 1951 as a physicist, in the Length Section of the Optics and Metrology Division. While we associate him with the development of reference materials later in his carrier, in his earlier work he contributed to such practical studies as the thermal expansion behavior of Invar geodetic surveying tapes. Later on, as the Project Leader of the Thermal Expansion Group, he was personally involved in developing and certifying several Standard Reference Materials (SRM): Fused Silica, Platinum, Borosilicate Glass, Copper, Single Crystal Sapphire, Tungsten and others, each one playing an important role in enabling accurate measurement of thermal expansion in a multitude of laboratories during the Space Program, when there were no other reference materials available from anywhere in the world. When in 1975 NIST (successor to NBS) terminated the certification program of new thermal expansion SRMs, Keith became Coordinator and Project Manager of the Office of Standard Reference

Materials until 1985, when he was named Chief and later Acting Director of the Office of Calibration Services.

He organized the ASTM E37.05 Subcommittee on Thermal Expansion and was its Chairman for many decades. His active participation in this area led to the crafting of the first ASTM E228 Linear Thermal Expansion Standard Test Method using a Quartz Dilatometer, which, with revisions and scope variations over many decades, has served as model for several other expansion related ASTM Standard Test Methods as well as Practices, and it has survived on the books to this date.

Besides his over 30 publications, he also authored the chapter on Thermal Expansion in the American Institute of Physics Handbook, 2nd Ed., Several NBS Special Publications, Volume 12 of Thermal Expansion of Metallic Elements and Alloys and Volume 13, Thermal Expansion of Nonmetallic Solids, Thermophysical Properties of Matter (TPRC Data Series by Touloukian).

In 1968, Mr. Kirby was Co-Chair and Co-Organizer of the First Thermal Expansion Symposium (Later renamed the International Thermal Expansion Symposium), which merged with the International Thermal Conductivity Conference in 1997. He was always ready to share his knowledge with those who sought him out for advice on thermal expansion. He was a permanent fixture at all ITCC-ITES conferences, and was a member of the Governing Board up to 1997, even past his retirement from NIST in 1986.

Those of us who had the privilege of knowing him, will miss him.

In Memory of Coultas D. Pears

The thermal conductivity community lost a strong contributor and inspirational leader with the passing of Coultas “Colt” Pears in May, 2011. Colt was instrumental to the hosting of the 12th Thermal Conductivity Conference in Birmingham AL. in 1972 and was elected a Fellow of the Conference in 2007.

Colt was born February 7, 1925 in Clarksburg, West Virginia. He was a U.S. Navy veteran who served as a navigator on board ships in the Atlantic during WWII. He earned a B.S.M.E. degree at Tulane University in 1949 where he was a top player on Tulane’s tennis team and sixth man on the basketball team. An avid sportsman all his life, he was in

the South's top bracket of amateur tennis players during the 1960's - 1970's. After college he directed the coal gasification research for the Bureau of Mines for 10 years and headed Alabama Power's Underground Coal Gasification Project.

Colt joined Southern Research Institute in 1957, establishing a vanguard engineering organization that regularly proffered novel means of understanding complex new materials' behavior in extreme environments. In the execution of his vision, early work by his Analysis and Measurements Section evolved into a major Southern Research function– the Mechanical and Materials Engineering Department. Work in the Department targeted America's aerospace needs, stressing high-temperature technology and characterization. Colt's work was key to U.S. Department of Defense and space program successes, including Apollo and the shuttle. His findings also extend to countless other applications, including automotive engineering, pollution control, and power generation. In 1963 his test furnace, which achieved a record-breaking 6500-degree capability, made the "IR 100." *Industrial Research* magazine's list of notable new products. In 1964, the American Society for Testing and Materials' Templin Award recognized the gas-bearing tensile-stress-strain apparatus Mr. Pears developed as the year's most significant contribution to testing. Long dedicated to professional service, Colt chaired the ASTM Committee on Manufactured Carbon and Graphite Products for three terms and held regional ASTM offices. He received the ASTM Outstanding Service and Leadership Award. Colt holds or shares five patents and was elected to the Alabama Academy of Science. He also served on the National Academy of Sciences' National Council and its Materials Advisory Board. The materials evaluation facility that Colt created at Southern Research joined a handful of places worldwide where thermal and mechanical properties are routinely tested and studied at up to over 5000 thousand degrees. That facility, named for Colt in 2016 and now housed in the Engineering Research Center for which Colt lead the design, entered the Alabama Engineering Hall of Fame in 1991. He was inducted as an individual in the Alabama Engineering Hall of Fame in 2006. His work on composite materials is still definitive, and Southern Research is a Department of Defense "critical facility."

Appointed vice president emeritus and Distinguished Engineer at Southern Research in 1993, Mr. Pears continued to consult on Institute research until his passing. He is survived by his wife, Geraldine "Jo" Pears and three children: Gary C. Pears, Robert M. Pears and Sandra Pears-Wilson.

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