Reaction Motors Rocket Newsletter

Reaction Motors Reunion Committee May 2009

Sixteenth Biennial Reunion

Our Sixteenth Biennial Reunion was held at Zeris Inn on September 28, 2008. Even though our generation is maturing, we still had over 100 attendees. And, those who were lucky took home a Chrysanthemum plant. We are negotiating with some of our women employees to speak at our next reunion.

Looking forward to seeing all of you in September, 2010.

Reaction Motors Reunion Committee

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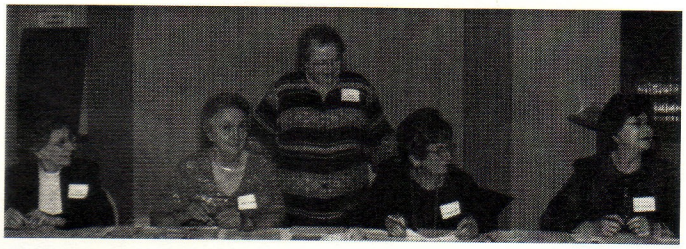
Welcome Rocketeers to The Sixteenth Biennial Reunion



The Ticket Collectors

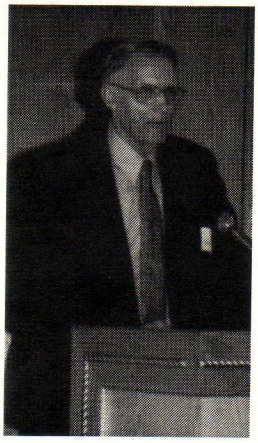
Nancy Chamberlain ❑ Betty Bradt ❑ Mary Hockenberry

Lucille Struble ❑ Betty Bracaglia

Keynote Address

By Robert Sawyer

Robert Sawyer summarized his 12 years experience in the Engineering Division. He started in Project Engineering in January, 1957 and ended his career as a Project Leader on the C-1 Attitude Control Common Engine for the Apollo Program. Bob was involved in several major programs including:



- Super "P" Engine Program for the Navy
- XLR-99 Engine for the NASA X-15 Hypersonic Research Aircraft
- Surveyor TD-339 Engine Lunar Soft Landing Program
- C-1 Common Engine Program for the Apollo Program
- Propellant Positive Expulsion Bladder System for the Condor Missile
- 6000 Engine; Catapult and Atlas Propellant Valves

Bob recalled some human interest anecdotal project experiences with co-workers Bob Seaman, Harry Burdette, Gay Caldwell, Lace Ferris, Don Zimmet, Jack Wiseman, Hank Pickering, and Dick Heilman.

Bob's contributions to these major programs were typical project engineering team efforts that resulted in successful program accomplishments.

Bob and his wife, Marie, are currently enjoying retirement in Bernardsville, New Jersey.

The Photo Album
Sixteenth Biennial Reunion

Attendees at Reaction Motors Sixteenth Biennial Reunion
September 28, 2008
107 Alumni from 9 states

Angus, Dick

Bartholomew, Ed & Carol
Bauerlein, Alois & Irene
Bracaglia, Betty & Julio
Bradt, Betty & Ed
Burwasser, Herman & Lillian

Carper, Bob & Pat
Chamberlain, Nancy
Cheetham, Charles & Carolvhay
Cherepy, Virginia
Chernack, Gil & Rosemarie
Chipko, Peter & Lucy
Cloitre,Louis
Cohen, Murray

DePreter, Elodie
Dwyer, Jim & Rita

Edwards, Dan

Fabbro, Al & Vilma
Fahey, Judy
Fletcher, Charles & Helen

Gaddis, Kenneth & Louise
Greco, Tony & Fran

Hackenburg, Robert & Susan
Hansen, Everett & Bernice
Harris, James
Hickerson, Fred, Louisa ,John
Hockenberry, Mary P.
Holder, Bob & Arline
Holland, Bob
Hurd, Lewis & Camille T.
Huson, George & Pat

Jenkins, Mary
Jolly, Robert & Elsie

Kastner, Carl & Shirley
Kimble, Floyd
Kircher, Hartman & Blanche
Kirk, Roberta
Konecnik, Cam

Larsen, Arnie & Leah
Lee, Allan
Lohman, Shirley
Loprest, Frank
Luperi, Mario

Masi, Phyllis
Mathisen, Fred & Dorothy
McAleer, Frank & Joan

Novotny, Raymond

Perry, Helen
Pfau, Beverly
Pickering, Henry & Pat

Quinn, John
Quinn, Merritt

Rarick, Barbara
Ruggerie, Don & Bonnie

Sapek, Joseph & Julia
Sawyer, Robert & Marie
Schmidt, Patti & Bob
Schreib, Rolland (Bob)
Schuttler, Marion
Siminski, Vince
Socolowski, Jean
Stark, Richard
Stone, Edith
Struble, Lucille
Steinmark, Leonard
Struthwolf, David

Tasker, Gordon & Nettie
Tick, Sanford

Wahlquist, Agnes
Walther, Manny
Webb, Richard & Julia
Wolf, Herbert

Some History
from
Power for Progress by Ronald J Dupont, Jr.

THE EARLY YEARS OF ROCKETRY

Rockets were invented at least 700 years ago, when the Chinese used them for both military and festive purposes. The British employed them in naval warfare in the early 19th century, but the age of modern rocketry began in the years during and after the First World War. In the United States, the great pioneer of rocketry was Dr. Robert H. Goddard, working first at Clark University in Massachusetts in 1914. In 1926, Goddard flew the first liquid-powered rocket.[1] In Germany, the German Rocket Society was established by the late 1920s, and by the early 1930s had made significant progress in the field. The American Rocket Society (see below) was established in 1930.

Though often lacking funding, and struggling with basic technological questions, these private organizations and research efforts laid down fundamental principles of modern rocketry. Rocket enthusiasts in both the U.S. and Germany enjoyed a degree of kinship and communication that, for political and military reasons, ended abruptly in 1934.

By the Great Depression, both the American public and government tended to regard rockets as the fanciful things of Buck Rogers and Flash Gordon. The military and private industry saw little practical application for rockets, and showed accordingly little interest. The Guggenheim Foundation supported rocket research at the California Institute of Technology with grants, and much rocket research and development occurred in academic environments. There were also occasional forays by rocket promoters into commercial applications, with sometimes-comical results. One such event took place at Greenwood Lake in 1936.

On February 23 of that year, Fred Kessler, founder of the "Rocket Plane Corporation of America," organized the launch of a vehicle he hoped would demonstrate the usefulness of rockets in delivering mail. The unmanned rocket plane that was built had a fourteen-foot wingspan and was made of the alloy “duralumin”; a spare vehicle was also constructed.

Dubbed the "Gloria," this odd aircraft was promoted by Willy Ley, a well-known German writer and journalist in the field of rocketry. Interestingly, it bore a passing resemblance to a German V-1 rocket, which in a few years would gain the world's attention. The design of the rocket, however, was apparently not on par with Ley's ability to generate public interest in it. On frozen Greenwood Lake, the "Gloria" was loaded with mail and fuel, placed on its launching catapult, and fired off. It went straight up, then down, then up, and then down--permanently.

The spare "Gloria" was brought forth, the mail transferred to it, and it was launched directly from the ice. It finally rose up and flew a quarter of a mile before the force of propulsion ripped its wings off. Most importantly (to its promoters), it made it to the New Jersey state line, where the enclosed mail was postmarked for eager collectors.[3] The surviving "Gloria" long hung from the rafters of the Greenwood Lake Boat Yard, and was later donated to the Aviation Hall of Fame and Museum of New Jersey at Teterboro Airport, where it remains today.

TABLE 1: CHRONOLOGICAL LIST OF SELECTED RMI PROJECTS AND ACHIEVEMENTS 64

1941	first U.S. Corporation dedicated solely to development of liquid rocket engines.
1943	3,000 lb. thrust JATO engine for Navy PBM.
1944	350 lb. thrust hypergolic engine for *Gorgon* experimental guided rocket missile.
1944	experimental rocket boat tested for potential use as landing craft in invasion of Japan; never used.
1945	620 lb. thrust engine for *Lark* guided missile, first in U.S. to go into production.
1946	6,000 lb. thrust four-chambered engine introduced; engine achieves numerous supersonic flights over next three decades of service.
1947-57	20,000 lb. thrust engines for *Viking* missile produced.
1947	Bell X-1 powered by RMI 6000C4 engine breaks sound barrier.
1947	"Spaghetti" combustion chamber construction developed, now used in Space Shuttle, among many other large-scale liquid fuel engines in the U.S.
1947	Experimental rocket-propelled ice sled tested on Lake Hopatcong, an off-duty private project of RMI employees; reaches speeds of 90 m.p.h. Only difficulty: stopping it.
1948	8,000 lb. thrust engine for Air Force MX-774 sounding missile, the first ICBM, precursor to the Atlas missile.
1949	Internal Combustion Catapult Powerplant developed.
1950	Engines for *Viking* No. 5 sounding rocket produced; reaches record-setting altitude of 108 mi.; also first large U.S. rocket launched at sea.
1951	6,000 lb. thrust engines (6000C-4) for Navy *Skyrocket* research plane.
1951-53	50,000 lb. thrust engine for *Super Viking* rocket developed; never became operational.
1952	6,000 lb. thrust engine (modified 6000C-4) for first fully supersonic combat aircraft, Republic XF-91.
1953	6,000 lb. thrust engines (6000C-4) for Bell X-1A produced.
1953	6,000 lb. thrust engine (6000C-4) for D-558-2 No. 2, first aircraft to exceed twice the speed of sound.
1954	Uprated 21,750 lb. thrust engine for *Viking* 11 produced; rocket sets new altitude record of 158 mi.
1954	40 lb. thrust engines for helicopters developed.
1955	Vernier engines produced for Atlas ICBMs; never adopted.
1958	12,000 lb. thrust Navy Bullpup-A missile engine developed; over 33,000 are produced by RMD.
1956-63	59,000 lb. XLR-99 engines for X-15 hypersonic space plane produced, the largest man-rated rocket aircraft engine ever produced; plane ultimately exceeds Mach 6.7, and an altitude of 67 miles.
1960	Engines for Navy Bullpup-B missile go into production; RMI produces 17,000.
1963	RMD receives NASA-Air Force Trophy for its contributions to the success of the X-15 hypersonic space plane project.
1966-68	Development of vernier TD-339 attitude-control rockets for seven NASA *Surveyor* lunar soft landers.

The Mail Box

RMI NOTES

A Note from Mary Alice Piccirilli

I do love seeing the notice in the mail about the reunions. It brings back many happy memories. As you know John and I met there and both of my brothers, Albert Miller and John, also worked at RMI. Those were the fun days when we attended all the ball games, bowling, dances picnics, and parties. I played for the women's basketball team. In fact, I brought a picture of our group which disappeared at one of the reunions. If it turns up, I would love to have it. It was wonderful being a pioneer/rocketeer at RMI, a wonderful place to work. Please say hello to the women I knew, Lee DeAngelo, Lucille, Patty and anyone else who may remember me. Have a great day September 28th. I will be thinking of all of you.

From Jack Del Grosso

We spoke a few days ago when I informed you that my wife, Ellen M. Kelly DelGrosso died of heart failure 5/08. She was 80 years old. She worked at RMI from 1946 to1954 when we married. I worked at RMI 1951 and 1952 when I joined the Navy. I returned to RMI in 1954 and remained there working in the materials lab as a Lab Tech until leaving in 1960 to pursue a sales career. In 1976 we moved to Sierra Vista, Arizona which is still our home. Ellen was a wonderful person and the best wife any man could ever want. Her 4 children, 7 grandchildren, 2 great- grand children and numerous friends, loved and will always miss her, as will I.

From Theresa Edwards

Theresa sold her home in Wharton, NJ and has moved to Indiana to be near her grandson. She sends her best wishes to the Rocketeers.

Comunication Request

Al Mock is interested in hearing from Carl Kastner, Chester Naldoney, Ray Novotny, Larry Vanderjagt, and Ray Marvinney. Get in touch with Al at 23182 Hemenway Ave., Pt. Charlotte, FL 33980-5811.

Notes of Thanks

The committee thanks Rita Dwyer and Cam Konecnik for sending us pictures taken at the 16th reunion.

The committee especially thanks Jean Socolowski for her continued interest in RMI and her notes to all the committee members.

Space Jokes

How do we know that Saturn was married more than once?
Ans:Because he has lots of rings.

Which chocolate bars do you eat in space?
Ans: Mllky-ways and Mars Bars.

When do astronauts have lunch?
Ans: Launch time.

Where do astronauts leave their spaceships?
Ans: At parking meteors.

In Memoriam List

Due to space, the committee voted to only list the co-workers who have passed on from August 2007 (the last Newsletter) to May 2009 (current Newsletter). We will continue this practice with each future Newsletter.

August 2007-May 2009

Eugene Biron 9/23/07

Alma Bahrs 9/26/07

Phil Keslo 2007

Evelyn Lewis 2/08

Norbert Socolowski 2/15/08

William Heiser 3/2/08

David Wildstein 4/5/08

Ellen DelGrosso 5/8/08

Frances Sproha 5/13/08

Ronald Storms 2008

Harry M. Bowman 7/4/08

John Kreps 8/1/08

Al Marcellis 8/15/08

John R. Federowicz 11/23/08

Carl S. Wolosin 3/4/09

Jesse L Acker 3/29/09

Joseph S. Santos 4/11/09

Russell B. McClain 4/13/09

Those We Just Learned About

Ewald Gerstmann 12/14/05

Charles Teske 4/16/05

William Lewis 2006

John McConnell 2006

Earle Gil 6/8/07

Richard Frazee

A complete **"In Memoriam List"** will always be available at all Reunions

We Appreciate Your Support

The Sixteenth Reunion would not have been as successful without the support of many who helped to defray expenses. The cost of printing and mailing the newsletter, as well as the reunion invitations, continues to rise over the years. Our committee wishes to sincerely thank the following who sent donations for our 16th reunion:

Dick Angus
Elizabeth Casey
Nancy Chamberlain
Gilbert Chernack
Pete Chipko
Jim & Rita Dwyer
John Grady
John Hurd
Bob & Elsie Jolly

See you in 2010

Ed Jung
John Miller
Al Mock
Ray Novotny
John Quinn
Pat Schmidt
Gordon Tasker
Larry Vanderjagt

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