

NASA JOHNSON SPACE CENTER ORAL HISTORY PROJECT

BIOGRAPHICAL DATA SHEET

NAME: Kenneth "Kenny" Samuel Kleinknecht

ORAL HISTORY: 10 September 1998
25 July 2000

EDUCATIONAL BACKGROUND:

B.S. in Mechanical Engineering, Purdue University, West Lafayette, Indiana, 1942
Course in Space Technology, University of California, Lancaster, California, 1958

MILITARY EXPERIENCE:

Private, United States Army, Air Corps Enlisted Reserve, 1944-1945

PRE-NASA CAREER:

NACA Aircraft Engine Research Laboratory, Cleveland, Ohio (1942-1951)
Junior Mechanical Engineer (1942-1943)
Mechanical Engineer (1943-1948)
Aeronautical Research Scientist (1948-1951)
NACA / NASA High Speed Flight Research Station, Edwards AFB, Muroc, California
(1951-1959)
Mechanical Engineer, Design (1951-1952)
Flight Operations Engineer, Head, Operations Engineering Section, Flight Branch, Flight
Research Division (1952-1956)
Aeronautical Research Scientist (1956-1959)
Head, Operations Engineering Section, Flight Branch, Flight Research Division
(1956-1958)
Office of the Chief (1958-1958)
Head, Special Projects Group (1958-1959)
Advanced Projects Management Officer (1959-1959)

NASA CAREER:

NASA Space Task Group (STG), Langley Research Center, Hampton, Virginia
Aeronautical Research Engineer, Technical Assistant to the Director (1959-1961)
Aerospace Technologist, Technical Assistant (for Research and Development) to the
Associate Director (1961-1962)
Manager, Mercury Project Office (1962-1963)
NASA Manned Spacecraft Center / Johnson Space Center, Houston, Texas
Deputy Manager, Gemini Program Office (1963-1967)
Manager for Command and Service Modules (CSM), Apollo Spacecraft Program Office
(1967-1970)
Manager, Skylab Program Office (1970-1974)

Director of Flight Operations (1974-1976)
Assistant Manager, Space Shuttle Orbiter Project Office (1976-1977)
NASA Headquarters, Washington, DC
Deputy Associate Administrator for Space Flight, Space Transportation Systems
(European Operations), ESA, Spacelab Program (1977-1979)
NASA Johnson Space Center, Houston, Texas and Kennedy Space Center, Cape Canaveral,
Florida
Assistant Manager (specifically Vehicle Manager for OV-102), Space Shuttle Orbiter
Project Office (1979-1981)

POST-NASA CAREER:

Martin Marietta Aerospace / Lockheed Martin Astronautics, Denver, Colorado (1981-1990)
Manager, Program Engineering
Senior Space Transportation System Technical Advisor
Manager, Manufacturing, Procurement and Testing (1983-1984)
Director, Design to Cost / Productivity of Space Station Project (1984-1988)
Manager, Laser Project, Zenith Star Program (1988-1990)

CURRENT OCCUPATION: Retired, 1990

PROFESSIONAL & HONORARY SOCIETIES:

- Member, Society of Automotive Engineers
- Roster of Scientists and Engineers in the Federal Service and National Register of Scientific and Technical Personnel
- Honorary Member, Korea Space Science Society
- Honorary Member, National Society of Aerospace Professionals, San Diego, California
- Associate Fellow, American Institute of Aeronautics and Astronautics (AIAA)
- Fellow, American Astronautical Society (AAS)
- Corresponding Member, International Academy of Astronautics
- Scottish Rite Masons
- Member, Executive Board of Directors, Sam Houston Area Council, Boy Scouts of America
- National Contract Management Association

AWARDS & CITATIONS:

- NASA Group Achievement Award, Mercury Project Office, MSC, 1962
- NASA Medal for Outstanding Leadership from the President of the United States, 1963
- John. J. Montgomery Award (San Diego chapter of the National Society of Aerospace Professionals), 1963
- NASA Group Achievement Award, X-15 Flight Test Organization, Flight Research Center, 1964
- NASA Group Achievement Award, Gemini Program Office, MSC, 1966
- NASA Exceptional Service Medal, 1969
- NASA Distinguished Service Medal, 1969, 1973

- NASA Group Achievement Award, Manned Spacecraft Center, 1969
- MSC Group Achievement Award, Apollo Spacecraft Program Office, 1969
- William Randolph Lovelace II Award (AAS), 1975
- JSC Special Achievement Award, 1975
- JSC Group Achievement Award, Space Shuttle Program Definition and Preliminary Design team
- NASA Group Achievement Award, Lunar Landing Team
- NASA Group Achievement Award, Skylab Emergency Thermal Shield Development Team
- NASA Group Achievement Award, Skylab Achievement Award
- NASA Group Achievement Award, Earth Resources Experiment Team
- NASA Group Achievement Award, Lyndon B. Johnson Space Center
- NASA Group Achievement Award, Skylab Program Office
- JSC Group Achievement Award, Orbiter Processing Facility Build Team

SELECT PUBLICATIONS:

Kleinknecht, Kenneth S. "A Method of Installing Thermocouples in Coolant and Oil Lines (P-63 Airplane)." Cleveland: NACA Aircraft Engine Research Laboratory, 1944.

Kleinknecht, Kenneth S. "Flight Investigation of the Heat Requirements for Ice Prevention on Aircraft Windshields." NACA RM E7G28. Cleveland: NACA Aircraft Engine Research Laboratory, 1947.

Kleinknecht, Kenneth S. "Project Mercury, the Pioneer." In The NASA-University Conference on the Science and Technology of Space Exploration, in Chicago, Illinois, November 1962, by NASA Manned Spacecraft Center. Houston: NASA Manned Spacecraft Center, 1962.

Kleinknecht, Kenneth S. "The Rocket Research Airplanes." In The History of Rocket Technology, Essays on Research, Development, and Utility. Detroit: Wayne State University Press, 1964.

Kleinknecht, Kenneth S. "Role of Procurement in the Apollo Program." In Atomic Energy Commission Procurement Seminar, in Boulder, Colorado, October 1969, by NASA Manned Spacecraft Center. Houston: NASA Manned Spacecraft Center, 1969.

Kleinknecht, Kenneth S. "Design Principles Stressing Simplicity." Aeronautics and Astronautics 8 (March 1970): 46-49.

Kleinknecht, Kenneth S. "Skylab - What it Means to the State of Colorado." In American Institute of Aeronautics and Astronautics: Rocky Mountain Section Meeting, in Fort Collins, Colorado, March 1972, by NASA Manned Spacecraft Center. Houston: NASA Manned Spacecraft Center, 1972.

- Boynton, J. H. and Kenneth S. Kleinknecht. "Systems Design Experience from Three Manned Space Programs." In American Institute of Aeronautics and Astronautics: 6th Annual Meeting and Technical Display, in Anaheim, California, October 20-24, 1969, by NASA Manned Spacecraft Center. Houston: NASA Manned Spacecraft Center, 1969.
- Boynton, J. H. and Kenneth S. Kleinknecht. "Systems Design Experience from Three Manned Space Programs." Journal of Spacecrafts and Rockets 7, no. 7 (July 1970): 770-784.
- Brun, R. J., J. H. Levine, and Kenneth S. Kleinknecht. "An Instrument Employing a Coronal Discharge for the Determination of Droplet-Size Distribution in Clouds." NACA TN 2458. Cleveland: NACA Lewis Flight Propulsion Lab, 1951.
- Kleinknecht, Kenneth S. and L. W. Acker. "Flight Comparison of Performance and Cooling Characteristics of Exhaust-Ejector Installation with Exhaust-Collector-Ring Installation." NAA RM E6L13A. Cleveland: NACA Aircraft Engine Research Laboratory, 1947.
- Kleinknecht, Kenneth S. and L.W. Acker. "Comparison of Flight Performance of AN-F-58 and AN-F-32 Fuels in a J-35 Turbojet Engine." NACA RM E8L02. Cleveland: NACA Aircraft Engine Research Laboratory, 1948.
- Kleinknecht, Kenneth S. and L.W. Acker. "Effects on Inlet Icing on Performance on an Axial-Flow Turbojet Engine in Natural Icing Conditions." NACA RM E50C15. Cleveland: NACA Aircraft Engine Research Laboratory, 1950.
- Kleinknecht, Kenneth S. and D. R. Bellman. "Operational Experience with Rocket Propelled Airplanes." In Institute of the Aeronautical Sciences: 11th Annual Flight Propulsion Meeting, in Cleveland, Ohio, March 1956, by NACA High Speed Flight Research Center. California: NACA High Speed Flight Research Center, 1956.
- Kleinknecht, Kenneth S. and M. Bernardo. "Ground Tests of Flame-Damping Shrouds on a Bell P-63 Airplane." NACA MR E6C15. Cleveland: NACA Aircraft Engine Research Laboratory, 1946.
- Kleinknecht, Kenneth S. and A. S. Boksenbon. "Improved Carburetion from a Modified Ceco 58 CPB-4 Carburetor and its Effects on the Temperature of a Wright R-3350 Engine Part III, Cylinder Head Temperatures and Fuel Consumption in Flight with a Vultee Y-A31C Airplane." NASA MR E5F28. Cleveland: NACA Aircraft Engine Research Laboratory, 1945.
- Kleinknecht, Kenneth S., J. H. Boynton, and Aaron Cohen. "Major Subsystem Development in the Apollo Program." In National Aeronautic and Space Engineering

- Manufacturing Meeting, in Los Angeles, California, October 1969, by NASA Manned Spacecraft Center. Houston: NASA Manned Spacecraft Center, 1969.
- Kleinknecht, Kenneth S. and J. H. Levine. "United States Manned Spacecraft Reliability Experience." In International Astronautical Federation: 25th International Astronautical Congress, in Amsterdam, Netherlands, September 30-October 5, 1974, by NASA Johnson Space Center. Houston: NASA, Johnson Space Center, 1974.
- Kleinknecht, Kenneth S. and B. J. Miller. "System Safety as Applied to Skylab." In International Astronautical Federation: 25th International Astronautical Congress, in Amsterdam, Netherlands, September 30-October 5, 1974, by National Aeronautics and Space Administration, Johnson Space Center. Houston: NASA, Johnson Space Center, 1974.
- Kleinknecht, Kenneth S. and J. E. Powers, Jr. "Skylab Student Project." In International Academy of Astronautics: 23rd International Astronautical Congress, in Vienna, Austria, October 8-15, 1972, by NASA Johnson Space Center. Houston: NASA, Johnson Space Center, 1972.
- Kleinknecht, Kenneth S. and L. G. Williams. "Skylab Rescue Capability." In International Astronautical Federation: 23rd International Astronautical Congress, 5th International Space Rescue Symposium, in Vienna, Austria, October 8-15, 1972, by NASA Johnson Space Center. Houston: NASA, Johnson Space Center, 1972.
- Levine, J. H. and Kenneth S. Kleinknecht. "Adaptation of a Cascade Impactor to Flight Measurement of Droplet Size in Clouds." NACA RM E51G05. Houston: NACA Lewis Flight Propulsion Lab, 1951.
- Mathews, Charles W., Kenneth S. Kleinknecht, and R. C. Henry. "Gemini Program Features and Results." In Gemini Midprogram Conference, Including Experiment Results, in Houston, Texas, February 1966, by NASA Manned Spacecraft Center. Houston: Manned Spacecraft Center, 1966.
- Williams, Walter C., Kenneth S. Kleinknecht, William M. Bland, Jr., and James E. Bost. "Project Review." In Mercury Project Summary Including the Results of the Fourth Manned Orbital Flight May 15 and 16, 1963. Houston: NASA Manned Spacecraft Center, 1963.

BIOGRAPHICAL REFERENCES:

American Astronautical Society Fellow Nomination Form (14 January 1970), Kenneth S. Kleinknecht Key Personnel File, Awards Office, Lyndon B. Johnson Space Center, Houston, TX.

American Astronautical Society W. Randolph Lovelace II Award Nomination Form (27 February 1975), Kenneth S. Kleinknecht Key Personnel File, Awards Office, Lyndon B. Johnson Space Center, Houston, TX.

Curriculum Vitae (18 October 1974), Kenneth S. Kleinknecht Key Personnel File, Awards Office, Lyndon B. Johnson Space Center, Houston, TX.

Information Prepared by Bob Hood to Support the 1981 SES Rank Nominations (16 March 1981), Kenneth S. Kleinknecht Key Personnel File, Awards Office, Lyndon B. Johnson Space Center, Houston, TX.

NASA Biographical Data (March 1970), Kenneth S. Kleinknecht Biographical File, History Collection, Science and Technical Information Center, Lyndon B. Johnson Space Center, Houston, TX.

NASA Biographical Data (March 1970), Kenneth S. Kleinknecht Key Personnel File, Awards Office, Lyndon B. Johnson Space Center, Houston, TX.

NASA Biographical Data Sheet (January 1967), Kenneth S. Kleinknecht Biographical File, History Collection, Science and Technical Information Center, Lyndon B. Johnson Space Center, Houston, TX.

NASA Biographical Data Sheet (August 1971), Kenneth S. Kleinknecht Key Personnel File, Awards Office, Lyndon B. Johnson Space Center, Houston, TX.

NASA Johnson Space Center Senior Executive Service Position Form (1 January 1980), Kenneth S. Kleinknecht Key Personnel File, Awards Office, Lyndon B. Johnson Space Center, Houston, TX.

NASA Nomination Justification Statement for the Rank Meritorious Executive (8 May 1981), Kenneth S. Kleinknecht Key Personnel File, Awards Office, Lyndon B. Johnson Space Center, Houston, TX.

NASA Senior Executive Service Performance Appraisal Form (April 1980), Kenneth S. Kleinknecht Key Personnel File, Awards Office, Lyndon B. Johnson Space Center, Houston, TX.

NASA Senior Executive Service Performance Appraisal Form (June 1981), Kenneth S. Kleinknecht Key Personnel File, Awards Office, Lyndon B. Johnson Space Center, Houston, TX.

The Veterans of Foreign Wars of the United States Space Award Nomination Form (16 December 1974), Kenneth S. Kleinknecht Key Personnel File, Awards Office, Lyndon B. Johnson Space Center, Houston, TX.

Who's Who in America, 51st ed. Vol. 1, s.v. "Kleinknecht, Kenneth Samuel."

BIOGRAPHICAL DATA SHEET CREATED: 26 JUNE 1998