

### Biography

**Name:** Gilbert (Gib) L. Arthur

**Present Affiliation:** NAVAIR Engineering Support Office  
Naval Air Rework Facility  
MCAS Cherry Point, NC 28533

**Title:** Chemical Branch Head



**Field of Interest/Responsibilities:** Chemical processes and materials involved with cleaning, metal surface treatment, electroplating, organic coatings, surface preparation for adhesive bonding and corrosion treatment and control.

**Previous Affiliations/Titles:**

Empire Menhaden Co., Empire, LA/  
Chief Chemist

**Academic Background:**

B. S. in Chemistry, High Point College, High Point, NC/1949

**Society Activities/Offices:**

ACS, NACE, SAMPE

**Publications/Papers:**

## Biography

**Name:**

F. L. (Fred) Banta

**Present Affiliation:**

Aerojet Strategic Propulsion Co.  
Sacramento, Ca.

**Title:**

Senior Engineering Specialist



**Field of Interest/Responsibilities:**

Engineering Materials & Processes  
Corrosion Prevention & Control      MX Stage II  
Adhesive Bonding      MX Common EPM

**Previous Affiliations/Titles:**

Chemical Systems Division of United Technologies  
Sunnyvale, Ca.  
Manager, Materials & Processes-Eng. Branch

**Academic Background:**

B.S. Engineering, University of Wisconsin  
M.S. Engineering, Stanford University

**Society Activities/Offices:**

ASTM - Member Main Committee E 24  
AMS Div. of SAE

**Publications/Papers:**

"Structural Adhesives for Missile External Protection Material"  
To be presented at 1981 JANNAF Propulsion Meeting - New Orleans

"Metallurgical Defects in Aerospace Materials"  
Presented at Ninth Annual Technical Meeting of International Metallographic Society - Seattle, Washington

"Casting - A Means for Low Cost-High Strength Rocket Motor Fabrication"  
Presented at ASM - Detroit, Michigan

"Low Cost Fabrication - Integral Rocket Ramjet Components"  
Presented at SAMPE - Kiamisha Lake, New York

ASM Handbook, Vol 4 "Forming"      Contributing author on Metal Spinning Section.

**Biography**

**Name:**

Hargrow Barber

**Present Affiliation:**

Naval Air Rework Facility, Code 120  
Alameda Naval Air Station, Alameda, CA 94501

**Title:**

Training Instructor  
Corrosion Engineer

**Field of Interest/Responsibilities:**

Training, Corrosion Control



**Previous Affiliations/Titles:**

None

**Academic Background:**

Degree in Chemistry, BS and MS  
Two years Metallurgy

**Society Activities/Offices:**

National Association of Corrosion Engineers  
Member T-9B and T-9D Technical Committee  
License number 142, California Corrosion Engineer

**Publications/Papers:**

None

### Biography

Name: LOUIS CAMPANARO

Present Affiliation: Aeronutronic Division  
Ford Aerospace & Communications Corporation

Title: MATERIALS ENGINEER



Field of Interest/Responsibilities: Materials and Processes/ material  
and process call-outs for division programs, corrosion control,  
specifications, manufacturing support, proposals, etc.

Previous Affiliations/Titles:

Rockwell International--Space Division-- /  
Member of Technical Staff

Academic Background:

PhD--Organic Chemistry--State University of Iowa

Society Activities/Offices:

SAMPE  
Alpha Chi Sigma

Publications/Papers:

Company Internal

**Biography**

**Name:** Larry W. Campbell, PE

**Present Affiliation:** McDonnell Douglas  
Aeronautics Company-St. Louis

**Title:** Senior Engineer



**Field of Interest/Responsibilities:** Corrosion Control on the Harpoon Weapon  
System (Anti-ship Missile)

**Previous Affiliations/Titles:**

Martin Marietta Aerospace - Denver Division - Michoud Operations  
Senior Engineer

**Academic Background:** B.S. - Ch. E. from University of Missouri at Rolla (1971)  
NACE Courses 1 & 5  
1980 MIT Corrosion Short Course  
NACE Corrosion Specialist-In-Training

**Society Activities/Offices:**

Member NACE/T-9B Chairman  
Member AICHE  
Member ASTM/G-1 Committee  
Member NSPE/Registered Professional Engineer in Louisiana

**Publications/Papers:** None

**Biography**

**Name:** Thomas A. Corboy

**Present Affiliation:**

Advanced Coatings and Chemicals

**Title:**

President

**Field of Interest/Responsibilities:**

Coating - Corrosion - Research as it relates

**Previous Affiliations/Titles:**

Dexter Corp. - General Manager

W.P. Fuller & Co. - Vice President

**Academic Background:**

AA City College S.F.

BS San Jose State College

MBA Golden Gate College S.F

**Society Activities/Offices:**

SAE / NACE / NPC / NPTC / SAMPLE / FCS /

**Publications/Papers:**

17 Patents Issued or pending

## Biography

**Name:** Eugene R. Fannin

**Present Affiliation:** McDonnell Aircraft Company,  
A Division of McDonnell Douglas Corp.

**Title:** Program Manager, Engineering Technology

### Field of Interest/Responsibilities:

Corrosion control, electroplating and inorganic coatings, vacuum deposition, materials development application. Presently program manager responsible for the Ivadizer equipment development and marketing.

### Previous Affiliations/Titles:

24 years with McDonnell Aircraft in Material and Process Development. Previous title - Manager - Nonmetallics Branch, Material and Process Development.

**Academic Background:** B.S. Chemical Engineering, University of Missouri, Rolla.

### Society Activities/Offices:

SAMPE                      ASM                      AES  
AIAA - Materials Technical Committee  
SAE - Nonmetallics Committee  
NMAB - Ion Implantation Committee

### Publications/Papers:

Ion Vapor Deposited Aluminum Coatings for Improved Corrosion Protection, AGARD Meeting, September 1978.

Aluminum Coated Fasteners by Ion Vapor Deposition, Finishing Conference (SMB), October 1977.

Ion Vapor Deposited Aluminum, Alternative for Cadmium, Workshop on Alternatives for Cadmium, October 1977

## Biography

**Name:** Catharine M. Flowers

**Present Affiliation:** Martin Marietta Aerospace  
1979-present P.O. Box 179, Denver, CO 80201

**Title:** MX Corrosion Control Engineer  
(Staff Engineer)

### Field of Interest/Responsibilities:

**Interest:** Corrosion control, finishes, materials selection, failure analysis  
**Responsibilities:** Corrosion control program for Martin Marietta part of MX contract.

### Previous Affiliations/Titles:

1974-1979 - Northrop Corporation/Sr. Engr, Mtls & Processes  
1972-1974 - NETCO, Inc., contracted to Aerospace Corp./Engr, Mtls. Lab.  
1970-1972 - Chemistry Department, Univ. of So. Calif./Research  
1969-1970 - Hughes Aircraft Co/Analyst  
1968-1969 - Chemistry Department, Univ. of Ca. at L.A./Teacher

### Academic Background:

B.S. Chemistry, Univ. of So. Calif., 1968  
Graduate courses at UCLA and USC - 1969 - 1976

### Society Activities/Offices:

Member of ASM, AES.

### Publications/Papers:

Photochemistry of Complex Ions. XII. Photochemistry of Cobalt (III) Acidoammines: R.A. Pribush, C.K. Poon, C.M. Bruce (now Flowers), and A.W. Adamson, University of Southern California, JACS, 96, 3027 (1974).



**Biography**

**Name:** Albert J. Glueckert

**Present Affiliation:** GARD, INC./ GATX CORP.

**Title:** Research Engineer



**Field of Interest/Responsibilities:** Corrosion and Coatings, Air Pollution

**Previous Affiliations/Titles:**

**Academic Background:** B.S. Chemical Engineering

**Society Activities/Offices:** A.I.Ch.E.  
N.A.C.E.  
Soc. for Coating Technology

**Publications/Papers:**

Biography

Name: Jack D. Guttenplan

Present Affiliation: Autonetics Strategic Systems Division  
Rockwell International  
D/274-044, Mail Code: 031-GA25; 3370 Miraloma Avenue, Anaheim, CA 92803  
Title: Member of the Technical Staff (MTS)



Field of Interest/Responsibilities: Corrosion, Electrochemistry, Material Science/Corrosion Prevention and Control Representative for Guidance and Control System of Missile X, Autonetics Representative on Corporate Technical Panel on Corrosion.

Previous Affiliations/Titles:

Magna Corporation (TRW), Anaheim, CA - Manager, Development  
Chrysler Corporation, Highland Park, MI - Group Leader, Electrochemistry Research  
C.F. Prutton and Associates, Cleveland, OH - Associate Engineer

Academic Background:

1945 Case Institute of Technology, Cleveland, Ohio - B.S. Chemical Engineering  
1948 Case Institute of Technology, Cleveland, Ohio - M.S. Chemical Engineering

Society Activities/Offices:

ASM/Chairman, Orange Coast Chapter 1978-79  
ASM/Chairman, Technical Program Committee, WESTEC 1980-1981  
NACE/T9E/Corrosion Specialist  
FAIC  
SIGMA Xi, TAU Beta Pi, Professional Engineer in Corrosion Engineering, California

Publications/Papers:

35 Publications/Papers in the Areas of Corrosion, Electrochemistry and Materials Science.

Recent Papers:

E. G. Shafrin, J. S. Murday, J. D. Guttenplan, and L. N. Hashimoto, "Chromate Film Used For Chemical Corrosion Control On Gold Plated PCB Connectors", Applications of Surface Science 4, 456-465, 1980.

J. D. Guttenplan and L. N. Hashimoto, "Corrosion Control For Electrical Contacts In Submarine Based Electronic Equipment", Materials Performance, Vol. 18, No. 12, 49-55, Dec. 1979.

J. D. Guttenplan and L. N. Hashimoto, "Cleaning Process For The MARDAN Computer", 5TH Contamination Control Seminar, Los Angeles, CA., October 1979.

J. D. Guttenplan, "Corrosion Prevention and Control", Orange County Chapter SPHE, Buena Park, CA., March 1979.

J. D. Guttenplan, "SPD - A NDT Method for Detecting Surface Contamination", Plating and Surface Finishing, Vol. 65, No. 6, 51-58, June 1978.

### Biography



**Name:** Alvin H. Ingram Jr.

**Present Affiliation:**

Naval Air Rework Facility  
NAVAIR Engineering Support Office  
Code: NESO 34200  
Norfolk, VA. 23511

**Title:**

Chemist

**Field of Interest/Responsibilities:**

Electroplating, Surface Chemistry Corrosion,  
Inorganic Coatings, Analytical Chemistry.

**Previous Affiliations/Titles:**

**Academic Background:**

B. S. Chemistry, 1963, Old Dominion  
University, Norfolk, VA.

**Society Activities/Offices:**

American Society for Metals  
American Electroplaters Society

**Publications/Papers:**

U. S. Patent, 3, 994, 751, Paint Adhesion  
Improvement

## Biography

Name: John R. Martin

Present Affiliation: The Foxboro Company  
Foxboro, Mass.

Title: Manager, Materials Research

Field of Interest/Responsibilities: Applied research related to materials used in industrial instruments and control systems. These units are expected to operate within tight performance specs and with a high degree of reliability in a broad range of environments.

Previous Affiliations/Titles:

General Dynamics/Electric Boat Division

Academic Background:

BS, Tufts University, Chem. Eng.  
MS, University of Connecticut, Chem. Eng.  
PhD, University of Connecticut, Polymer Science

Society Activities/Offices:

Soc. Plastics Eng., Engineering Prop. & Struct. Div.; Chm. Tech.  
Prog. Comm.;

AIChE

ACS

NACE

Int'l Electronics Pkg. Soc.

Publications/Papers:

15 Technical publications in open literature - primarily related to test and evaluation of polymeric materials for long term performance

3 Reports for NAVSHIPS; investigated elastomer characteristics relevant to sonar systems

## Biography



Name: J. B. Nathan, Jr.

Present Affiliation: Honeywell Inc.  
Defense Systems Division  
600 Second Street N.E.  
Hopkins, MN 55343

Title: Principal Materials & Process Engineer

### Field of Interest/Responsibilities:

Mr. Nathan is a Principal Materials and Process Engineer in Honeywell's Defense Systems Division. In this capacity he advises design engineering in the selection of materials, metal finishing treatments, heat treatments, metal joining techniques, encapsulation, fabrication methods, and sealing techniques for new electronic weaponry designs. For the past twelve years he has had the added responsibility of designing the long term - world wide storage corrosion protection systems of all DSD's electronic weaponry projects.

He served as project engineer for a multi-year corrosion study of various metal, paint coating, and sealant materials in ground burial environments. He was responsible for transferring the ground burial study results into the designs of Honeywell's buried sensor and traffic monitor product lines.

He was responsible for corrosion protection of Honeywell's sensor systems in the National Data Buoy System, a weather monitor attached to free floating marine buoys.

He was responsible for printed circuit assembly materials, and plastic molding compounds, encapsulating and potting compound selections for Honeywell's electronic fuze and scatterable mines programs.

For the past three-years he has been responsible for selecting the corrosion protection systems used on all U.S. Navy Torpedo systems designed and/or manufactured by Honeywell.

### Previous Affiliations/Titles:

Prior to joining Honeywell in 1968, Mr. Nathan was a Materials Engineer at Beech Aircraft Corporation, Boulder, Colorado and Cessna Aircraft Company, Wichita, Kansas. In those capacities he was responsible for all material and process controls at a military aircraft production facility, and for material and process selection and controls for Apollo and LEM cryogenic fuel tanks.

Academic Background:

B.S., Chemical Engineering, Kansas State University

B.S., Physical Sciences, Kansas State University

Registered Professional Engineer, State of Kansas

Society Activities/Offices:

Member - American Society for Testing and Materials

Member - National Association of Corrosion Engineers

Active Member of Corrosion of Aerospace Equipment Committee (T-9)

Moderator of the Corrosion Protection Panel Discussion at the 1980 NACE North Central Regional Conference.

Publications/Papers:

"A Program to Evaluate Materials for Underground Exposure in Extreme Environments," 15th National SAMPE Symposium, April, 1969.

"Evaluation of Materials for Underground Exposure in Extreme Environments," 4th SAMPE National Technical Conference, October, 1972.

"Fabrication and Laser Sealing of a Powder Metal Mercury Switch," 5th National SAMPE Technical Conference, October, 1973.

"Improve Small Item Concealment with Indigous Adhesive Camouflage", USA MERDC Passive Countersurveillance Symposium, April, 1973.

1970 Seals and Sealing Burden Study - Final Report  
(distributed within Honeywell D.S.D. Engineering).

"Pressure Sensitive Adhesive Film Characterization by Accelerated Aging," Adhesives Age, Vol. 17, No. 9, Spetember, 1974.

"Electroless Nickel Plating on Powder Metal Substrates", Plating and Surface Finishing, Vol. 65, No. 6, June, 1978.

"A Method for Moisture Proofing Ground Buried Cable Connectors and Splices," National Association of Corrosion Engineers, March, 1978, Paper No. 200.

"Conflicting Requirements in Military Specifications", National Association of Corrosion Engineers, March, 1979, Paper No. 150.

"A Method of Moisture Proofing Buried Cable Connectors and Splices", Materials Performance, Vol. 18, No. 6, August, 1979.

## Biography

**Name:**

James E. Preston

**Present Affiliation:**

Naval Coastal Systems Center, Panama City, Fla.

**Title:**

Mechanical Engineer



**Field of Interest/Responsibilities:**

Mechanical Design  
Materials Selection  
Failure Analysis  
Corrosion Control

**Previous Affiliations/Titles:**

Adjunct Instructor, University of Florida, Gainesville, Fla.  
Adjunct Instructor, Gulf Coast Community College, Panama City, Fla.  
Consulting Engineer, Reg. P.E. (Fla.)

**Academic Background:**

Bachelor of Mechanical Engineering, University of Florida, 1963  
Master of Materials Engineering, University of Florida, 1968  
Various Short Courses in Materials and Corrosion Engineering

**Society Activities/Offices:**

American Society for Metals  
National Association of Corrosion Engineers  
American Society of Mechanical Engineers, Past Chmn. Panama City Section

**Publications/Papers:**

BIOGRAPHY

Name: Harold J. Singletary  
Present Affiliation: Lockheed-Georgia Company  
Title: Staff Engineer



Field of Interest/Responsibilities: Corrosion & Its Prevention in Aircraft Systems/Provide design guidance and support in the prevention of corrosion in Lockheed-built products; participate in Air Force CPAB activities for the C-130, C-141 and C-5; develop corrosion oriented information for service manuals and technical orders; initiate corrective action on corrosion related problems; establish corrosion testing procedures; conduct classes in corrosion for Lockheed and customer personnel; contribute to the Engineering Design Handbook.

Previous Affiliations/Titles: Cee Bee Chemical Co., salesman & technical representative; The Martin Company, senior engineer; Hayes International Corp., materials and processes engineer.

Academic Background: University of Alabama, 1949

Society Activities/Offices: SAMPE, first vice-chairman of Atlanta Chapter; NACE, past chairman, Atlanta Section; Registered Professional Engineer.

Publications/Papers: "Aircraft Lavatories, A Corrosive Royal Flush", 9th National SAMPE Technical Conference, October 1977; "Growing Procedural Problems of Washing Mammoth Aircraft", Journal of Aircraft, Sept. 1974; "Maintenance of Aircraft Integral Fuel Tanks", Airlifters, July 1967, October 1967, and January 1968.



BIOGRAPHY

NAME: Ronald J. Olson

Present Affiliation:

3M  
Industrial Specialties

Title:

Technical Service Representative



Field of Interest/Responsibilities:

General Industry/Automotive/Aerospace as concerns surface protection and pressure sensitive bonding. Primary responsibilities include identifying new product opportunities, services and assuring product conformance to meet government, industry and 3M requirements.

Previous Affiliations/Titles:

Product Engineering and Development - 3M Industrial Specialties Div.

Academic Background:

University of Minnesota - Technical Course Study

Biography

Name: NARVEL L. ROGERS

Present Affiliation: Bell Helicopter Textron

Title: Chemical and Process Laboratory  
Assistant Group Engineer

Field of Interest/Responsibilities:  
Metal Finishing and Corrosion Control



Previous Affiliations/Titles:

Academic Background:

Attended Tarleton State College and  
The University of Texas

Society Activities/Offices:

NACE, T9B, T9D Committees  
SAMPE, Chairman, Dallas-Ft. Worth Chapter  
National Director - Dallas-Ft. Worth Chapter  
AUSA

Publications/Papers:

(See Attached Sheet for listing)

## PAPERS AND PUBLICATIONS:

1. "Surface Preparation of Metals for Adhesive Bonding", presented at Symposium on Structural Adhesive Bonding, September 1965, at Stevens Institute of Technology, Hoboken, N. J.; published in Journal of Applied Polymer Science.
2. "A Comparative Test for Corrosion Resistant Adhesive Primers", presented at SAMPE National Technical Conference, Aerospace Adhesives and Elastomers, October 1970, Dallas, Texas; published by SAMPE - National SAMPE Technical Conference Series, Vol. 2.
3. "Some Effects of Curing Conditions on Adhesion to Metal Surfaces", presented by SAE Automotive Engineering Congress and Exposition, Adhesive Symposium, January 1971, Detroit, Michigan; published by SAE.
4. "Corrosion of Adhesive Bonded Clad Aluminum", presented at SAE National Business Aircraft Meeting, March 1972, Wichita, Kansas; published by SAE.
5. "Developing a Reliable Surface Preparation for Adhesive Bonding", presented at Symposium on Processing for Adhesives Bonded Structures, August 1972, at Stevens Institute of Technology, Hoboken, N. J.; published in Journal of Applied Polymer Science.
6. "A Comparative Test for Bondline Corrosion - Clad Vs Bare Aluminum", presented at SAMPE National Technical Conference, Kiamesha Lake, N. Y., October 1973; published by SAMPE, National SAMPE Technical Conference Series, Vol. 5.
7. "Lead Interference in Bisulfate Etch Solution for Stainless Steel", presented at SAMPE National Symposium, April 1976, Los Angeles, California; published by SAMPE, 21st National SAMPE Symposium, Vol. 21.
8. "Bonding to Sealed Chromic Acid Anodize", presented at Symposium on Durability of Adhesive Bonded Structures, Picatinny Arsenal, Dover, N. J., October 1976; published by Journal of Applied Polymer Science.
9. "Characterization of Stainless Steel Surfaces Prepared for Adhesive Bonding", presented at Joint SAMPE/ASM Symposium, Los Angeles, California, February 1980; published by ASM.

BIOGRAPHY

NAME: Neil E. Ryan

Present Affiliation:

Aeronautical Research Laboratories

Title:

Principal Research Scientist



Field of Interest/Responsibilities:

Durability Performance of Aircraft  
Materials - Corrosion and Environment Assisted cracking processes.

Previous Affiliations/Titles:

Academic Background:

Fellow Royal Melbourne Inst. Tech  
D. Phil Oxford University  
C. Eng., Member Inst. Metallurgists (London)  
[FRMIT, D. Phil (Oxon), CE, NM.]

Society Activities/Offices:

Australasian Institute of Metals\*  
Chairman - Australian Fracture Group  
\*National Tech. Comm.  
Phys. Met. Comm. (Victorian Branch)

Publications/Papers:

Some 36 Papers - High Temp. Alloy Development Fracture  
Mechanics and Corrosion Fatigue

BIOGRAPHY

NAME: Don Treadway

Present Affiliation:

General Dynamics/Convair

Title:

Senior Engineering Chemist



Field of Interest/Responsibilities:

Interests involve corrosion prevention procedures for military and aerospace hardware including corrosion testing using accelerated laboratory and natural environments. Responsibilities include preparation and implementation of the corrosion control plans and finish specification for Tomahawk Cruise Missile systems.

Previous Affiliations/Titles:

Academic Background:

B.S., Chemical Engineering, University of California at Berkeley

Society Activities/Offices:

National Association of Corrosion Engineers  
American Society for Metals  
Society for the Advancement of Materials and Process Engineers

Publications/Papers:

Corrosion Control at Graphite/Epoxy - Aluminum and Titanium Interfaces,  
Technical Report AFML-TR-74-150, Air Force Materials Laboratory, July 1974.

BIOGRAPHY

NAME: Frank T. Werner, Capt

Present Affiliation:

USAF, HQ SAC/LGME  
Aircraft Engineering Division

Title:

Aircraft Systems Engineer



Field of Interest/Responsibilities:

Primarily involved with improving aircraft systems which have less than desirable reliability.

Previous Affiliation/Titles:

Fisher Body, General Motors - Production Engineer  
USAF - Pilot On -135 Series Aircraft 7 Yrs

Academic Background:

BME from General Motors Institute, Flint Michigan  
MBA from Creighton, University Omaha

Society Activities/Offices:

Publications/Papers:

BIOGRAPHY

NAME: Robert A. Williams

Present Affiliation:

McDonnell Aircraft Co.  
St. Louis, Missouri

Title:

Technical Specialist, Engineering Technology

Field of Interest/Responsibilities:

Corrosion Prevention and Control. Member F-15  
Corrosion Prevention and Control Panel 1970-71.  
Harpoon Missile Corrosion Prevention and Control  
1971-72. F-4 Aircraft Corrosion Control 1972-74.  
Co-Chairman F-18 Corrosion Prevention and Control  
Panel 1975-78. Environmental Resistance  
Coordinator AV-8 Programs 1979-80.

Previous Affiliation/Titles:

Senior Engineer (M&P), North American Aviation  
(Later North American Rockwell), Columbus, Ohio 1961-68.  
Member Corporate Corrosion Panel 1967-68.  
Senior Engineer (M&P), Curtiss Wright-Corp., Caldwell, NJ 1959-61.

Academic Background:

Higher National Certificate, Royal Institute of Chemistry,  
London, England.

Society Activities/Offices:

NACE Accredited Corrosion Specialist.  
Member NACE T-9 Committee.

Publications/Paper:

"Corrosion is a Dirty Word", Three Part Article-Product  
Support Digest Magazine.

BIOGRAPHY

NAME: Phillip M. Winter

Present Affiliation:

3M Company - Building Service and  
Cleaning Products Division Laboratory

Title:

R & D Supervisor

Field of Interest/Responsibilities:

Metal Surface Studies  
New Technology Development

Previous Affiliations/Titles:

Rocketdyne - Materials Engineer

Academic Background:

BS Metallurgy - University of Minnesota

Society Activities/Offices:

ASM  
NACE

Publications/Papers: