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1940

REPORT OF MEMBERSHIP COMMITTEE

C. E. RALSTON,* Chairman

Eleven new members affiliated with Air Hygiene Foundation during past year. The new members are:

Allegheny Pittsburgh Coal Company
American Mutual Liability Insurance Company
Calco Chemical Company
Colorado Mining Association
Industrial Tape Corporation
Liberty Mutual Insurance Company
Maryland Self-Insurers' Association
Powers X-ray Products, Inc.
Pullman Company
Rustless Iron and Steel Corporation
Toledo Scale Company

Meanwhile, eleven companies failed to renew their membership in January. With the business upturn—increased production creating increased need for health protection—a number of these companies are expected to return to the fold.

While the resignations balanced the additions, maintaining the membership at 225 companies, there was an increase of about \$400 a year in income. This is accounted for by the fact that most of the companies that resigned were small firms. Six of them were in the \$50 a year bracket, whereas most of the new members are larger companies in the higher bracket.

As Dr. Meller has announced, there has been a pronounced increase in the Foundation's survey service to its members during the year. This is a significant development. It links the benefits of Foundation membership more firmly with every-day plant operations. An industrial concern does not know its health hazards, or its lack of them, and have this information in a scientific, specific form, is like a company that does not know its costs. Industrial hygiene surveys are simply inventories. Like inventories they must be made periodically. The advantages of such a procedure are manifold.

In case of claims, you have a record showing what the health hazards actually were at the time of alleged injury. That is, you have this information if you have been making periodic checks over a period of time. A report you receive from the Foundation removes the "guess work" and speculation as to whether there was or wasn't a hazard at the time of injury. Further, as Mr. Fletcher pointed out here a year ago, a survey report from an outside, independent agency carries more weight in Court or before a compensation commission than does a report prepared by your own company. In other words, an outside party can talk with greater weight about your plant than you can talk about yourself.

You all know man's capacity for spreading rumor, how tales grow and

* Safety Director, Pittsburgh Plate Glass Company.

Proc. 5th Ann. Meeting, Nov. 12-13, 1940

1941

REPORT OF THE MEMBERSHIP COMMITTEE

C. E. RALSTON, Chairman

Thirteen companies have affiliated with the Foundation thus far this year. They are:

Corhart Refractories Company
General Motors Corporation
Hazel-Atlas Glass Company
International Business Machines Company
Merck & Company
Miamisburg Paper Company
Michigan Mutual Liability Company
Neville Company
Pittsburgh Clay Pot Company
Plaskon Company
Pyrene Manufacturing Company
Standard Lime and Stone Company
Toledo Edison Company

Two of the above are old members who dropped out during lean years but renewed their memberships during 1941. Meanwhile, four companies joined during the year.

It will be impossible to make a full report on membership work until the end of the year. A campaign for new members is now in progress and we have reason to be optimistic about its results. Mr. Lewis H. Brown, President of Johns-Manville Corporation, which has held membership since the Foundation was started, has kindly agreed to assist us in the undertaking. The campaign has been necessarily held up by the fact that the Foundation has been in the process of changing its name. That change was advocated by the Membership Committee, as well as many other persons interested in the Foundation, at the meeting here one year ago. After circularizing the membership, and after the due processes of the law, the change from Air Hygiene Foundation to Industrial Hygiene Foundation became official only recently. In fact there are still some final legalities to be disposed of at a business session here today.

Increasing industrial activity tends to increase health hazards—and at a time when the nation sorely needs maximum manpower. Therefore, the work of the Foundation is more important now than ever before. It helps companies keep precautions apace with production, which is the only way it can offset the increases in sick absences and occupational disease which inevitably accompany an increase in the industrial tempo.

In endeavoring to fulfill this important function—keeping precautions step with production—the Foundation is performing more and more field work for its member companies. During the past year our industrial hygienist, Mr. Mallette, covered approximately 25,000 miles in making plant surveys and “trouble shooting” where new processes were being installed, new materials introduced with questionable health effects. Survey work was performed in seven states.

In August, the staff hygienist flew 2,700 miles in three days covering

Safety Director, Pittsburgh Plate Glass Company.

*Proc. 6th Ann. Meeting
Nov. 12-13, 1941*

1942

New Members

During 1942, 11 more companies and associations affiliated with Industrial Hygiene Foundation in the organization's efforts to promote healthful working conditions, namely:

General Motors Corporation	Koppers Company
Flintkote Company	General Refractories Company
Owens-Corning Fiberglass Corp.	Domore Chair Company
Employers Mutual Liability Insurance Co.	Strathmore Paper Company
Dresser Manufacturing Company	Davison Chemical Company
Pacific Coast Association Pulp and Paper Manufacturers	

There are now 246 company and association members in the Foundation. These organizations, practically all of them directly engaged in war production, employ between 2 and 3 million war workers.

Plant Hygiene Surveys

The introduction of unfamiliar and new chemicals in manufacturing processes, some with little known toxic effects, is demanding even greater attention to plant hygiene measures. Meanwhile the dermatoses continue to be the most common of all occupational diseases.

The Foundation has conducted more plant hygiene surveys than in any previous year. These investigations, supervised by Frank R. Holden, check on the possible existence of health hazards in the workplaces. If hazards are detected, effectual measures are devised for their correction. Besides fostering healthful working conditions, the Foundation's plant surveys are proving to be an increasing factor in advancing harmonious labor relations, helping to eliminate working conditions which are often sources of discontent, such as nuisance dusts and fumes.

The Foundation collaborates actively with governmental agencies, both state and federal, which are interested in industrial health. One evidence of this cooperation is the subscription classification started early in the year whereby governmental agencies can secure all Foundation publications at less than cost. Since this arrangement was initiated 12 months ago, 4 federal agencies including Army and Navy, 22 states, and 5 cities have subscribed for Foundation literature. Meanwhile, 3 universities and 4 private specialists have also availed themselves of this material.

Research

The Foundation has continued to support medical and engineering research in industrial health with grants to The Saranac Laboratory, University of Pennsylvania and Harvard School of Public Health. Findings from these studies have been published. Then, too, an important study in toxicology is under way for a member company at Mellon Institute.

Publications

Two medical and two engineering bulletins have been issued to members during the year. These publications, giving the results of research are as follows:

1. Comparison of Stereoscopic Miniature Chest Films, Single Roentgenograms on Paper, and Single Roentgenograms on Large Films.

Proc. 74th Ann. Meeting, Nov. 10-11-1942

MEMBERS OF INDUSTRIAL HYGIENE FOUNDATION

Abingdon Sanitary Manufacturing Co.
Abrasive Company
Abrasive Division, U. S. Rubber Company
Abrasive Products Company
Allegheny Ludlum Steel Corporation
Allegheny Pittsburgh Coal Company
Allis-Chalmers Manufacturing Corp.
The Allison Company
Aluminum Company of America
American Abrasive Company
American Air Filter Company, Inc.
American Brake Shoe Company
American Cyanamid Company
American Emery Wheel Works
American Iron & Steel Institute
American Mining Congress
American Mutual Liability Insurance Co.
American Optical Company
American Radiator & Standard
Sanitary Corporation
American Refractories Institute
American Smelting & Refining Company
American Zinc Institute
American Zinc, Lead & Smelting Company
Anaconda Copper Mining Company
Ass'n of Casualty & Surety Executives
Automobile Manufacturers Association
Ball Brothers Company
Bartlett-Collins Company
Bay State Abrasive Products Company
Bethlehem Steel Company, Inc.
Bird & Son, Inc.
Bridgeport Safety Emery Wheel Company
Bunker Hill & Sullivan Mining &
Concentrating Company
The Carborundum Company
Central Silica Company
Chicago Wheel & Manufacturing Company
Climax Molybdenum Company
Robert F. Coleman, Inc.
The Colorado Mining Association
Consolidated Mining & Smelting Company
of Canada, Ltd.
Corhart Refractories Company
Corning Glass Works
Cortland Grinding Wheels Corporation
Dakota Chemical Corporation
Deere & Co. Sand Company
Denver Fire Clay Company
A. F. DeWitt & Son, Inc.
Detroit Star Grinding Wheel Company
Diamond Drill Company
Domora Chair Company, Inc.
Dow Chemical Company
R. F. Drakenfeld Company
Duro Corporation
Eagle-Hobbs Lead Company
Eaton-Schuch, Inc.
Electro Refractories & Alloys Corporation
Employers Mutual Liability Insurance Co.
Ethyl Corporation
Eureka Flint & Spar Company, Inc.
Exelon Company
The Falk Corporation
Firestone Tire & Rubber Company
Firth Sterling Steel Company
The Flintkote Company
Foote Mineral Company
Foundry Supply Manufacturers Ass'n
Fraxler-Simplex, Inc.
Fuller Merriam Company
Gavin Manufacturing Company
Garco Products, Inc.
Gardner Machine Company
General Abrasive Company, Inc.
General Grinding Wheels Corporation
General Motors Corporation
General Refractories Company
Glass Container Association
Glenahaw Glass Company, Inc.
Grinding Wheel Manufacturers Ass'n
The Hall China Company
Hamilton Emery & Corundum Company
Hampden Grinding Wheel Company
Hawley Products Company
Hazel-Atlas Glass Company
Hecla Mining Company
Hercules Powder Company
John W. Higman Company
O. Hommel Company
Mauricio Hochschild S. A. M. I.
Industrial Silica Corporation
Industrial Tape Corporation
International Business Machines Corp.
International Nickel Company, Inc.
Jack & Heints, Inc.
Jackson Mills Emery Company
Jamison Coal & Coke Company
John-Manville Corporation
Jones & Laughlin Steel Corporation
Keystone Emery Mills
Kimble Glass Company
The Kirk & Blum Manufacturing Company
Koppers Company
Homer Laughlin China Company
Lava Crucible Company of Pittsburgh
E. J. Lavino & Company
Lead Industries Association
Liberty Mutual Insurance Company
Mackintosh-Hemphill Company
Macklin Company
Magna Copper Company
Maryland Self-Insurers' Association
Merck & Company, Inc.
Mexican Refractories Company
The Miamisburg Paper Company
Michigan Mutual Liability Company
Mid-West Abrasive Company
Mine Safety Appliances Company
Monocento Chemical Company
Mutual Chemical Company of America
J. S. McCormick Company
National Crushed Stone Association, Inc.
National Grinding Wheel Company
National Industrial Sand Association
National Lead Company
National Slag Association
The Neville Company
New Jersey Zinc Company
North American Refractories Company
Norton Company
Norton Pike Company
Ontario Mining Association
Oriental Emery Company
Ottawa Silica Company
Owens-Corning Fiberglas Corporation
Owens-Illinois Glass Company
Pacific Coast Association of Pulp & Paper
Manufacturers
Peninsular Grinding Wheel Company
Penn-Rillon Company
Pennsylvania Glass Sand Corporation
Phelps Dodge Corporation
Pittsburgh Coal Company
Pittsburgh Plate Glass Company
Plaskon Division, Libbey-Owens-Ford Co.
Portland Cement Association
Powers X-Ray Products, Inc.

MEMBERS OF INDUSTRIAL HYGIENE FOUNDATION

Precision Grinding Wheel Company, Inc.
The Pullman Company
Pullman-Standard Car Manufacturing Co.
Pyral Manufacturing Company
Raybestos-Manhattan, Inc.
Radio Mining Corporation
H. H. Robertson Company
Safety First Supply Company
Safety Grinding Wheel & Machine Co.
Claude H. Schnell Company
Joseph T. Seagram & Sons, Inc.
Shaw-Walker Furnace Company
Shaw-Walker White Company
Shaw-Walker Process Company
South West Box Company
St. Joseph Lead Company
Standard Abrasive Wheel Company
Standard Lime & Stone Company
Sterling Grinding Wheel Company
Stuckton Fire Brick Company
The Sun Rubber Company
Texas Gulf Sulphur Company
Titan Abrasives Company
Toledo Edison Company
Toledo Scale Company
Trenton Potteries Company
Tri-State Zinc & Lead Ore Producers
Association
Union Carbide & Carbon Corporation
United Engineering & Foundry Company
United States Pottery Association
United States Smelting Refining & Mining
Company
United States Steel Corporation of Del.
Universal Sanitary Manufacturing Co.
Utah Copper Company
Utilities Research Commission
Valley Mould & Iron Corporation
Vanadium Corporation of America
Versulux Crucible Company
Vitrified Wheel Company
Waltham Grinding Wheel Company
Washington Mills Abrasive Company
Wedron Silica Company
The E. K. Wellman Company
West Company
Western Precipitation Corporation
Westfield Grinding Wheel Company
Westinghouse Air Brake Company
Westinghouse Electric & Mfg. Company
Whitehead Brothers Company
Willson Products, Inc.
Wisconsin Abrasive Company
Wolf's New Process Abrasive Wheel, Inc.
Youngstown Sheet & Tube Company

SUBSCRIBERS

FEDERAL GOVERNMENT

Air Service Command, Fairfield, Ohio.
Bureau of Medicine & Surgery, Navy Dept.
Chief of Ordnance, Chicago, Ill.
Industrial Hygiene Service, Oklahoma
City, Okla.
Industrial Safety Division, Huntsville,
Alabama
Industrial Hygiene Laboratory,
Baltimore, Md.
Medical Supply Officer, Fort Monro, Cal.
Navy Yard, Charleston, S. C.
Shore Establishments Div. Navy Dept.
Tennessee Valley Authority
U. S. Public Health Service

CITIES

Department of Health, Baltimore, Md.
Department of Health, Detroit, Mich.
Department of Health, St. Louis, Mo.

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Dr. Elston L. Belknap
Dr. Charles Kemm Good
Dr. J. W. G. Hannon
Dr. E. R. Hayhurst
Dr. N. P. Henderson
Mr. J. H. Holden
Dr. Hedwig R. Kuhn
Dr. Geo. E. Morris
Dr. E. D. McDaniel
Dr. C. O. Rorington
Johns Hopkins University
University of Colorado
Medical Administration Service

STATES

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Department of Health, Georgia
Department of Health, Idaho
Department of Health, Illinois
Department of Health, Indiana
Department of Health, Iowa
Department of Health, Kansas
Department of Health, Louisiana
Department of Health, Maryland
Department of Health, Missouri
Department of Health, Montana
Department of Labor, New York
Department of Health, Ohio
Department of Health, Oklahoma
Department of Labor & Industry,
Pennsylvania
Department of Health, Tennessee
Department of Health, Texas
Department of Health, Utah
Department of Health, Vermont
Department of Health, Virginia
Department of Health, West Virginia
Department of Health, Wisconsin
Industrial Commission of Ohio

FOREIGN

Department of Pensions & Health,
Ottawa, Canada
Department of Health & Public Welfare,
Winnipeg, Canada
British Ministry of Supply Mission
International Labor Office, Montreal
Medical Research Council, London
Ministère Santé & B. E. Social Hyg.
Quebec, Canada
Netherlands Government Commission for
Scientific Documentation

* Multiple Membership

* Multiple Membership

Proc. 9th Ann. Meeting, Nov. 10-11, 1943

Abingdon Sanitary Manufacturing Co.
Abrasive Company
Abrasive Division, U. S. Rubber Company
Abrasive Grain Association
Abrasive Products Company
All-Steel Ludlow Steel Corporation
All-Steel Pittsburgh Coal Company
Allis-Chalmers Manufacturing Corp.
The Allison Company
Aluminum Company of America
American Abrasive Company
American Air Filter Company, Inc.
American Brake Shoe Company
American Canvassed Company
American Emery Wheel Works
American Iron & Steel Institute
American Mining Congress
American Optical Company
American Radiator & Standard
Sanitary Corporation
American Retortories Institute
American Smelting & Refining Company
American Zinc Institute
American Zinc, Lead & Smelting Company
Anaconda Copper Mining Company
Ass'n of Casualty & Surety Executives
Automobile Manufacturers Association

Ball Brothers Company
Bartlett-Collins Company
Bay State Abrasive Products Company
Bethlehem Steel Company, Inc.
Bird & Son, Inc.
Bridgport Sales Emery Wheel Company
Brooks-Hill & Co., an American
Concentrator Company

The Carborundum Company
Central Shaft Company
Chicago Wheel & Manufacturing Company
Chicor Mold Making Company
Robert F. Coleman, Inc.
The Colonial Spring Association
Consolidated Machine & Tool Company
of Canada, Ltd.
Cooper-Reevey Corporation
Corhart Refractories Company
Coring Glass Works
Cortland Grinding Wheels Corporation

Davison Chemical Corporation
Deekers Creek Sand Company
Denver Fire Clay Company
A. F. Dickinson & Son, Inc.
Detroit-Star Grinding Wheel Company
Makel Corporation
Diamond Alkali Company
Donk Aircraft Company, Inc.
Domore Chair Company, Inc.
Dow Chemical Company
R. F. Drakenfeld Company
Dravo Corporation

Eagle-Picher Lead Company
 Elasco Services, Inc.
 Elcor Refractories & Alloys Corporation
 Eller Company
 Ethyl Corporation
 Eureka Flint & Spar Company, Inc.
 Evolon Company

The Falk Corporation
Flintstone The & Fuller Company
Fifth Streeting St. of Company
The Flintstone Company
Folkston Manufacturing Co.
Folkston Steel Manufacturing Corp.
Folkston Supply Inc.
Fuller Metallum Company

Galvin Manufacturing Corporation
Garcia Products, Inc.
Gardner Machine Company

General Abrasive Company, Inc.
General Grinding Wheels Corporation
General Motors Corporation
General Refractories Company
Glass Container Association
Glenhew Glass Company, Inc.
A. P. Green Fire Brick Company
Grinding Wheel Manufacturers Ass'n
The Hall-Childs Company
Hamilton Emery & Corundum Company
Hampton Grinding Wheel Company
Hawley Products Company
Hazel-Atlas Glass Company
Hoch-Minning Company
Hercules Powder Company
John W. Harrison Company
O. Hombold Company
Maurilio Hochschild & A. M. I.

Industrial Silica Corporation
Industrial Tube Corporation
International Business Machines Corp.
International Nickel Company, Inc.

Jack & Heintz, Inc.
Jackson Mills Lumber Company
Jamison Coal & Coke Company
Johns-Manville Corporation
Jones & Laughlin Steel Corporation

Keystone Emery Mills
Kimbble Glass Company
The Kirk & Blum Manufacturing Company
Koppers Company

Hopewell Lumber & Coal Company
Latta Lumber Company of Pittsburgh
E. J. Layman & Company
Lead Industries Association

MacKintosh-Hatfield Company
MacKlin Company
Magna Copper Company
Marland Safety Equipment Association
Metropolitan Life Insurance Company
Metcalf-Eddy Company
Mid-West Abrasive Company
Mine Safety Appliances Company
Monsanto Chemical Company
Mutual Chemical Company of America
J. S. McCormick Company

National Association of Mutual Casualty Companies*
National Cashed Store Association, Inc.

National Grinding Wheel Company
National Industrial Sand Association
National Lead Company
National Sand & Gravel Association
National Slag Association
The Neville Company
New Jersey Zinc Company
North American Refractories Company
Norton Company
Norton Pipe Company

Ontario Mining Association
Oriental Cement Company
Ottawa Silica Company
Owens-Corning Fiberglas Corporation
Owens-Illinois Glass Company
Pentaplar Grinding Wheel Company
Penn-Bitter Company
Pennsylvania Glass Sand Corporation
Flex-Fudge Corporation
Pittsburgh Coal Company
Portland Cement Association
Fletcher Portland Cement Co., Inc.
Portland Cement Association
Powers X-Ray Products, Inc.

Precision Grinding Wheel Company, Inc.
The Pullman Company
Pullman-Standard Car Manufacturing Co
Pyrene Manufacturing Company

Raybestos-Manhattan, Inc.
 Republic Steel Corporation
 Rio-Grande Mining Corporation
 H. H. Robertson Company
 Safety First Supply Company
 Safety Grinding Wheel & Machine Co.
 Claude E. Schnellbe Company
 Joseph E. Seagram & Sons, Inc.
 Sherrill Furnace Company
 Skunk Creek Wooden White Company
 Steel Wheel Box Company
 C. Joseph Lead Company
 Standard Abrasive Wheel Company
 Standard Lime & Stone Company
 Sweeney Grinding Wheel Company
 The Sun Rubber Company
 Texas Gulf Sulphur Company
 Titan Aluminizer Company
 Toledo Edison Company
 Toledo Scale Company
 Trenton Potteries Company
 Tri-State Zinc & Lead Ore Producers
 Association

Union Carbide & Carbon Corporation
United Engineering & Foundry Company
United States Pottery Association

United States Smelting Refining & Mining
Company
United States Steel Corporation of Del
Universal Sanitary Manufacturing Co.
Utah Copper Company
Utilities Research Commission*
Valley Mould & Iron Corporation
Van Cleef Dwyer
Vanadium Corporation of America
Vanguard Crucible Company
Vulcan Wheel Company

Waltham Grinding Wheel Company
Washington Mill Abrasive Company
Webster Slick Company
West Company
West Virginia Manufacturers' Association
Western Precipitation Corporation
Westfield Grinding Wheel Company
Westinghouse Air Brake Company
Westinghouse Electric & Mfg. Company
Whitehead Brothers Company
Wilcon Products, Inc.
Winconish Abrasive Company
Wolf's New Process Abrasive Wheel, Inc.
Youngstown Sheet & Tube Company

SPECIAL SUBSCRIBERS

UNITED STATES GOVERNMENT

Armed Forces
 American Command, Fairfield, Ohio
 Army Industrial Hygiene Laboratory
 Army Medical Library
 Industrial Safety Division,
 Nashville Arsenal
 Medical Supply Officer, Fort Mason
 Bureau of Medicine & Surgery,
 Navy Department
 Navy Yard, Charleston, E. C.
 Shore Establishments Div., Navy Dept.

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Bombay Melbourne
Johannesburg Sydney
London Wellington

Tennessee Valley Authority
U. S. Civil Service Commission
U. S. Public Health Service

STATE DEPARTMENTS OF HEALTH

California	Montana
Connecticut	New Jersey
Georgia	Ohio
Idaho	Oklahoma
Illinois	Tennessee
Indiana	Utah
Iowa	Vermont
Kansas	Virginia
Massachusetts	Washington
Michigan	West Virginia
Minnesota	Wisconsin

Other State Agencies

New York Department of Labor
New York State Insurance Fund
New York State Library
Pennsylvania Department of Labor &
Industry

THE DEPARTMENTS OF HEALTH

Baltimore
Detroit

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Dr. Charles Kenn Good
Dr. J. W. G. Hannon
Dr. E. B. Hayhurst
Dr. N. P. Henderson
Mr. J. H. Hobbs
Dr. Ludwig S. Kohn
Dr. R. T. Johnstone
Dr. C. O. Jorgensen

INSTITUTIONS AND OTHER ORGANIZATIONS

American Association of Industrial
Physicians and Surgeons
Harvard Business School
Johns Hopkins University
University of California
University of Chicago Libraries
University of Colorado
University of Texas
Health Institute of the UAW-CIO
Medical Administration Service
New School for Social Research
Southern California State Dental Ass'n

FOREIGN COUNTRIES

Department of National Health &
Welfare, Ottawa, Canada
Department of Health & Public Welfare,
Windsor, Canada
International Labor Office, Montreal
Ministry of Santos & B. E. Social Hyg.,
Quebec, Canada
Federal Ministry of Supply, Moscow
Medical Research Council, London
University of Sydney, Australia
Netherlands Government Commission for
Scientific Documentation
The Government Mining Engineer,
Johannesburg, South Africa
Amalgamated Anthracite Collieries, Ltd
Ammannford, South Wales

Proc. 9th Ann. Mtg. ^{*Multiple Membership} Jan. 15-16, 1944 Phil IV

* Multiple Membership & Multiple Subscription

MEMBERS OF INDUSTRIAL HYGIENE FOUNDATION

- A -

Ablington Potteries, Inc.
Abrasive Division, U. S. Rubber Company
Abrasive Grain Association
Abrasive Products Company
Allegheny Ludlum Steel Corporation
Allegheny Pittsburgh Coal Company
Allis-Chalmers Manufacturing Corp.
Aluminum Company of America
American Abrasive Company
American Air Filter Company, Inc.
American Brake Shoe Company
American Cyanamid Company
American Emery Wheel Works
American Iron & Steel Institute
American Mining Congress
American Optical Company
American Radiator & Standard Sanitary Corporation
American Refractories Institute
American Smelting & Refining Company
American Zinc Institute
American Zinc, Lead & Smelting Company
Anaconda Copper Mining Company
Arrow Mutual Liability Insurance Co.
Ass'n of Casualty & Surety Executives*
Automobile Manufacturers Association

- B -

Ball Brothers Company
Bartlett-Collins Company
Bay State Abrasive Products Company
Bethlehem Steel Company, Inc.
Bird & Son, Inc.
Bridgeport Safety Emery Wheel Company
Bunker Hill & Sullivan Mining & Concentrating Company

- C -

Canadian General Rubber Company, Ltd.
The Carborundum Company
Central Silica Company
Chicago Wheel & Manufacturing Company
Climax Molybdenum Company
Robert F. Coleman, Inc.
The Colorado Mining Association
Consolidated Mining & Smelting Company of Canada, Ltd.
Cooper-Bessemer Corporation
Corhart Refractories Company
Corning Glass Works
Cortland Grinding Wheels Corporation

- D -

Davison Chemical Corporation
Deckers Creek Sand Company
A. P. DeSanno & Son, Inc.
Detroit-Star Grinding Wheel Company
Diakel Corporation

- D -

Diamond Alkali Company
Duck Aircraft Company, Inc.
Dow Chemical Company
R. F. Drakenfeld Company
Dravo Corporation

- E -

Eagle-Picher Company
Eaton Services, Inc.
Electro Refractories & Alloys Corporation
Eljer Company
Ethyl Corporation
Eureka Flint & Spar Company, Inc.
Exelon Company

- F -

The Falk Corporation
Firth Sterling Steel Company
Foote Mineral Company
Foundry Supply Manufacturers Ass'n
Frazier-Simplex, Inc.
Fuller Merriam Company

- G -

Galvin Manufacturing Corporation
Garc Products, Inc.
Gardner Machine Company
General Abrasive Company, Inc.
General Aniline & Film Corporation
General Grinding Wheels Corporation
General Motors Corporation
General Refractories Company
Glenshaw Glass Company, Inc.
A. P. Green Fire Brick Company
Grinding Wheel Manufacturers Ass'n

- H -

The Hall China Company
Hamilton Emery & Corundum Company
Hampton Grinding Wheel Company
Hawley Products Company
Hazel-Atlas Glass Company
Hercules Powder Company
John W. Higman Company
Maurice Hochschild S. A. M. I.
O. Hömmel Company

- I -

Industrial Silica Corporation
International Business Machines Corp.
International Nickel Company, Inc.

- J -

Jackson Mills Emery Company
Jamison Coal & Coke Company
Johns-Manville Corporation
Jones & Laughlin Steel Corporation

- K -

Kearsey and Mattison Company
Kentalmetal, Inc.
Keystone Emery Mills
Kimble Glass Company
The Kirk & Blum Manufacturing Company
Koppers Company

- L -

Lozier Laughlin China Company
Luna Crucible Company of Pittsburgh
L. J. Loring & Company
Lund Industries Association

- M -

Blackintech-Hemphill Company
Blacklin Company
Blagma Copper Company
Maryland Self-Insurers' Association
Metropolitan Life Insurance Company
Mexico Refractories Company
Mid-West Abrasive Company
Mine Safety Appliances Company
Monsanto Chemical Company
Mutual Chemical Company of America

- Mc -

J. F. McCormick Company

- N -

National Association of Mutual Casualty Companies*
National Crushed Stone Association, Inc.
National Grinding Wheel Company
National Industrial Sand Association
National Lead Company
National Sand & Gravel Association
National Slag Association
The Neville Company
New Jersey Zinc Company
North American Refractories Company
Norton Company
Norton Pike Company

- O -

Ontario Mining Association
Oriental Abrasive Company
Ontario Silica Company
Owens-Corning Fiberglass Corporation
Owens-Illinois Glass Company

- P -

Peninsular Grinding Wheel Company
Penn-Billion Company
Pennsylvania Glass Sand Corporation
Philip Judge Corporation
Pittsburgh Coal Company
Pittsburgh Plate Glass Company
Piston Division, Libby-Owens-Ford Co.
Pulchard Corporation
Portland Cement Association
Prestone Research Corporation
Powers X-Ray Products, Inc.
Precision Grinding Wheel Company, Inc.
The Pullman Company
Pyrene Manufacturing Company

- R -

Raybestor-Manhattan, Inc.
Republic Steel Corporation
Rialto Mining Corporation
H. H. Robertson Company
Robertson Manufacturing Company

- S -

Safety First Supply Company
Safety Grinding Wheel & Machine Co.
Claude E. Schuchle Company
Scott Aviation Corporation
Shenango Furnace Company
Simonds Abrasive Company
Simonds Worden White Company
South West Box Company
St. Joseph Lead Company
Standard Lime & Stone Company
Sterling Grinding Wheel Company

- T -

Tennessee Copper Company
Texas Gulf Sulphur Company
Titan Abrasives Company
Toledo Edison Company
Trenton Potteries Company
Tri-State Zinc & Lead Ore Producers Association

- U -

Union Asbestos & Rubber Company
Union Carbide & Carbon Corporation
United States Feltex Association
United States Smelting Refining & Mining Company
United States Steel Corporation of Del.
Universal Sanitary Manufacturing Co.
Utah Copper Company
Utilities Research Commission*

- V -

Valley Mould & Iron Corporation
Van Cleef Bros.
Vanadium Corporation of America
Vesuvius Crucible Company
Vitrified Wheel Company

- W -

Waltham Grinding Wheel Company
Washington Mill Abrasive Company
Wedron Silica Company
West Virginia Manufacturers' Association
Western Precipitation Corporation
Westfield Grinding Wheel Company
Westinghouse Air Brake Company
Westinghouse Electric Corporation
Whitehead Brothers Company
Willson Products, Inc.
Winthrop Chemical Company, Inc.
Wisconsin Abrasive Company
Wolf's New Process Abrasive Wheel, Inc.

- Y -

Youngstown Sheet & Tube Company

* Multiple Membership

Prep. 10th Ann. Meeting, Nov. 14-15, 1945

PART IV

* Multiple Membership

Transactions, Bull # 8,
11th Ann. Meeting, Nov. 7, 1946.

1946

MEMBERS OF INDUSTRIAL HYGIENE FOUNDATION

— A —

Abingdon Potteries, Inc.
Abrasive Division, U. S. Rubber Company
Abrasive Grain Association
Abrasive Products Company
Allegheny Ludlum Steel Corporation
Allegheny Pittsburgh Coal Company
Allis-Chalmers Manufacturing Company
Aluminum Company of America
Amalgamated Anthracite Collieries, Ltd.
American Abrasive Company
American Air Filter Company, Inc.
American Brake Shoe Company
American Can Company
American Cyanamid Company
American Emery Wheel Works
American Foundry Equipment Company
American Iron & Steel Institute
American Mining Congress
American Optical Company
American Radiator & Standard
Sanitary Corporation
American Refractories Institute
American Smelting & Refining Company
American Zinc Institute
American Zinc, Lead & Smelting Company
Anaconda Copper Mining Company
Anthracite Institute
Arrow Mutual Liability Insurance Company
Assoc. of Casualty & Surety Executives*
Austin Motor Co., Ltd.
Automobile Manufacturers Association

— B —

Ball Brothers Company
Bartlett-Collins Company
Bay State Abrasive Products Company
Bethlehem Steel Company, Inc.
Bird & Son, Inc.
Bituminous Casualty Corporation
Bridgeport Safety Emery Wheel Company
Brush Beryllium Company
Bunker Hill & Sullivan Mining &
Concentrating Company

— C —

Canadian General Rubber Company, Ltd.
The Carborundum Company
Caterpillar Tractor Company
Central Silica Company
Chicago Wheel & Manufacturing Company
Robert F. Coleman, Inc.
The Colorado Mining Association
Consolidated Mining & Smelting Company
of Canada, Ltd.
Cooper-Bessemer Corporation
Corhart Refractories Company
Corning Glass Works
Cortland Grinding Wheels Corporation

— D —

Davison Chemical Corporation
Deckers Creek Sand Company
A. P. DeSanno & Son, Inc.
Detroit-Star Grinding Wheel Company
Diakel Corporation
Diamond Alkali Company
Dow Chemical Company
B. F. Drakenfeld Company
Dravo Corporation

— E —

Eagle-Picher Company
Eastern Gas and Fuel Associates
Ebasco Services, Inc.
Electro Refractories & Alloys Corporation
Eijer Company
Ethyl Corporation
Eureka Flint & Spar Company, Inc.
Exclon Company

— F —

The Falk Corporation
Firth Sterling Steel Company
H. E. Fletcher Company
Foote Mineral Company
Ford Motor Company
Foundry Supply Manufacturers Assoc.
Frazier-Simplex, Inc.
Fuller Merriam Company
The Funkhouser Company

* Multiple Membership

MEMBERS OF INDUSTRIAL HYGIENE FOUNDATION

— G —

Garco Products, Inc.
Gardner Machine Company
General Abrasive Company, Inc.
General Aniline & Film Corporation
General Grinding Wheels Corporation
General Motors Corporation
General Refractories Company
Glenshaw Glass Company, Inc.
A. P. Green Fire Brick Company
Grinding Wheel Manufacturers Assoc.

— H —

The Hall China Company
Hamilton Emery & Corundum Company
Hampden Grinding Wheel Company
Hawley Products Company
Hazel-Atlas Glass Company
Hercules Powder Company
John W. Higman Company
Mauricio Hochschild S. A. M. I.
O. Hommel Company

— I —

Imperial Chemical Industries, Ltd.
Industrial Silica Corporation
Inland Steel Company
Interchemical Corporation
International Business Machines Corp.
International Nickel Company, Inc.

— J —

Jackson Mills Emery Company
Jamison Coal & Coke Company
Johns-Manville Corporation
Jones & Laughlin Steel Corporation

— K —

Keasbey and Mattison Company
Kennecott Copper Corporation
Keystone Emery Mills
Kimble Glass Company
The Kirk & Blum Manufacturing Company
The Edwin M. Knowles China Company
Koppers Company

— L —

Homier Laughlin China Company
Lava Crucible Company of Pittsburgh
E. J. Lavino & Company
Lead Industries Association

— M —

Mackintosh-Hemphill Company
Macklin Company
Magma Copper Company
Maryland Self-Insurers' Association
Mayer China Company
J. S. McCormick Company
Metropolitan Life Insurance Company
Mexico Refractories Company
Mid-West Abrasive Company
Mine Safety Appliances Company
Monsanto Chemical Company
Mutual Chemical Company of America

— N —

National Association Fan Manufacturers
National Association of Mutual Casualty Companies*
National Crushed Stone Association, Inc.
National Grinding Wheel Company
National Industrial Sand Association
National Lead Company
National Sand & Gravel Association
National Slag Association
National Steel Company
National Supply Company
The Neville Company
New Jersey Zinc Company
North American Refractories Company
Norton Company
Norton Pike Company

— O —

Ontario Mining Association
Oriental Abrasive Company
Ottawa Silica Company
Owens-Corning Fiberglas Corporation
Owens-Illinois Glass Company

* Multiple Membership.

MEMBERS OF INDUSTRIAL HYGIENE FOUNDATION

— P —

Peninsular Grinding Wheel Company
Penn-Rillton Company
Pennsylvania Glass Sand Corporation
Phelps Dodge Corporation
Pittsburgh Coal Company
Pittsburgh Plate Glass Company
Polaroid Corporation
Portland Cement Association
Posture Research Corporation
Powers X-Ray Products, Inc.
Precision Grinding Wheel Company, Inc.
The Pullman Company
Pyrene Manufacturing Company

— R —

Raybestos-Manhattan, Inc.
Republic Steel Corporation
Rialto Mining Corporation
H. H. Robertson Company
Robertson Manufacturing Company

— S —

Safety First Supply Company
Safety Grinding Wheel & Machine Co.
Sand Products Corporation
Claude B. Schneible Company
Shenango Furnace Company
Simonds Abrasive Company
Simonds Worden White Company
South West Box Company
St. Joseph Lead Company
Standard Lime & Stone Company
The Standard Ultramarine Company
Sterling China Company
Sterling Grinding Wheel Company
Sun Sand Company

— T —

Tata Sons, Ltd.
Taylor, Smith & Taylor Company
Tennessee Copper Company
Texas Gulf Sulphur Company

— T —

Titan Abrasives Company
Toledo Edison Company
Trenton Potteries Company
Tri-State Zinc & Lead Ore Producers Association

— U —

Union Asbestos & Rubber Company
Union Carbide & Carbon Corporation
United States Potters Association
United States Smelting Refining & Mining Company
United States Steel Corporation of Del.
Universal Sanitary Manufacturing Co.
Utilities Research Commission*

— V —

Valley Mould & Iron Corporation
Van Cleef Bros.
Vanadium Corporation of America
Vesuvius Crucible Company
Vitreous China Plumbing Fixtures Association
Vitrified Wheel Company

— W —

Waltham Grinding Wheel Company
Washington Mills Abrasive Company
Wedron Silica Company
West Virginia Manufacturers' Association
Western Precipitation Corporation
Westfield Grinding Wheel Company
Westinghouse Air Brake Company
Westinghouse Electric Corporation
Whitehead Brothers Company
Willson Products, Inc.
Winthrop Chemical Company, Inc.
Wisconsin Abrasive Company
Wolf's New Process Abrasive Wheel, Inc.

— Y —

Youngstown Sheet & Tube Company

* Multiple Membership

I-H-F IN 1947

JOHN F. McMAHON

Managing Director, Industrial Hygiene Foundation

What has Industrial Hygiene Foundation done during the past year?

The following are some partial answers to that question:

At the first meeting of the Foundation's Board of Trustees, on December 16, 1935, this organization was launched with 23 member companies and associations. As of today, there are 349 members.

Twenty-two companies and associations have affiliated thus far this year. They are:

American Can Company	Inland Steel Company
Anthracite Institute	National Ass'n Fan Manufacturers
Atlas Powder Company	National Pulverizing Company
Austin Motor Company (England)	National Steel Corporation
Crucible Steel Company	National Supply Company
Federal-Mogul Corporation	New Jersey Pulverizing Company
Firestone Tire & Rubber Co.	Pittsburgh Coke & Chemical Co.
Ford Motor Company	Sharon Steel Corporation
General Ceramics & Steatite Co.	Sun Oil Company
General Electric Company	Sun Sand Company
Godrej and Boyce Mfg. Co.	Sylvania Electric Products Co.

Actually, the number of new members is 54 inasmuch as one of the organizations is the Anthracite Institute, which has taken out a multiple membership covering its 32 member companies. There are now 103 special subscribers—governmental agencies, private institutions, etc.

Field Work

Field work continued to increase in a satisfactory manner and involved studies in approximately 70 different plants. This work will be described by Mr. Hatch, the Foundation's Research Director. In an engineering survey for the pottery industry, directed by Mr. Hemeon, Head Engineer, the Foundation collaborated with the U. S. Potters Association to hold a Pottery Dust Control Clinic here in Mellon Institute on October 13. Sixteen companies sent 31 representatives to this all-day conference.

*Trans. Bull. No. 9, 12th Ann. Meet
Nov. 20, 1947*

I-H-F IN 1948

JOHN F. McMAHON

Managing Director, Industrial Hygiene Foundation

Membership

The membership of Industrial Hygiene Foundation now number 353 companies and associations, plus 105 special subscribers.

New members during the year to date are:

Canadian Institute of Stove and
Furnace Manufacturers

Ferro Enamel Corporation

The Glidden Company

The B. F. Goodrich Company

Homestake Mining Company

Pangborn Corporation

Revere Copper & Brass, Inc.

Scaife Company

Standard Oil Company (N.J.)

Meanwhile, applications for membership have just been received from Lever Brothers Company and Southern Mica Company. These will be acted upon by the Foundation's Board of Trustees at their annual meeting today.

Research

Early this year, the Foundation announced the establishment of a new laboratory for industrial toxicology and physiology. This step was taken in response to demands from member companies. The new laboratory marks a highly important advance in the development of this research association of industries—a development that strengthens the Foundation and that promises important benefits not only to the members and their employees but ultimately to all members of America's industrial society.

Two projects, both of one-year duration, have already been initiated and several short-time investigations have been completed.

Plant studies and field researches conducted by the Foundation staff this year have exceeded, both in scope and importance, anything previously undertaken. The work has included a trip by two men to South America and a number of trips to Canada.

Foundation research will be dealt with fully this morning in report by Mr. Hatch, our Research Director.

[4]

Trans. Bull. No. 10, 134, Ann. Meeting

Nov. 18, 1948

1949

FOUNDATION FACTS

JOHN F. McMAHON

Managing Director, Industrial Hygiene Foundation

Membership

The following companies and organizations affiliated or re-affiliated with Industrial Hygiene Foundation during 1949:

Peere & Company	Jeffrey Manufacturing Company
Socoy-Vacuum Oil Company	Rome Cable Company
Texas Company	Metal & Thermit Corporation
Sylvania Electric Products, Inc.	Southern Mica Company
Dochler-Jarvis Corporation	West Virginia Manufacturers Association
Lever Brothers Company	East Indian Railway

Field Studies

The volume of field studies carried on during the year was greater than ever before. Highlights of this work included half a dozen surveys dealing with community air pollution; these were made for Foundation Members in the steel and glass industry, and for the Atomic Energy Commission. Likewise a number of studies were made or are in progress, to determine the health and medical needs of certain member companies. The Foundation welcomes projects of this kind, showing a company what it should have to provide adequately for the health of its employees, the cost, administrative procedures, the medical facilities needed for a given type of firm—these constitute lasting contributions to labor, industry, to human relations, to developing human resources.

Personnel

We announced to the Foundation's membership the appointment of Dr. H. H. Schrenk as Research Director of Industrial Hygiene Foundation. This pleasing development became effective October 1. Dr. Schrenk comes to the Foundation after establishing an international reputation in industrial hygiene at the U.S. Bureau of Mines and more recently with the U.S. Public Health Service. Mr. Theodore F. Hatch is now dividing his time between the Foundation and the new School of Public Health at the University of Pittsburgh—

[5]

*Trans Bull., No. 11, 14th Ann. Meeting,
Nov. 17, 1949*

1950

FOUNDATION FACTS

ANDREW FLETCHER, Eng.D.

President, St. Joseph Lead Company
Chairman, Board of Trustees, Industrial Hygiene Foundation

It has been John McMahon's custom to present to you at this time "Foundation Facts." That responsibility today falls on me. Most of you know what the facts are, but we have probably a few new members and a few new friends, so I will just briefly outline them. Our Foundation started in 1935, when a group of companies banded together on account of the silicosis problem. That organization was known as the Air Hygiene Foundation. We had only some 20 companies, but the early work of the Foundation so impressed other companies that year after year our membership has increased, until today we have approximately 350 of the outstanding companies in the United States who are really interested in improving the working and living conditions of their employees.

National recognition to the Foundation as a competent, impartial research organization was not long in coming, and today, gentlemen, we deserve that recognition. I hope that we will always hold it. The eight companies who joined us this year are representative of our membership list—anyone who would like to have a complete list of our membership can obtain it through our offices here. The eight new companies which joined in 1950 were:

Bradley Mining Company
A. M. Byers Company
Commercial Solvents Corporation
Gulf Oil Corporation
Joy Manufacturing Company
Wyckoff Steel Company
General Ceramics and Steatite Corporation
Pullman-Standard Car Manufacturing Company

I would be amiss if I didn't tell you that your Foundation is in excellent financial condition. We started the year with roughly \$101,000 in cash and short term Government bonds, and we estimate that we will end 1950 with \$115,000.

Major Research Problems

Research results in facts. Constructive policies affecting better working conditions can only be based on facts. And facts are certainly the product of your Foundation. The goal of our Foundation is somewhat visionary, and its labors will only be completed when

[4]

*Trans. Bull. No. 15, 15th Ann. Meeting
Nov. 16 1950*

1951

Reprints of addresses continue to be in demand. Requests are still coming in for the talk on "The Human Side of Business," which was made at the 1950 meeting by Dr. Donald K. David, Dean, Graduate School of Business Administration at Harvard. There have been numerous requests for copies of Don G. Mitchell's 1951 keynote address on "Human Dignity."

The following companies have affiliated with the Foundation since January 1:

American Foundrymen's Society	Pennsylvania Railroad Company
Cleveland-Cliffs Iron Company	Prismo Safety Corporation
General Mills, Inc.	Sandia Corporation
General Steel Castings Company	Trion, Inc.
Lakey Foundry and Machine Company	U.S. Pipe and Foundry
	West Michigan Steel Foundry Company
	Wheeling Steel Corporation Company

The Foundation is now serving more than 300 member companies.

The American Iron and Steel Institute training program is one of three established at the Foundation. A new—and important one to us—is that of the Foundation's sponsoring the further education of a medical graduate who is at present studying in the University of Pittsburgh Graduate School of Public Health. The University grants a scholarship, and the Foundation gives financial assistance to the student. This trainee program is the beginning of the Foundation's plan to train future staff members.

In addition to this student in the Graduate School, the Foundation employs part time an undergraduate student of chemical engineering, who is a prospective future staff member.

Listed among the managing director's activities for the past year were numerous talks, one of which took place at the Tenth International Congress on Industrial Medicine held in Lisbon, Portugal, in September. While abroad, the managing director also discussed the role of industrial hygiene in the 79-nation World Health Organization when he conferred at its headquarters in Geneva, Switzerland, with the director, Dr. Brock Chisholm.

Dr. H. H. Schrenk, research director, and W. C. L. Hemeon, engineering director, spoke on "Smoke Abatement" at a recent monthly meeting of the City Council of Weirton, West Virginia. Thomas E. Millsop, President of the City Council, also is president of Weirton Steel Company which, at present, has a trainee in the American Iron and Steel Institute program at the Industrial Hygiene Foundation Laboratory in Mellon Institute.

[83]

*Trans. Bull. No. 19, 16th Ann. Meeting,
Nov 15, 1951*

1952 No Record

Trans. Bull. No. 26. 1953

istic, but because the relationship of industrial health with all the other health fields is becoming increasingly evident. It is directly allied with public health in that a workman must be kept healthy 24 hours a day if he is to do an efficient job for 8 of those hours. Therefore, progressive managements concern themselves with the physical and mental well-being of the worker, his family, his whole community. Physical examinations of employees catch nonoccupational diseases in their incipient stages while there is still time to effect a cure. Physical defects are also uncovered and make it possible to place the man on a job commensurate with his physical condition, thereby prolonging his economically productive years. Health education in the plant is reflected in improved living standards outside its walls. Everybody benefits, including the employer.

Essential Part of Management Program

In certain companies, in-plant health programs have reduced absenteeism by more than 29%, labor turnover by almost the same, and have cut occupational diseases in half. Considered in this light it is obvious that a good industrial health program is an essential part of any management program in industry. I don't need to spell out to you the disrupting and costly effect that absenteeism alone has on production. The savings through reduction in absenteeism can easily offset the cost of a health program.

To achieve the best possible working and living conditions for their employees, many industries have turned to Industrial Hygiene Foundation for guidance. Although we have shown a continuing growth over the last 15 years, I am happy to say that 1953 has been one of our most satisfactory, as evidenced by:

Twelve new members 1953

Can Manufacturers Institute, Inc.
Continental Can Company
Sugar Beet Products Company
McLean Manufacturing Company
Kennebec Copper Corporation
Doehler-Jarvis Division, National Lead Company
Rem-Cre Titanium, Inc.
Owens-Corning Fiberglass Corporation
McLain Fire Brick Company
Johnson and Johnson
→ Ruberoid Company
St. Regis Paper Company

1954

FOUNDATION FACTS

C. RICHARD WALMER, M.D.

Managing Director, Industrial Hygiene Foundation

The most illuminating measure of Industrial Hygiene Foundation's progress and growth is to be found right here in this auditorium. The increasing attendance at each Annual Meeting is evidence of the enthusiastic support you and the companies you represent are giving to the Foundation. With such interest, it was inevitable that the Foundation would achieve much in its first 20 years toward making better environmental health a reality. With a continuation of this interest, we look forward confidently to a still greater degree of success.

Membership

We are pleased to welcome twelve new member companies to this year's meeting. They are:

Asbestos Corporation Limited
Commonwealth Sanitation Company
G. H. Packwood Manufacturing Company
Georgia Kaolin Company
Mechanical Industries, Inc.
Phillips Petroleum Company
Pilot Chemical Company
Radio Corporation of America
L. L. Stiles and Sons Brick Company
U. S. Asbestos Division of Raybestos-Manhattan, Inc.
Western Electrochemical Company
Wyandotte Chemicals Corporation

This brings the Foundation's membership to 365 companies having a total of more than three million employees. Special subscribers to the monthly DIGEST and other publications now include 128 governmental health agencies and other health and education institutions. Among them are 30 such organizations in 14 foreign countries.

Almost every industrial category is represented on the Foundation's membership roster. The staff of the Foundation is proud to be the medium through which all of these diversified industries can unite their efforts in protecting the health of their workers and their consumers.

Helping immeasurably to make this possible through the years has been the interest and support of Mellon Institute. We owe a

[5]

*Trans. Bull. No. 28, 1944 Ann.
Meeting, Nov. 17-18, 1954*

1955

We like to feel that through the years these meetings, too, have proved valuable to you in affording an opportunity to get together with representatives of fields other than your own so that lines of communication can be strengthened and problems ironed out.

We hope that all of you, and particularly the new members, will take every opportunity to call on the Foundation's staff for assistance. I would like to welcome, at this time, eleven new members to this year's meeting. They are:

Baugh Chemical Company
The Beryllium Corporation
Cora Products Refining Company
Crouse-Hinds Company
Crown Zellerbach Corporation
Detroit Steel Products Company
Industrial Indemnity Company
Mechanical Industries, Inc.
Olin Mathieson Chemical Corporation
Pittsburgh Steel Company
Standard Oil Company of California

This twentieth year of the Foundation's existence saw the completion of a number of important field and research projects and the initiation of new ones. Environmental surveys included studies of dust exposures and other atmospheric contaminants, for which control procedures were recommended and parallel medical controls set up. Several surveys involved determination of the outdoor air pollution as well as that at specific manufacturing operations.

Two complete medical surveys were made which resulted in the modernization of existing medical programs to encompass health maintenance activities.

Several new products have been investigated in our toxicological laboratory to ascertain whether any harmful properties were present. Other studies were carried out to determine the effects on the lungs of dust from various substances used in manufacturing. One of these investigations extends over a three-year period, another over two years.

Extensive air pollution investigations continued throughout the year.

The work carried on by the Foundation this year involved a budget expenditure of a quarter of a million dollars. Figures were cut close, but we expect to end the year with a balanced budget. Our total cash and securities amount to \$175,000.

Elected to the Board of Trustees this year were Mr. John Bugas.

[6]

Trans. Bull. No. 29, 20th Ann. Meeting,
Nov. 16-17-1955

1956

FOUNDATION FACTS

C. RICHARD WALMER, M.D.

Managing Director, Industrial Hygiene Foundation

It is indeed a pleasure to have so many of the Foundation's member companies represented here today. The charter members of Industrial Hygiene Foundation visualized it as a unifying agent, aiding in the advancement of occupational health on an industry-wide front, and I think your presence here today justifies their belief that industry needed and wanted such an organization. The joint effort of companies to foster health of workmen has been an effective method of dealing with socio-economic problems relating to industrial health.

Of equal importance in advancing industrial health are the individual efforts of companies to achieve optimum health maintenance in their respective plants. I think the member companies of Industrial Hygiene Foundation are leaders in this respect.

We want at this time to welcome seventeen new members to this year's meeting. They are:

Allied Chemical & Dye Corporation
AMP Incorporated
Association of American Railroads
Association of American Soap and
Glycerine Producers, Inc.
Boeing Airplane Company
The Cleveland Graphite Bronze Company
Dow Corning Corporation
Equitable Life Assurance Society
of the United States
Farrell-Cheek Steel Company
Jesse S. Morie & Son, Inc.
Minneapolis-Honeywell Regulator Company
Pennsylvania Manufacturers' Association
Casualty Insurance Company
Sauereisen Cements Company
Sperry Gyroscope Company
Standard Oil Company of Indiana
Wald Industries Inc.
Western Maryland Railway

We hope that all of you will consider the Foundation as part of your own technical staff, and we look forward to being of assistance to you.

During the past year the Foundation's staff completed a number of important field and research projects. Environmental surveys were

[4]

Nov - 14-15, 1956

Trans. Bull. No. 30, 21st Ann. Meeting

*Trans. Bull. No. 31, 22nd Ann. Meeting,
Oct 30-31, 1957*

Foundation Facts

C. RICHARD WALMER, M.D., Pittsburgh

It is indeed a pleasure to welcome all of you to this 22d Annual Meeting of Industrial Hygiene Foundation, not only because I am always happy to see so many members of the Foundation here, but because I believe this audience represents the formula for hurdling obstacles that present themselves in just about every major human endeavor. And that formula is communication—not just communication within the boundaries of our own specialties, but communication across lines, across barriers of misunderstanding that lack of information and insight can create.

We hope that the program which has been arranged for you will help to bring about a clearer understanding of the interrelationship of management, technical, and medical aspects of health maintenance.

We want at this time to welcome 11 new members to this year's meeting. They are the following:

The American Metal Co., Ltd.
The Atchison, Topeka and Santa Fe Railway System
Brazilian National Steel Company
Dick Corporation
General Foods Corporation
Ingersoll-Humphreys Division of Borg-Warner Corporation
Inchide Steel Company
Minnesota Mining & Manufacturing Co.
Reaction Motors, Inc.
Research-Cottrell, Inc.
Sheffield Steel Division of Armco Steel Corporation

We hope that you will consider the Foundation as part of your own technical staff, and we look forward to being of assistance to you.

During the past year the Foundation's staff completed a number of important field

and research projects. Environmental surveys were made for member companies to evaluate the degree of hazardous exposures to dust, fumes, and other atmospheric contaminants. Control measures were based upon this evaluation of the working environment. Investigations were also made of community air pollution, and stack discharges at industrial plants were measured to determine whether these were a contributing factor.

Two major epidemiological studies were carried on during the year, one to determine the health status of workers in a specific industry and whether there is a relationship between environmental exposures and certain biologic effects, and the other to investigate the biologic effects of certain chemical compounds.

Another major medical study was the survey of the medical program of one member company, a redesigning of it, and the preparation of a manual of procedures.

A number of research investigations in the Foundation's toxicological laboratory were concerned with the development of fundamental information appraising and controlling occupational disease hazards. Among long-range projects of this type is one being conducted for an association of industries to study biological factors in air pollution. Another is a research project to study potential hazards of a new product, and includes pulmonary, gastrointestinal, and eye-irritation studies. Findings serve as a basis for evolving proper control measures to protect the health of workers and consumers.

These are just the highlights of the work carried on this year. There were many other projects of a lesser magnitude but equally

1958

No REcord

1959 Ann. Rept

MEMBERS OF INDUSTRIAL HYGIENE FOUNDATION

—A—

Abingdon Potteries, Inc.
Abrasive Grain Association
Abrasive Products Company
Acme Abrasive Company
Aerovent Fan Company, Inc.
Allegheny Ludlum Steel Corporation
Allegheny Pittsburgh Coal Company
Allied Chemical Corporation
Allis-Chalmers Manufacturing Company
Aluminum Company of America
American Abrasive Company
American Air Filter Company, Inc.
American Brake Shoe Company
American Can Company
American Emery Wheel Works
American Iron and Steel Institute
American Metal Climax, Inc.
American Mining Congress
American Optical Company
American Smelting & Refining Company
American Zinc Institute, Inc.
American Zinc, Lead & Smelting Company
Anaconda Company
Asbestos Corporation Limited
Assn. of American Railroads
Assn. of American Soap & Glycerine Producers, Inc.
Assn. Argentina de Empresarios Mineros
Assn. of Casualty & Surety Companies*
Atchafalaya, Topeka and Santa Fe Railway System
Automobile Manufacturers Association

—B—

Ball Brothers Company
Bartlett-Collins Company
Baugh and Sons Company
Bay State Abrasive Products Company
Beryllium Corporation
Bethlehem Steel Company, Inc.
Bird & Son, Inc.
Bituminous Casualty Corporation
Boeing Airplane Company
Brush Beryllium Company
George H. Bullard Company
Bunker Hill Company

—C—

Can Manufacturers Institute, Inc.
Carborundum Company
Catalytic Combustion Corporation
Celanese Corporation of America
Central Silica Company
Chicago Wheel & Manufacturing Company
Cincinnati Milling Products
Cleveland Graphite Bronze Company
Robert F. Coleman, Inc.
Colonial Abrasive Products Company
Commonwealth Sanitation Company
Companhia Siderurgica Nacional
Consolidation Coal Company, Inc.
Continental Can Company, Inc.
Copperweld Steel Company
Corn Products Company
Cortland Grinding Wheels Corporation

—D—

Deckers Creek Sand Company
Deere & Company
A. P. de Sanno & Son, Inc.
Diamond Alkali Company
Dow Chemical Company
B. F. Drakenfeld & Company, Inc.
Dravo Corporation

—E—

Eagle-Picher Company
Ebasco Services, Inc.
Electric Storage Battery Company
Electro Refractories & Abrasives Corporation
Eljer Company
Equitable Life Assurance Society of the U.S.
Esso Research and Engineering Company
Ethyl Corporation
Exolon Company

—F—

Falk Corporation
Farrell-Cheek Steel Company
Ferro Corporation
Foote Mineral Company
Ford Motor Company
Fostoria Glass Company
Foundry Facings Manufacturers Association
Fuller Merriam Company

* Multiple Membership (147 member companies)

MEMBERS (continued)

—G—

Gardner Machine Company
Geigy-Werke Schweizerhalle A.G.
General Abrasive Company, Inc.
General Ceramics Corporation
General Electric Company
General Grinding Wheel Corporation
General Mills, Inc.
General Motors Corporation
General Refractories Company
Georgia Kaolin Company
Glenshaw Glass Company, Inc.
W. R. Grace & Company
Grinding Wheel Institute
Gulf Oil Corporation

—H—

Hall China Company
Hamilton Emery & Corundum Company
Hampden Grinding Wheel Company
Hazleton Laboratories
Hercules Powder Company
Homestake Mining Company

—I—

Ingersoll-Humphries
Inland Steel Company
International Business Machines Corp.
International Nickel Company

—J—

Johns-Manville Corporation

—K—

Keasbey & Mattison Company
Kennecott Copper Corporation
Keystone Abrasive Wheel Company
Kirk & Blum Manufacturing Company
Koppers Company, Inc.

—L—

Homer Laughlin China Company
Lava Crucible-Refractories Company
E. J. Lavino and Company
Lead Industries Association
London Transport Executive

—M—

Macklin Company
Manhattan Rubber
Maryland Self-Insurers' Association
J. S. McCormick Company
Mexico Refractories
Mid-West Abrasive Company
Mine Safety Appliances Company
Minneapolis-Honeywell Regulator Company
Minnesota Mining & Manufacturing Company
Jesse S. Morie & Son, Inc.

—N—

National Assn. of Mutual Casualty Cos.*
National Crushed Stone Association, Inc.
National Glass Sand Corporation
National Grinding Wheel Company, Inc.
National Industrial Sand Association
National Lead Company
National Sand & Gravel Association, Inc.
National Slag Association
National Steel Corporation
Neville Chemical Company
New Jersey Pulverizing Company

—O—

Ottawa Silica Company
Owens-Corning Fiberglas Corporation
Owens-Illinois Glass Company

—P—

Pacific Grinding Wheel Manufacturing Co.
G. H. Packwood Manufacturing Company
Pangborn Corporation
Pennular Grinding Wheel
Penn-Rillton Company
Pennsylvania Glass Sand Corporation
Pennsylvania Manufacturers' Association
Casualty Insurance Company
Phelps Dodge Corporation
Philadelphia Quartz Company
Phillips Petroleum Company
Pittsburgh Coke & Chemical Company
Pittsburgh Plate Glass Company
Pittsburgh Steel Company
Portland Cement Association
Pullman Incorporated Foundation

* Multiple Membership (24 member companies)

MEMBERS (continued)

—R—

Reaction Motors
Red Hill Grinding Wheel Corporation
Republic Steel Corporation
Research-Cottrell, Inc.
H. H. Robertson Company
Robertson Manufacturing Company
Rome Cable Corporation

—S—

Safety First Supply Company
St. Joseph Lead Company
Sandia Corporation
Sauerisen Cement Company
Claude B. Schnelble Company
Scott Aviation Corporation
Sharon Steel Corporation
Sheffield Steel
Shenango Furnace Company
Simonds Abrasive Company
Simonds Worden White Company
Socony Mobil Oil Company, Inc.
Standard Lime and Cement Company
Standard Oil Company of California
Standard Ultramarine and Color Company
Sterling Grinding Wheel Company
Sugar Beet Products Company

—T—

Tata Industries Limited
Taylor, Smith & Taylor Company
Tennessee Copper Company
Texas Gulf Sulphur Company
Titan Abrasives Company
Trenton Potteries Company
Trion, Inc.
Tusco Corporation

—U—

Union Carbide Corporation
United States Pottery Association
United States Rubber Company
United States Steel Corporation
Universal-Rundle Corporation

—V—

Valley Mould & Iron Corporation
Vesuvius Crucible Company
Vitrified Wheel Company

—W—

Waltham Grinding Wheel Company
Washington Mills Abrasive Company
Wedron Silica Company
Western Maryland Railway Company
Westfield Grinding Wheel Company
Westinghouse Air Brake Company
Westinghouse Electric Corporation
Wheelabrator Corporation
Whitehead Brothers Company
Willson Products
Wyckoff Steel Company

—Y—

Youngstown Sheet and Tube Company

1960

No REcord

1961 Ann. Rpt.

given specific information on their dust problem wrote and thanked us for this assistance and stated "Your advice and references have 'cleared the air' enabling us to face our atmospheric pollution with something more than doubt and suspicion."

A second training course for industrial hygiene engineers and chemists was conducted in cooperation with the Occupational Health Research Training Facility of the U. S. Public Health Service. An intensive two weeks was devoted to work in the laboratory and lectures. The response of those taking the course is evidence of the benefits to be derived from this activity and it is planned to repeat the course in 1962. A two-day seminar on the current aspects of the dust problem was conducted under the sponsorship of the National Industrial Sand Association and the Foundry Feedings Manufacturers Association. This provided an opportunity for the members of these associations to obtain up-to-date information on the medical, engineering and legal aspects of problems associated with their operations.

The Foundation provides an opportunity for representatives of industry to come together as working groups to explore and better define what they are doing and to take leadership in planning and developing policies to anticipate and prepare for new problems which we must face in the future. The real strength of the Foundation is in the unified action of its members.

On behalf of the staff, I wish to express our deep appreciation for the helpful and encouraging support and the valuable contributions of the Board of Trustees and its Executive Committee, the Technical Committees, and the executive staff of Mellon Institute.

NEW MEMBERS - 1961

American Viscose Corporation
Armco Steel Corporation
Butler County Mushroom Farm, Inc.
The Cooper-Bessemer Corporation
Davison Chemical Division,
W. R. Grace & Company
Ferro-Glo Corporation
Hanley Company
Hughson Chemical Company
Powdered Products Company
Westinghouse Brake & Signal, Ltd.
West Virginia Pulp and Paper Company

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1962 Ann. Rpt.

A third training course for industrial hygiene engineers and chemists was conducted in cooperation with the Occupational Health Research and Training Facility of the United States Public Health Service. A concentrated two weeks was devoted to work in the laboratory, lectures and homework assignments. The response was again most satisfying and the course will be repeated in 1963.

On behalf of the staff, I wish to express our deep appreciation for the helpful and encouraging support and the valuable contributions of the Board of Trustees and its Executive Committee, the Technical Committees, and the executive staff of Mellon Institute.

NEW MEMBERS - 1962

E. I. du Pont de Nemours & Company

International Research and Development Corporation

Louisiana Ordnance Plant of Remington Rand
Division, Sperry Rand Corporation

Netherlands du Pont (foreign)

Semiconductor Products Division of Motorola, Inc.

Stauffer Chemical Company

Tamms Industries Company

Western Electric Company

Member companies represented by proxies:

Abrasive Grain Association
Allegheny Pittsburgh Coal Company
Aluminum Company of America
American Air Filter Company, Inc.
American Iron and Steel Institute
American Zinc Institute
Anaconda Company
American Can Company
American Metal Climax, Inc.
American Smelting & Refining Company
American Viscose Div., FMC Corporation
American Zinc, Lead & Smelting Company
Armco Steel Corporation
Atlas Chemical Industries
Ball Brothers Company, Inc.
Boeing Company
Brush Beryllium Company
Butler County Mushroom Farm
Central Silica Company
Robert F. Coleman, Inc.
Cooper-Bessemer Corporation
Davison Chemical Div., W. R. Grace & Company
Deckers Creek Sand Company
Deere & Company
Dow Chemical Company
B. F. Drakenfeld & Co., Inc.
E. I. du Pont de Nemours & Company
Ebasco Services Incorporated
Electric Storage Battery Company
Equitable Life Assurance Society of the U.S.
Ethyl Corporation
Ferro Corporation
Foundry Facings Manufacturers Association
General Electric Company
General Motors Corporation
Glenshaw Glass Company
Grinding Wheel Institute
Hall China Company
Hanley Company
Hazleton Laboratories, Inc.
Hercules Powder Company
Inland Steel Company
International Business Machines Corp.
Johns-Manville Corporation
Jones & Laughlin Steel Corporation

Meeting of Members, October 23, 1963

Member companies represented by proxies (continued):

Kaiser Refractories
Kennecott Copper Corporation
Lava Crucible-Refractories Company
Louisiana Ordnance Plant, Remington Office Equipment Div.,
Sperry Rand Corporation
Marbon Chemical Div., Borg-Warner Corporation
J. S. McCormick Company
Minneapolis-Honeywell Regulator Company
Minnesota Mining and Manufacturing Company
Jesse S. Morie & Son, Inc.
National Assoc. of Mutual Casualty Companies
National Crushed Stone Association
National Industrial Sand Association
National Slag Association
Owens-Corning Fiberglas Corporation
Owens-Illinois Glass Company
G. H. Packwood Manufacturing Company
Penn Rillton Company
Pennsylvania Manufacturers' Assoc. Casualty Insurance Co.
Phelps Dodge Corporation
Philadelphia Quartz Company
Pipe Fabrication Institute
Pittsburgh Plate Glass Company
Pittsburgh Steel Company
Portland Cement Association
Powdered Products Company
Pullman-Standard
Reaction Motors Div., Thiokol Chemical Corporation
Republic Steel Corporation
Safety First Supply Company
St. Joseph Lead Company
Sandia Corporation
Sauerstein Cements Company
Claude B. Schneible Company
Scott Aviation Corporation
Socony Mobil Oil Company, Inc.
Stauffer Chemical Company
Sugar Beet Products Company
Tennessee Copper Company Division of Tennessee Corporation
Union Carbide Corporation
U. S. Steel Corporation
Wedron Silica Company
Westinghouse Electric Corporation
Whitehead Brothers Company

NEW MEMBERS AND MEMBERS RESIGNED

January 1 - September 30, 1963

New Members

Comalco Aluminium, Ltd.	\$	75.00	
Freeport Division, Nalco Chemical Co.		75.00	
Marbon Chemical Div., Borg Warner Corp.		175.00	
Pipe Fabrication Institute		75.00	
Stiffler Industrial Lubricants Co.		<u>75.00</u>	\$ 475.00

Members Increasing Dues

Ethyl Corporation (from \$100 to \$350)			<u>250.00</u>
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725.00

Members Resigned

Association of American Railroads	\$	50.00	
Autometric, Inc.		100.00	
Bethlehem Steel Co.		1,000.00	
Gustin-Bacon Manufacturing Co.		200.00	
Keasbey & Mattison Co.		150.00	
New Jersey Pulverizing Co.		50.00	
Shenango Furnace Co.		150.00	
Standard Ultramarine & Color Co.		150.00	
Universal Rundle Corp.		<u>100.00</u>	- <u>\$1,950.00</u>

Loss to September 30, 1963 - \$1,225.00

Year	Company	Year	Company
1937	Adhesive Grate Association	1961	Davison Chemical Division
1937	Abrasive Products Company		W. R. Grace & Company
1936	Acme Abrasive Company	1937	Deckers Creek Sand Company
1964	Acme Quality Products, Inc.	1937	A. P. de Sanno & Son, Inc.
1936	Allegheny Ludlum Steel Corp.	1952	Diamond Alkali Company
1940	Allegheny Pittsburgh Coal Co.	1939	Dow Chemical Company
1936	Allied Chemical Corporation	1937	B. F. Drakenfeld & Co., Inc.
1936	Aluminum Company of America	1937	Dravo Corporation
1937	American Abrasive Company	1962	E. I. duPont de Nemours & Co.
1947	American Can Company, Inc.		
1937	American Emery Wheel Works	1963	Edmar Abrasive Company
1944	American Iron and Steel Institute	1943	Electro Refractories & Abrasives Co.
1937	American Metal Climax, Inc.	1945	Eljer Plumbingware Division
1937	American Mining Congress		The Murray Corp. of America
1944	American Optical Company	1956	Equitable Life Assurance Society
1964	American Potash & Chemical Corp.		of the United States
1936	American Smelting & Refining Co.	1937	Ethyl Corporation
1936	American Zinc Institute, Inc.	1937	Exolon Company
1937	American Zinc, Lead & Smelting Co.		
1936	Anaconda Company		
1961	Armco Steel Corporation	1949	Ferro Corporation
1938	Association of Casualty & Surety Companies*	1964	FMC Corporation
1968	Atlas Chemical Industries, Inc.	1937	Foot Mineral Company
1936	Automobile Manufacturers Assn.	1947	Ford Motor Company
		1936	Foundry Facings Manufacturers Assn.
		1963	Freeport Division
1944	Bell Brothers Company, Inc.		Nalco Chemical Company
1937	Bartlett-Collins Company	1943	Fuller Merriam Company
1937	Bay State Abrasive Products Co.		
1955	Beryllium Corporation	1943	Gardner Machine Company
1961	Bleached Board Division	1956	Geigy-Werke Schweizerhalle A. G.
	West Virginia Pulp and Paper Co.	1937	General Abrasive Company, Inc.
1956	Bueing Company	1947	General Electric Company
1946	Brush Beryllium Company	1937	General Grinding Wheel Corp.
1952	George H. Bullard Company, Inc.	1951	General Mills, Inc.
1936	Bunker Hill Company	1942	General Motors Corporation
1961	Butler County Mushroom Farm, Inc.	1954	Georgia Kaolin Company
		1937	Glenstar Glass Company, Inc.
1953	Can Manufacturers Institute, Inc.	1937	Grinding Wheel Institute
1937	Carborundum Company	1950	Gulf Oil Corporation
1952	Celanese Corp. of America	1964	Gypsum Association
1937	Central Silica Company		
1937	Chicago Wheel & Manufacturing Co.	1937	Hall China Company
1954	Cincinnati Milling Products Division	1937	Hamilton Emery & Corundum Co.
	Cincinnati Milling Machine Co.	1937	Hampden Grinding Wheel Company
1944	Robert F. Coleman, Inc.	1961	Hanley Company
1951	Colonial Abrasive Products Co.	1949	Hazleton Laboratories
1963	Comalco Aluminum (Bell Bay) Ltd.	1956	Honeywell Inc.
1954	Commonwealth Sanitation Company	1961	Hughson Chemical Company
1956	Companhia Siderurgica Nacional	1937	Huntington Alloy Products Division
1936	Consolidation Coal Company, Inc.		International Nickel Company
1951	Continental Can Company, Inc.		
1961	Cooper-Brosamer Corporation	1957	Ingersoll-Humphries Division
1955	Corn Products Company		Borg-Warner Corporation
1937	Cortland Grinding Wheels Corporation	1947	Inland Steel Company
1962	Croft Petroleum Corporation	1947	International Business Machines

*Multiple Membership (126 member companies)

1936	Johns-Manville Corporation	1964	Pittsburgh Activated Coal Company
1960	Jones & Laughlin Steel Corp.	1937	Pittsburgh Plate Glass Company
1963	Jewett & Rodgers Company	1955	Pittsburgh Steel Company
1960	Kaiser Refractories Division	1938	Portland Cement Association
	Kaiser Aluminum & Chem. Corp.	1961	Powdered Products Company
1953	Kennecott Copper Corporation	1937	Process Air Division
1942	Koppers Company, Inc.		American Air Filter Company
		1950	Pullman-Standard
1937	Lava Crucible-Refractories Co.	1957	Reaction Motors Division
1964	Leverack & Haines, Inc.		Thiokol Chemical Corporation
1936	Lead Industries Association	1952	Red Hill Grinding Wheel Corp.
1958	London Transport Board	1945	Republic Steel Corporation
1962	Louisiana Ordnance Plant	1937	H. H. Robertson Company
	Remington Rand Division	1956	Robertson Manufacturing Company
	Sperry Rand Corporation		
1937	Macklin Company	1939	Safety First Supply Company
1950	Manhattan Rubber Division	1937	St. Joseph Lead Company
	Raybestos-Manhattan, Inc.	1950	Sandia Corporation
1940	Maryland Self-Insurers' and	1956	Sauereisen Cements Company
	Employers' Compensation Assn.	1937	Claude B. Schneible Company
1937	J. S. McCormick Company	1946	Scott Aviation Corporation
1964	Merck & Co., Inc.	1937	Simonds Abrasive Company
1937	Mid-West Abrasive Company	1937	Simonds Worden White Company
1936	Mine Safety Appliances Company	1956	Soap and Detergent Association
1957	Minnesota Mining & Manufacturing Co.	1949	Socony Mobil Oil Company, Inc.
1956	Jesse S. Moris & Son, Inc.	1941	Standard Lime and Cement Company
		1964	Standard Oil Company (New Jersey)
1945	National Association of Mutual	1962	Stauffer Chemical Company
	Casualty Companies*	1937	Sterling Grinding Wheel Company
1937	National Crushed Stone Assn., Inc.	1963	Stiffler Industrial Lubricants Co.
1947	National Glass Sand Corporation	1953	Sugar Beet Products Company
1937	National Grinding Wheel Co., Inc.		
1937	National Industrial Sand Assn.	1952	Tata Industries Limited
1937	National Lead Company	1946	Taylor, Smith & Taylor Company
1964	National Ready Mixed Concrete Assn.	1946	Tennessee Copper Company
1945	National Sand and Gravel Assn., Inc.		Division of Tennessee Corp.
1938	National Slag Association	1938	Texas Gulf Sulphur Company
1947	National Steel Corporation	1937	Titan Abrasives Company
1962	Nederland duPont de Nemours N. Y.	1960	Toms River-Cincinnati Chemical
1964	Newport Division		Corporation
	Heyden Newport Chemical Corp.	1936	Union Carbide Corporation
1963	Osborn Manufacturing Company	1936	United States Potters Association
1937	Ottawa Silica Company	1936	United States Steel Corporation
1953	Owens-Corning Fiberglas Corp.		
1936	Owens-Illinois Glass Company	1937	Valley Mould and Iron Corporation
		1960	Van Straaten Chemical Company
1954	Pacific Grinding Wheel Manufacturing	1938	Vesuvius Crucible Company
1954	G. H. Packwood Manufacturing Co.		
1937	Penineular Grinding Wheel Division	1937	Waltham Grinding Wheel Company
	Wakefield Corporation	1937	Washington Mills Abrasive Company
1937	Pennsylvania Glass Sand Corp.	1937	Wedron Silica Company
1956	Pennsylvania Manufacturers' Assn.	1962	Western Electric Company, Inc.
	Casualty Insurance Company	1937	Westfield Grinding Wheel Company
1964	Perkin-Elmer Corporation	1961	Westinghouse Brake and Signal
1960	Petroleo Brasileiro S. A.		Company, Limited
1936	Phelps Dodge Corporation	1937	Westinghouse Electric Corporation
1951	Philadelphia Quartz Company	1937	Whitehead Brothers Company
		1937	Willson Products Division
			Ray-O-Vac Company
		1937	Youngstown Sheet and Tube Company

* Multiple Membership (27 member companies)

1965 Annual Report

Date Joined	Company	Date Joined	Company
1937	Abrasive Grain Association	1937	Deckers Green Sand Company
1937	Abrasive Products Company	1937	A. P. deSanto & Sons, Inc.
1956	Achie Abrasive Company	1952	Diamond Alkali Company
1965	The Air Preheater Company	1939	Dow Chemical Company
1936	Alliegheny Ludlum Steel Corp.	1937	B. F. Drakenford & Co., Inc.
1940	Alliegheny Pittsburgh Coal Co.	1937	Dravo Corporation
1956	Allied Chemical Corporation	1962	E. I. duPont de Nemours & Co.
1936	Aluminum Company of America		
1937	American Abrasive Company	1963	Edmar Abrasive Company
1947	American Can Company, Inc.	1943	Electro Refractories & Abrasives Co.
1937	American Emery Wheel Works	1945	Eljer Plumbingware Division
1938	* American Insurance Association		The Murray Corporation of America
1944	American Iron and Steel Institute	1956	Equitable Life Assurance Society
1957	American Metal Climax, Inc.		of the United States
1937	American Mining Congress	1937	Ethyl Corporation
1945	* American Mutual Insurance Alliance	1937	Exolon Company
1944	American Optical Company		
1964	American Potash & Chemical Corp.	1949	Ferro Corporation
1936	American Smelting & Refining Co.	1964	FMC Corporation
1936	American Zinc Institute, Inc.	1937	Foot Mineral Company
1937	American Zinc, Lead & Smelting Co.	1947	Ford Motor Company
1936	Anacosta Company	1936	Foundry Facing Manufacturers Assn.
1961	Arcoro Steel Corporation	1963	Freeport Division
1965	Armstrong Paint & Varnish Works, Inc.		Nalco Chemical Company
1960	Atlas Chemical Industries, Inc.	1943	Fuller Merriam Company
1936	Automobile Manufacturers Assn.		
		1943	Gardner Machine Company
1945	Frank Bancroft Company, Inc.	1958	Geigy-Werke Schenckstrasse A.G.
1937	Bartlett-Collins Company	1937	General Abrasive Company, Inc.
1937	Bay State Abrasive Products Co.	1947	General Electric Company
1955	Beryllium Corporation	1937	General Grinding Wheel Corp.
1961	Bleached Board Division	1951	General Mills, Inc.
	West Virginia Pulp and Paper Co.	1942	General Motors Corporation
1956	The Boring Company	1954	Georgia Kaolin Company
1946	Brush Beryllium Company	1937	Glenshaw Glass Company, Inc.
1952	George H. Bullard Company, Inc.	1966 **	Milton J. Gordon Company
1936	Bunker Hill Company	1937	Grinding Wheel Institute
1961	Butler County Mushroom Farm, Inc.	1950	Gulf Oil Corporation
		1964	Gypsum Association
1953	Can Manufacturers Institute, Inc.		
1937	Carborundum Company	1937	Hall China Company
1952	Celanese Corporation of America	1937	Hamilton Emery & Corundum Company
1937	Central Silica Company	1937	Hampden Grinding Wheel Company
1937	Chicago Wheel & Manufacturing Co.	1961	Hanley Company
1966 **	Chrysler Corporation	1959	Hazleton Laboratories
1954	Cincinnati Milling Products Division	1956	Honeywell, Inc.
	Cincinnati Milling Machine Co.	1961	Hughson Chemical Company
1944	Robert F. Coleman, Inc.	1937	Huntington Alloy Products Division
1951	Colonial Abrasive Products Co.		International Nickel Company
1965	Comalco Aluminum (Bell Bay) Ltd.		
1954	Commonwealth Sanitation Company	1947	Inland Steel Company
1958	Companhia Siderurgica Nacional	1947	International Business Machines Corp.
1936	Consolidation Coal Company, Inc.		
1953	Continental Can Company, Inc.	1936	Johns-Manville Corporation
1961	Cooper-Bessemer Corporation	1960	Jones & Laughlin Steel Corporation
1955	Corn Products Company	1963	Jowitt & Rodgers Company
1937	Cortland Grinding Wheels Corporation		
1962	Cresic Petroleum Corporation	1960	Kaiser Refractories Division
			Kaiser Aluminum & Chemical Corp.
1961	Davison Chemical Division	1953	Kennecott Copper Corporation
	W. R. Grace & Company	1965	Keystone Brass Works, Inc.
		1942	Koppers Company, Inc.

* Multiple membership

** January 1, 1966 member

1937	Lava Crucible-Refractories Company	1952	Red Hill Grinding Wheel Corporation
1964	Leverack & Haines, Inc.	1945	Republic Steel Corporation
1936	Lead Industries Association	1937	H. H. Robertson Company
1958	London Transport Board	1956	Robertson Manufacturing Company
1962	Louisiana Ordnance Plant		
	Remington Rand Division	1939	Safety First Supply Company
	Sperry Rand Corporation	1937	St. Joseph Lead Company
1937	Macklin Company	1950	Sandia Corporation
1950	Manhattan Rubber Division	1956	Sauereisen Cements Company
	Raybestos-Manhattan, Inc.	1937	Claude B. Schneible Company
1966 **	Manufacturing Chemists' Association	1946	Scott Aviation Corporation
1966 **	Marcona Mining Company	1937	Simonds Abrasive Company
1940	Maryland Self-Insurers' and	1937	Simonds Worden White Company
	Employers' Compensation Assn.	1956	Soap and Detergent Association
1937	J. S. McCormick Company	1949	Socony Mobil Oil Company, Inc.
1964	Merck & Company, Inc.	1941	Standard Lime and Cement Company
1937	Mid-West Abrasive Company	1964	Standard Oil Company (New Jersey)
1965	Miles Laboratories, Inc.	1962	Stauffer Chemical Company
1936	Mine Safety Appliances Company	1937	Sterling Grinding Wheel Company
1957	Minnesota Mining & Manufacturing Co.	1963	Stiffler Industrial Lubricants Company
1956	Jesse S. Morie & Son, Inc.	1965	Sturm, Ruger & Company, Inc.
		1953	Sugar Beet Products Company
1966 **	National Coal Association	1952	Tata Services Limited
1937	National Crushed Stone Assn., Inc.	1946	Taylor, Smith & Taylor Company
1947	National Glass Sand Corporation	1946	Tennessee Copper Company
1937	National Grinding Wheel Company, Inc.		Division of Tennessee Corporation
1937	National Industrial Sand Assn.	1938	Texas Gulf Sulphur Company
1937	National Lead Company	1937	Titan Abrasives Company
1964	National Ready Mixed Concrete Assn.	1960	Toms River Chemical Corporation
1945	National Sand and Gravel Assn., Inc.		
1938	National Slag Association	1936	Union Carbide Corporation
1947	National Steel Corporation	1936	United States Potters Association
1962	Nederland duPont deNemours N. V.	1936	United States Steel Corporation
1964	Newport Division		
	Tenneco Chemicals, Inc.	1937	Valley Mould and Iron Corporation
1963	Osborn Manufacturing Company	1960	Van Straaten Chemical Company
1937	Oxide Silica Company	1938	Vasuvius Crucible Company
1953	Owens-Corning Fiberglas Corp.		
1936	Owens-Illinois Glass Company	1937	Waltham Grinding Wheel Company
1954	Pacific Grinding Wheel Manufacturing	1937	Washington Mills Abrasive Company
1954	G. H. Packwood Manufacturing Co.	1937	Wedron Silica Company
1937	Pennasular Grinding Wheel Division	1962	Western Electric Company, Inc.
	Wakefield Corporation	1937	Westfield Grinding Wheel Company
1937	Pennsylvania Glass Sand Corporation	1961	Westinghouse Brake and Signal Co., Ltd.
1956	Pennsylvania Manufacturers' Assn.	1937	Westinghouse Electric Corporation
	Casualty Insurance Company	1937	Willson Products Division
1964	Perkin-Elmer Corporation		Ray-O-Vac Company
1960	Petroleo Brasileiro S. A.	1937	Youngstown Sheet and Tube Company
1936	Phelps Dodge Corporation		
1951	Philadelphia Quartz Company		
1964	Pittsburgh Activated Carbon Company		
1937	Pittsburgh Plate Glass Company		
1965	Pittsburgh Steel Company		
1948	Portland Cement Association		
1961	Powdered Products Company		
1937	Process Air Division		
	American Air Filter Company		
1950	Pullman-Standard		
1957	Reaction Motors Division		
	Thiokol Chemical Corporation		

** January 1, 1966 member

1966 Ann. Rpt

I H F MEMBERS

Abrasive Grain Association
Abrasive Products Company
Acme Abrasive Company
Air Preheater Company
Alcolac Chemical Corporation
Allegheny Ludlum Steel Corporation
Allegheny Pittsburgh Coal Company
Allied Chemical Corporation
Aluminum Company of America
American Abrasive Company
American Can Company
American Emery Wheel Works
*American Insurance Association
American Iron and Steel Institute
American Metal Climax, Inc.
American Mining Congress
*American Mutual Insurance Alliance
American Optical Company
American Potash & Chemical Corp.
American Smelting & Refining Co.
American Zinc Company
American Zinc Institute, Inc.
Anaconda Company
Armco Steel Corporation
Armstrong Paint & Varnish Works, Inc.
Asbestos Textile Institute
Atlas Chemical Industries, Inc.
Automobile Manufacturers Association, Inc.

Frank Bancroft Company, Inc.
Bartlett-Collins Company
Bay State Abrasive Products Company
Beryllium Corporation
Blanchard Machine Company
Boeing Company
Buckeye Abrasive, Inc.
George H. Bullard Company, Inc.
Bunker Hill Company
Butler County Mushroom Farm, Inc.

Can Manufacturers Institute, Inc.
Carborundum Company
Celanese Corporation
Central Silica Company
Chicago Wheel & Manufacturing Co.
Chrysler Corporation
Cincinnati Milling Machine Company
Cincinnati Milling Products Division
Robert F. Coleman, Inc.
Colonial Abrasive Products Company
Comalco Aluminum (Bell Bay) Limited
Companhia Siderurgica Nacional
Consolidation Coal Company, Inc.
Continental Can Company, Inc.
Corn Products Company
Cortland Grinding Wheels Corporation
Creole Petroleum Corporation

A. P. deSanno & Son, Inc.
Diamond Alkali Company
Dow Chemical Company
Dravo Corporation
E. I. du Pont de Nemours & Company

Eastman Kodak Company
Edmar Abrasive Company
Electric Storage Battery Company
Willson Products Division
Electro Refractories & Abrasives Corp.
Equitable Life Assurance Society of the U.S.
Ethyl Corporation
Exolon Company

Ferro Corporation
FMC Corporation
Foote Mineral Company
Ford Motor Company
Foundry Facings Manufacturers Assn.
Fuller Merriam Company

Gardner Machine Company
Geigy-Werke Schweizerhalle A. G.
General Abrasive Company, Inc.
General Electric Company
General Grinding Wheel Corporation
General Mills, Inc.
General Motors Corporation
Georgia Kaolin Company
Glenshaw Glass Company, Inc.
M. J. Gordon Company
Grinding Wheel Institute
Gulf Oil Corporation
Gypsum Association

Hall China Company
Hamilton Emery & Corundum Company
Hampden Grinding Wheel Company
Hanford Occupational Health Foundation
Hanson Company
Hazleton Laboratories
Hercules, Inc.

Drakenfeld Division
Hughson Chemical Company

Inland Steel Company
International Business Machines Corp.
International Nickel Company
Huntington Alloy Products Division

Johns-Manville Corporation
Jones & Laughlin Steel Corporation
Jowett & Rodgers Company

Kaiser Aluminum & Chemical Corp.
Kaiser Refractories Division

* Multiple Membership

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Kennecott Copper Corporation
Keystone Brass Works, Inc.
Koppers Company, Inc.

Laundry & Cleaners Allied Trades Assn.
Laverack & Haines, Inc.
Lead Industries Association
London Transport Board

Macklin Company
Manufacturing Chemists Assn., Inc.
Marcona Mining Company
Maryland Self-Ins. & Empl. Comp. Assn.
J. S. McCormick Company
Merck and Company, Inc.
Metropolitan Life Insurance Company
Mid-West Abrasive Company
Miles Laboratories, Inc.
Mine Safety Appliances Company
Minnesota Mining & Manufacturing Co.
Mobil Oil Corporation
Jesse S. Morie & Son, Inc.

Nalco Chemical Company
Freeport Division
National Coal Association
National Crushed Stone Association, Inc.
National Glass Sand Corporation
National Grinding Wheel Company, Inc.
National Industrial Sand Association
National Insulation Manufacturers Assn.
National Lead Company
National Sand & Gravel Association, Inc.
National Slag Association
Nederland du Pont de Nemours N. V.

Osborn Manufacturing Company
Ottawa Silica Company
Owens-Corning Fiberglas Corporation
Owens-Illinois Glass Company

Pacific Grinding Wheel Manufacturing Co.
G. H. Packwood Manufacturing Company
Pennsylvania Glass Sand Corporation
Pennsylvania Mfrs' Assn. Ins. Co.
Perkin-Elmer Corporation
Petroleo Brasileiro S. A.
Philadelphia Quartz Company
Pittsburgh Activated Carbon Company
Pittsburgh Plate Glass Company
Pittsburgh Steel Company
H. K. Porter Company, Inc.
Simonds Worden White Works
Portland Cement Association

Raybestos-Manhattan, Inc.
Manhattan Rubber Division
Red Hill Grinding Wheel Corporation
Republic Steel Corporation
H. H. Robertson Company
Robertson Manufacturing Company

Safety First Supply Company
St. Joseph Lead Company
Sandia Corporation
Sauereisen Cements Company
Simonds Abrasive Company
Sinclair-Koppers Company
Soap and Detergent Association
Sperry Rand Corporation
Louisiana Army Ammunition Plant
Standard Oil Company (New Jersey)
Stauffer Chemical Company
Sterling Grinding Wheel Company
Sturm, Ruger & Company, Inc.
Sugar Beet Products Company

Tata Services Limited
Tennessee Copper Company
Texas Gulf Sulphur Company
Thiokol Chemical Corporation
Reaction Motors Division
Titan Abrasives Company
Toms River Chemical Corporation

Union Carbide Corporation
United States Potters Association
United States Steel Corporation

Valley Mould and Iron Corporation
Van Straaten Chemical Company
Vesuvius Crucible Company

Wakefield Corporation
Peninsular Grinding Wheel Division
Waltham Grinding Wheel Company
Washington Mills Abrasive Company
Wedron Silica Company
Western Electric Company, Inc.
Westfield Grinding Wheel Company
Westinghouse Brake and Signal Company, Ltd.
Westinghouse Electric Corporation
West Virginia Pulp and Paper Company
Bleached Board Division

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Brown & Co. Ex #20017
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1967 Ann. Rpt.

I H F MEMBERS

Abrasive Grain Association
Abrasive Products Company
Acme Abrasive Company
Air Preheater Company
Aicolac Chemical Corporation
Allegheny Ludlum Steel Corporation
Allegheny Pittsburgh Coal Company
Allied Chemical Corporation
Aluminum Company of America
American Abrasive Company
American Can Company
American Emery Wheel Works
* American Insurance Association
American Iron and Steel Institute
American Metal Climax, Inc.
American Mining Congress
* American Mutual Insurance Alliance
American Optical Company
American Petroleum Institute
American Potash & Chemical Corp.
American Smelting & Refining Co.
American Welding & Manufacturing Co.
American Zinc Company
American Zinc Institute, Inc.
Anaconda Company
Armco Steel Corporation
Armstrong Paint & Varnish Works, Inc.
Asbestos Textile Institute
Atlas Chemical Industries, Inc.
Automobile Manufacturers Association, Inc.
Avco Bay State Abrasives Division

Frank Bancroft Company, Inc.
Beryllium Corporation
Blanchard Machine Company
Boeing Company
Brush Beryllium Company
Buckeye Abrasive, Inc.
George H. Bullard Company
Bunker Hill Company
Butler County Mushroom Farm, Inc.

Calgon Corporation
Packwood Manufacturing Co.
Pittsburgh Activated Carbon Co.
Can Manufacturers Institute, Inc.
Carborundum Company
Celanese Corporation
Central Silica Company
Chayes Dental Instrument Corp.
Chicago Wheel & Manufacturing Co.
Chrysler Corporation
Cincinnati Milling Machine Co.
Cincinnati Milling Products Division
Robert F. Coleman, Inc.
Colonial Abrasive Products Co.
Comalco Aluminum (Felt Bay) Limited
Companhia Siderurgica Nacional

Consolidation Coal Company, Inc.
Continental Can Company, Inc.
Corn Products Company
Cortland Grinding Wheels Corporation
Creole Petroleum Corporation

A. P. deSanno & Son, Inc.
Diamond Alkali Company
Dow Chemical Company
Dravo Corporation
E. I. du Pont de Nemours & Company

Eastman Kodak Company
Edmar Abrasive Company
Electric Storage Battery Company
Willson Products Division
Electro Refractories & Abrasives Corp.
Equitable Life Assurance Society of the U.S.
Ethyl Corporation
Exolon Company

Ferro Corporation
FMC Corporation
FMR Corporation
Foote Mineral Company
Ford Motor Company
Foundry Facings Manufacturers Group

Gardner Machine Company
Geigy-Werke Schweizerhalle A.G.
General Abrasive Company, Inc.
General Electric Company
General Grinding Wheel Corporation
General Mills, Inc.
General Motors Corporation
Georgia Kaolin Company
Glenshaw Glass Company, Inc.
Goodyear Tire & Rubber Company
Grinding Wheel Institute
Gulf Oil Corporation
Gypsum Association

Hall China Company
Hamilton Emery & Corundum Company
Hampden Grinding Wheel Company
Hanford Occupational Health Foundation
Hanson Company
Hazleton Laboratories
Hercules, Inc.
Drakenfeld Division
Huckson Chemical Company

Inland Steel Company
International Business Machines Corp.
International Nickel Company, Inc.
Huntington Alloy Products Division
ITT Abrasive Products Company

* Multiple Membership

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Johns-Manville Corporation
Jones & Laughlin Steel Corporation
Jowitt & Rodgers Company

Kasco Abrasives, Inc.
Kennecott Copper Corporation
Keystone Brass Works, Inc.
Koppers Company, Inc.

Laundry & Cleaners Allied Trades Assn.
Laverack & Haines, Inc.
Lead Industries Association
London Transport Board

Macklin Abrasives Company
Manufacturing Chemists Assn., Inc.
Marcona Mining Company
Maryland Self-Ins. & Empl. Comp. Assn.
J. S. McCormick Company
Merck and Company, Inc.
Metropolitan Life Insurance Company
Mid-West Abrasive Company
Miles Laboratories, Inc.
Mine Safety Appliances Company
Mobil Oil Corporation
Jesse S. Morie & Son, Inc.

Nalco Chemical Company
Freeport Division
National Coal Association
National Crushed Stone Association, Inc.
National Glass Sand Corporation
National Grinding Wheel Company, Inc.
National Industrial Sand Association
National Insulation Manufacturers Assn.
National Lead Company
National Sand & Gravel Association, Inc.
National Slag Association
Nederland du Pont de Nemours N. V.
Norton Company

Osborn Manufacturing Company
Ottawa Silica Company
Owens-Corning Fiberglas Corporation
Owens-Illinois, Inc.

Pacific Grinding Wheel Manufacturing Co.
Pennsylvania Glass Sand Corporation
Pennsylvania Mfrs. Assn. Inc. Co.
Perkin-Elmer Corporation
Petrobras/RPEC
Portland Cement Association
PPG Industries
Precision Grinding Wheel Co., Inc.

Raybestos-Manhattan, Inc.
Manhattan Rubber Division
Red Hill Grinding Wheel Corporation
Republic Steel Corporation
H. H. Robertson Company

Safety First Supply Company
St. Joseph Lead Company
Sandia Corporation
Sauerisen Cements Company
Sinclair-Koppers Company
Soap and Detergent Association
Sherry Rand Corporation
Louisiana Army Ammunition Plant
Standard Oil Company (Indiana)
Standard Oil Company (New Jersey)
Stauffer Chemical Company
Sturm, Ruger & Company, Inc.
Sugar Beet Products Company

Tata Services Limited
Tennessee Copper Company
Texas Gulf Sulphur Company
Triokol Chemical Corporation
Reaction Motors Division
Toms River Chemical Corporation

Union Carbide Corporation
United States Potters Association
United States Steel Corporation

Valley Mould and Iron Corporation
Van Straaten Chemical Company
Vesuvius Crucible Company

Wallace-Murray Corporation
Simonds Abrasive Division
Waltham Grinding Wheel Company
Washington Mills Abrasive Company
Wecron Silica Company
Western Electric Company, Inc.
Westfield Grinding Wheel Company
Westinghouse Air Brake Division
Westinghouse Air Brake Company
Westinghouse Brake and Signal Company, Ltd.
Westinghouse Electric Corporation
West Virginia Pulp and Paper Company
Bleached Board Division

Bureau of Labor Statistics

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1968 Ann. Rpt.

MEMBERS — 1968

19.

Date Joined	Company	Date Joined	Company
1937	Abrasive Grain Association	1953	Continental Can Company, Inc.
1937	Abrasive Products Company	1968	Continental Insurance Companies
1956	Acme Abrasive Company	1955	Corn Products Company
1965	The Air Preheater Company	1937	Cortland Grinding Wheels Corp.
1936	Allegheny Ludlum Steel Corp.	1962	Creole Petroleum Corporation
1940	Allegheny Pittsburgh Coal Co.		
1936	Aluminum Company of America	1937	A. P. deSanno & Son, Inc.
1969	**Aluminum Co. of Canada (Alcan)	1952	Diamond Shamrock Corporation
1937	American Abrasive Company	1968	DL Skin Care Products, Inc.
1947	American Can Company, Inc.	1939	Dow Chemical Company
1937	American Emery Wheel Works	1937	Dravo Corporation
1938	*American Insurance Association	1962	E. I. du Pont de Nemours & Co.
1944	American Iron and Steel Institute		
1957	American Metal Climax, Inc.	1966	Eastman Kodak Company
1937	American Mining Congress	1963	Edmar Abrasive Company
1945	*American Mutual Insurance Alliance	1943	Electro Refractories & Abrasives Corp.
1944	American Optical Company	1950	Equitable Life Assurance Society of the United States
1967	American Petroleum Institute		
1964	American Potash & Chemical Corp.	1937	Ethyl Corporation
1936	American Smelting & Refining Co.	1937	Exolon Company
1967	American Welding & Manufacturing Co.		
1937	American Zinc Company	1949	Ferro Corporation
1936	Anaconda Company	1964	FMC Corporation
1961	Armco Steel Corporation	1967	FMR Corporation
1965	Armstrong Paint & Varnish Works, Inc.	1937	Foote Mineral Company
1966	Asbestos Textile Institute	1947	Ford Motor Company
1947	Atlas Chemical Industries, Inc.	1936	Foundry Facing Manufacturers Assn.
1968	Auto-Flo Company	1969	**Frantz, McConnell & Seymour
1936	Automobile Manufacturers Assn.		
1937	Avco Bay State Abrasives Division	1943	Gardner Machine Company
		1958	Geigy-Werke Schweizerhalle A.G.
1965	Frank Bancroft Company, Inc.	1937	General Abrasive Company, Inc.
1955	Beryllium Corporation	1947	General Electric Company
1968	Bituminous Coal Operators' Assn.	1937	General Grinding Wheel Corp.
1967	Blanchard Machine Company	1951	General Mills, Inc.
1956	The Boeing Company	1942	General Motors Corporation
1944	Brush Beryllium Company	1954	Georgia Kaolin Company
1967	Buckeye Abrasive, Inc.	1968	Glass Container Manufacturers Institute, Inc.
1952	George H. Bullard Company, Inc.		
1936	Bunker Hill Company	1937	Glenshaw Glass Company, Inc.
1961	Butler County Mushroom Farm, Inc.	1967	Goodyear Tire & Rubber Company
		1937	Grinding Wheel Institute
1953	Can Manufacturers Institute, Inc.	1950	Gulf Oil Corporation
1937	Carborundum Company		
1952	Celanese Corporation	1936	Hall China Company
1937	Central Silica Company	1937	Hamilton Emery & Corundum Company
1968	Certain-teed Products Corporation Gustin-Bacon Division	1937	Hampden Grinding Wheel Company
1967	Chayes Dental Instrument Company	1966	Hanford Occupational Health Foundation
1937	Chicago Wheel & Manufacturing Co.	1967	Hanson Company
1960	Chrysler Corporation	1966	Hazleton Laboratories
1954	Cincinnati Milling Machine Co. Cincinnati Milling Products Div.	1937	Hercules, Inc. Drakenfield Division
1944	Robert F. Coleman, Inc.	1947	Inland Steel Company
1951	Colonial Abrasive Products Co.	1947	International Business Machines Corp.
1963	Comalco Aluminum (Bell Bay) Ltd.	1966	International Nickel Company, Inc.
1958	Companhia Siderurgica Nacional		Huntington Alloy Products Division
1936	Consolidation Coal Company, Inc.		

*Multiple membership

**January 1, 1969 member

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1968 Ann. Rpt.

Date Joined	Company	Date Joined	Company
1967	ITT Abrasive Products Co.	1967	Precision Grinding Wheel Company, Inc.
1936	Johns-Manville Corporation	1968	Raybestos-Manhattan, Inc.
1936	Jones & Laughlin Steel Corp.		Manhattan Rubber Division
1963	Jowitt & Rodgers Company	1952	Red Hill Grinding Wheel Corporation
		1937	H. H. Robertson Company
1967	Kasco Abrasives, Inc.		
1953	Kennecott Copper Corporation	1937	St. Joseph Lead Company
1965	Keystone Brass Works, Inc.	1950	Sauereisen Cements Company
1942	Koppers Company, Inc.	1966	Sinclair-Koppers Company
		1956	Soap and Detergent Association
1968	Homer Laughlin China Company	1962	Sperry Rand Corporation
1966	Laundry and Cleaners Allied Trades Association		Louisiana Army Ammunition Plant
1964	Laverack & Haines, Inc.	1968	Sprayed Mineral Fiber Manufacturers Association, Inc.
1936	Lead Industries Association	1967	Standard Oil Company (Indiana)
1958	London Transport Board	1964	Standard Oil Company (New Jersey)
1961	Lord Corporation	1965	Sturm, Ruger & Company, Inc.
	Hughson Chemical Co. Div.	1953	Sugar Beet Products Company
		1968	SysteMed Corporation
1937	J. S. McCormick Company		
1937	Macklin Company	1945	Tata Services Limited
1966	Manufacturing Chemists' Assn.	1946	Tennessee Copper Company
1966	Marcna Mining Company		Div. of Tennessee Corporation
1949	Metropolitan Life Insurance Co.	1938	Texas Gulf Sulphur Company
1937	Mid-West Abrasive Company	1960	Toms River Chemical Corporation
1968	Midwestern Coating Corporation		
1936	Mine Safety Appliances Company	1936	Union Carbide Corporation
1968	Mobay Chemical Company	1936	United States Potters Association
1966	Mobil Oil Corporation	1936	United States Steel Corporation
1956	Jesse S. Morie & Son, Inc.		
		1937	Valley Mould and Iron Corporation
1963	Nalco Chemical Company	1960	Van Straaten Chemical Company
	Freeport Division	1936	Vesuvius Crucible Company
1966	National Coal Association		
1937	National Crushed Stone Assn., Inc.	1967	Wallace-Murray Corporation
1947	National Glass Sand Corporation		Simonds Abrasive Division
1937	National Grinding Wheel Co., Inc.	1937	Waltham Grinding Wheel Company
1937	National Industrial Sand Assn.	1937	Washington Mills Abrasive Company
1966	National Insulation Manufacturers Association	1937	Wedron Silica Company
		1962	Western Electric Company, Inc.
1937	National Lead Company	1937	Westfield Grinding Wheel Company
1945	National Sand and Gravel Assn., Inc.	1967	Westinghouse Air Brake Company
1938	National Slag Association		Westinghouse Air Brake Division
1962	Nederland duPont deNemours N. V.	1961	Westinghouse Brake and Signal Co., Ltd.
1967	Norton Company	1937	Westinghouse Electric Corporation
	Grinding Wheel Division	1968	Arthur C. Withrow Company
1963	Osborn Manufacturing Company	1936	Zinc Institute, Inc.
1953	Owens-Corning Fiberglass Corp.		
1936	Owens-Illinois, Inc.		
1954	Pacific Grinding Wheel Mfg. Co.		
1937	Pennsylvania Glass Sand Corporation		
1956	Pennsylvania Manufacturers' Assn. Insurance Company		
1960	Petrobras/RPBC		
1964	Pittsburgh Activated Carbon Co. Div. of Calgon Corporation		
1938	Portland Cement Association		
1937	PPG Industries		

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MEMBERS

Date Joined	Company	Date Joined	Company	Date Joined	Company
1937	Abrasive Grain Association	1937	Dravo Corporation	1968	Midwestern Coating Corporation
1970	Abrasive Materials Division Norton Company	1962	E. I. du Pont de Nemours & Co.	1936	Mine Safety Appliances Company
1937	Abrasive Products Company	1966	Eastman Kodak Company	1949	Mobil Oil Corporation
1970	Abrasives Division Bencix Corporation	1963	Edmar Abrasive Company	1956	Jesse S. Morie & Son, Inc.
1956	Acme Abrasive Company	1943	Electro Refractories & Abrasives Division of Ferro Corporation	1966	National Coal Association
1936	Allegheny Ludlum Steel Corp.	1969	Environmental Sciences, Inc.	1937	National Crushed Stone Assn., Inc.
1956	Allied Chemical Corporation	1956	Equitable Life Assurance Society of the United States	1969	National Forge Company
1970	Allison Campbell Division American Chain & Cable Co., Inc.	1937	Ethyl Corporation	1947	National Glass Sand Corporation
1936	Aluminum Company of America	1937	Exolon Company	1937	National Grinding Wheel Division Federal-Mogul Corporation
1969	Aluminum Co. of Canada (Alcan)	1949	Ferro Corporation	1937	National Industrial Sand Assn.
1947	American Can Company, Inc.	1964	FMC Corporation	1966	National Insulation Mfrs. Assn.
1937	American Emery Wheel Works	1967	FMR Corporation	1937	National Lead Company
1936	American Insurance Association	1937	Foot Mineral Company	1945	National Sand & Gravel Assn., Inc.
1944	American Iron and Steel Institute	1947	Ford Motor Company	1938	National Slag Association
1957	American Metal Climax, Inc.	1969	Fostoria Glass Company	1962	Nederland du Pont de Nemours N. V.
1937	American Mining Congress	1936	Foundry Supply Manufacturers' Group	1963	Osborn Manufacturing Company
1945	American Mutual Insurance Alliance	1969	Frantz, McConnell & Seymour	1953	Owens-Corning Fiberglas Corp.
1944	American Optical Company	1963	Freeport Division Nalco Chemical Company	1936	Owens-Illinois, Inc.
1967	American Petroleum Institute	1943	Gardner Machine Company	1954	Pacific Grinding Wheel Company, Inc.
1964	American Potash & Chemical Corp.	1958	Geigy-Werke Schweizerhalle A. G.	1937	Pennsylvania Glass Sand Corp.
1936	American Smelting & Refining Co.	1937	General Abrasive Company	1956	Pennsylvania Manufacturers' Assn. Insurance Company
1959	American Standard, Inc.	1968	General Asbestos & Rubber Div. Raybestos-Manhattan, Inc.	1960	Petrobras/RPBC
1969	American Textile Mfrs. Institute	1970	General Dynamics Corporation	1964	Pittsburgh Activated Carbon Div. Calgon Corporation
1936	Anaconda Company	1947	General Electric Company	1970	Pneumafil Corporation
1961	Armco Steel Corporation	1937	General Grinding Wheel Corp.	1938	Portland Cement Association
1965	Armstrong Chemcon, Inc.	1951	General Mills, Inc.	1937	PPG Industries
1969	Asbestos Cement Products Assn.	1942	General Motors Corporation	1967	Precision Grinding Wheel Co., Inc.
1956	Asbestos Textile Institute	1954	Georgia Kaolin Company	1952	Red Hill Grinding Wheel Corp.
1970	Atlantic Abrasive Corporation	1968	Glass Containers Mfrs. Institute, Inc.	1970	Rex-Cut Products Company Division of Clevepak Corp.
1947	Atlas Chemical Industries, Inc.	1937	Glenshaw Glass Company, Inc.	1937	H. H. Robertson Company
1968	Auto-Flo Company Division of Masco Corporation	1967	Goodyear Tire & Rubber Company	1969	Rome Division Revere Copper and Brass, Inc.
1936	Automobile Manufacturers Assn.	1967	Grinding Wheel Division Norton Company	1937	St. Joseph Lead Company
1937	Avco Bay State Abrasives Division	1937	Grinding Wheel Institute	1956	Sauereisen Cements Company
1970	The Bannson Company	1950	Gulf Oil Corporation	1967	Simonds Abrasive Division Wallace-Murray Corporation
1965	Frank Bannett Company, Inc.	1958	Gustin-Bacon Division Certain-teed Products Corp.	1966	Sinclair-Koppers Company
1968	Bituminous Coal Operators' Assn.	1936	Hall China Company	1956	Soap and Detergent Association
1956	The Boeing Company	1937	Hamilton Division American Abrasive Corporation	1968	Sprayed Mineral Fiber Mfrs. Assn., Inc.
1970	Borden, Inc.	1966	Hanford Environmental Health Fdn.	1964	Standard Oil Company (New Jersey)
1970	Brockway Glass Company, Inc.	1967	Hanson Company	1962	Stauffer Chemical Company
1944	Brush Beryllium Company	1959	Hazleton Laboratories	1965	Sturm, Ruger & Company, Inc.
1957	Buckeye Abrasive, Inc.	1961	Hughson Chemical Company Division of Lord Corporation	1953	Sugar Beet Products Company
1952	George H. Bullard Company, Inc.	1937	Huntington Alloy Products Division International Nickel Co., Inc.	1968	Systemed Corporation
1961	Butler County Mushroom Farm, Inc.	1947	Inland Steel Company	1945	Tata Services Limited
1953	Can Manufacturers Institute, Inc.	1947	International Business Machines Corp.	1969	Tenneco, Inc.
1937	Carborundum Company	1967	ITT Abrasive Products Company	1946	Tennessee Copper Company Div. of Tennessee Corporation
1952	Celanese Corporation	1936	Johns-Manville Corporation	1938	Texas Gulf Sulphur Company
1937	Central Silica Company	1939	Jones & Laughlin Steel Corp.	1960	Toms River Chemical Corporation
1967	Chayes Abrasives Division Chayes Dental Instrument Co.	1963	Jowitt & Rodgers Company	1970	Travelers Insurance Companies
1937	Chicago Wheel & Manufacturing Co.	1967	Kasco Abrasives, Inc.	1936	Union Carbide Corporation
1954	Cincinnati Milling Products Div. Cincinnati Milling Machine Co.	1955	Kawecki Beryllco Industries, Inc.	1968	United States Asbestos Division Raybestos-Manhattan, Inc.
1944	Robert F. Coleman, Inc.	1946	Kennecott Copper Corporation	1936	United States Potters Association
1961	Colonial Abrasive Products Co.	1942	Koppers Company, Inc.	1936	United States Steel Corporation
1953	Comarco Aluminum (Bell Bay, Ltd.	1970	Laclede Steel Company	1960	Van Straaten Chemical Company
1958	Companhia Siderurgica Nacional	1968	Homer Laughlin China Company	1938	Vesuvius Crucible Company
1936	Consolidated Coal Company, Inc.	1964	Laverack & Haines, Inc.	1937	Waltham/Hampden Grinding Wheel Co.
1953	Continental Can Company, Inc.	1936	Lead Industries Association	1937	Washington Mills Abrasive Co.
1958	Continental Insurance Companies	1958	London Transport Board	1937	Wedron Silica Company
1937	Cortland Division American Abrasive Corporation	1962	Louisiana Army Ammunition Plant Sperry Rand Corporation	1962	Western Electric Company, Inc.
1956	CPC International	1937	J. S. McCormick Company	1937	Westfield Grinding Wheel Co.
1962	Credle Petroleum Corporation	1946	Manhattan Rubber Division Raybestos-Manhattan, Inc.	1937	Westinghouse Electric Corporation
1937	A. P. deSandro & Son, Inc.	1966	Manufacturing Chemists Assn., Inc.	1968	Arthur C. Withrow Company
1952	Diamond Shamrock Corporation	1956	Marcona Mining Company	1936	Zinc Institute, Inc.
1958	DL Skin Care Products, Inc.	1949	Metropolitan Life Insurance Co.		
1939	Dow Chemical Corporation				
1937	Drakenstein Division Hercules, Inc.				

* Multiple membership

MEMBERS

Date Joined	Company	Date Joined	Company	Date Joined	Company
1937	* Abrasive Grain Association	1937	A. P. deSanno & Son, Inc.	1970	Medical Supply Company
1970	Abrasive Materials Division Norton Company	1952	Diamond Shamrock Corporation	1970	Metal Lathe Works Corporation
1957	Abrasive Products Company	1939	Dow Chemical Corporation	1949	Metropolitan Life Insurance Company
1970	Abrasives Division Bendix Corporation	1937	Drakenfeld Division, Hercules, Inc.	1957	Michael Abrasive Company
1956	Aixite Abrasive Company	1937	Dravo Corporation		Grinding Wheel Division
1971	Adamas Carbide Corporation	1962	E. I. du Pont de Nemours & Co.	1968	Midwestern Grinding Corporation
1956	Allegheny Ludlum Steel Corporation	1966	Eastman Kodak Company	1956	Mini Safety Appliances Company
1956	Allied Chemical Corporation	1963	Edmar Abrasive Company	1949	Mott Co. Corporation
1970	Allison Campbell Division American Chain & Cable Co., Inc.	1943	Electro Refractories & Abrasives Division of Ferro Corporation	1956	Jesse S. Moore & Son, Inc.
1936	Aluminum Company of America	1969	Environmental Sciences, Inc.	1971	Multi Metals, Inc.
1969	Aluminum Company of Canada Ltd.	1956	Equitable Life Assurance Society of the United States	1971	National Association of Manufacturers
1971	American Apparel Manufacturers Assn.			1966	National Coal Association
1947	American Can Company	1937	Ethyl Corporation	1957	National Grinding Wheel Division Federal Metal Corporation
1958	* American Insurance Association	1937	Excision Company	1957	National Industrial Sales Association
1944	American Iron and Steel Institute	1967	FMC Corporation	1966	National Insurance Sales Association
1957	American Metal Climax, Inc.	1949	Ferro Corporation	1957	National Lead Company
1947	American Mining Congress	1971	Firth Sterling, A Teledyne Company	1958	National Saw Association
1945	* American Mutual Insurance Alliance	1937	Foxe Mineral Company	1962	Northwestern Portland Cement N. V.
1944	American Optical Corporation	1947	Ford Motor Company	1971	Newcomer Products, Inc.
1967	American Petroleum Institute	1936	Foundry Supply Manufacturers' Group	1953	O'Brien Manufacturing Company
1946	American Smelting & Refining Company	1963	Freepart Division Nalco Chemical Company	1955	O'Brien Chemical Industries Corporation
1949	American Standard, Inc.	1943	Gardner Machine Company	1936	Owens-Illinois, Inc.
1969	American Textile Mfrs. Institute	1937	General Abrasive Company	1957	PGI Industries, Inc.
1936	Anaconda Company	1968	General Asbestos & Rubber Division Raybestos-Manhattan, Inc.	1951	Prime Grinding Wheel Company, Inc.
1970	Analo American Corp. of South Africa, Ltd.	1970	General Cigar Company	1947	Pennsylvania Glass Sand Corporation
1970	Argonaut Insurance Company	1970	General Dynamics Corporation	1970	Frederick Corporation
1965	Armstrong Chemcon, Inc.	1947	General Electric Company	1958	Portland Cement Association
1969	Asbestos Cement Products Association	1937	General Grinding Wheel Corporation	1970	Pottery Products, Inc.
1970	Asbestospray Corporation	1951	General Mills, Inc.	1967	Precision Grinding Wheel Co., Inc.
1966	Asbestos Textile Institute	1942	General Motors Corporation	1952	Ree Hill Grinding Wheel Corporation
1970	Atlantic Abrasive Corporation	1954	Georgia Kaolin Company	1970	Res-Cut Products Company
1947	Atlas Chemical Industries, Inc.	1968	Glass Containers Mfrs. Institute, Inc.		Division of General Corporation
1968	Auto-Flo Company	1937	Glenshaw Glass Company, Inc.	1957	H. B. Fetterman Company
	Division of Masco Corporation	1967	Gowear Tire & Rubber Company	1957	St. Joe Minerals Corporation
1946	Automobile Manufacturers Association	1967	Grinding Wheel Division Norton Company	1971	Sandvik Steel, Inc.
1947	Avco Bay State Abrasives Division	1937	* Grinding Wheel Institute	1956	Sacramento Cement Company
1970	The Bahnsen Company	1950	Gulf Oil Corporation	1971	Salem-Terrington Development Assn.
1965	Frank Bancroft Company, Inc.	1968	Gustin Bacon Division Certain-teed Products Corporation	1967	Simmons Abrasive Division
1956	The Bueing Company	1936	Hali China Company		Western Abrasive Corporation
1970	Borden, Inc.	1937	Hamilton Division American Abrasive Corporation	1966	Simmons Copper Company
1971	Bright Bow Industrial Division Weldon Roberts Rubber Company	1966	Hanford Environmental Health Fon.	1956	Soar and Descent Association
1941	Brush Beryllium Company	1967	Hanson Company	1968	Strayed Minerals, Inc.
1967	Buckeye Abrasive, Inc.	1937	Huntington Alloy Products Division International Nickel Company, Inc.	1964	Standard Oil Company (New Jersey)
1952	George H. Bullard Company, Inc.	1971	Hydro Carbide Corporation	1962	Stauffer Chemical Company
1961	Butler County Mushroom Farm, Inc.	1947	Inland Steel Company	1965	Sturm, Ruger & Company, Inc.
1955	C.P.C. International	1947	International Business Machines Corp.	1955	Sugar Beet Products Company
1955	Can Manufacturers Institute, Inc.	1970	International Lead Zinc Research Org.	1968	SveinMed Corporation
1971	Carbide Division, Howmet Corp.	1967	ITT Abrasive Products Company	1959	T.F.W. Industries
1937	Carborundum Company	1936	Johns-Manville Corporation	1945	Tate Services Limited
1971	Carmet Company	1939	Jones & Laughlin Steel Corporation	1969	Tennessee, Inc.
1952	Celanese Corporation	1963	Jowin & Rodgers Company	1958	Texas Gull Refining Company
1971	Cemented Carbide Producers Assn.	1967	Kasco Abrasives Columbian Systems Company	1960	Toni River Chemical Corporation
1957	Central Silica Company	1955	Kawerl Beryllco Industries, Inc.	1970	Travelers Insurance Companies
1967	Chaves Abrasives Division Chaves Dental Instrument Co.	1946	Kennecott Copper Corporation	1971	Tungsten Alloy Mfg. Co., Inc.
	Chicago Wheel & Manufacturing Co.	1942	Koppers Company, Inc.	1936	United Carbide Corporation
1958	Ciba Geigy AG	1970	Laclede Steel Company	1970	United States Mineral Products Co.
1954	Cincinnati Milacron, Inc.	1968	Home Laughlin China Company	1956	United States Pottery Association
	Products Division	1964	Laverax & Haines, Inc.	1936	United States Steel Corporation
1944	Robert F. Coleman, Inc.	1936	Lead Industries Association, Inc.	1960	Van Stratten Chemical Company
1951	Colonial Abrasive Products Company	1958	London Transport Executive	1958	Vesuvius Crucible Company
1958	Companhia Siderurgica Nacional	1962	Louisiana Army Ammunition Plant	1971	VK-Wagon Company
1956	Consolidation Coal Company, Inc.		Spern Rand Corporation	1971	Waco Corporation
1955	Continental Can Company, Inc.	1937	J. S. McCormick Company	1957	Valiant Grinding Wheel Co.
1958	Continental Insurance Companies	1946	Manhattan Rubber Division Raybestos-Manhattan, Inc.	1957	Washington Mill Abrasive Company
1966	Copperhill Operations Div. of Cater Service Company	1966	Manufacturing Chemists Association	1957	Western Steel Company
1957	Cortland Division American Abrasive Corporation		Marcon Mining Company	1971	Weston Grinding Wheel Co.
1970	Cresco Petroleum Corporation			1962	Western Industrial Company, Inc.

* Multiple membership

: Group membership

NEW MEMBERS -- 1971

American Apparel Manufacturer's Association

American Foundrymen's Society

American Steel Foundries

Argonaut Insurance Company

Asbestospray Corporation

Cemented Carbide Products Association

Chemico Metals Corp.

General Cigar Company

International Lead Zinc Research Organization

National Association of Manufacturers

Selenium-Tellurium Development Association, Inc.

Teledyne Brown Engineering

-- from Minutes of the Board of Trustees Meetings

March 9 & October 11, 1971

NEW MEMBERS -- 1972

Buhl Optical Company

Chicopee Manufacturing Company

Columbia Gas System Service Corporation

Consolidated Natural Gas Service Co.,
and Peoples Natural Gas Company

Industrial Bio-Test Laboratories, Inc.

Lee-Norse Company

Miles Laboratories

Organization Resources Counselors, Inc.

Safety First Industries, Inc.

Shell Oil Company

Tri-State Engineering Company

-- from Minutes of the Board of Trustees Meetings

February 8, May 9, and October 9, 1972

1973

Date Joined	Company
1973	Falcon Foundry Company
1949	Ferro Corporation
1947	Ford Motor Company
1936	Foundry Supply Manufacturers Group
1968	General Asbestos & Rubber Division, Raybestos-Manhattan, Inc.
1970	General Cigar Company, Inc.
1947	General Electric Company
1951	General Mills, Inc.
1942	General Motors Corporation
1954	Georgia Kaolin Company
1937	Glenshaw Glass Company, Inc.
1937	*Grinding Wheel Institute
1950	Gulf Oil Corporation
1936	Hall China Company
1972	Heinz U.S.A. (Div. of H.J. Heinz Co.)
1973	Howell Industrial Clinic
1937	Huntingdon Alloy Products Division, International Nickel Co., Inc.
1947	ICI America, Inc.
1972	Industrial Bio-Test Laboratories, Inc.
1973	Ingersoll-Rand Company
1947	Inland Steel Company
1947	International Business Machines Corp.
1970	International Lead Zinc Research Org.
1936	Johns-Manville Corporation
1939	Jones & Laughlin Steel Corporation

Date Joined	Company
1955	Kawecki Berylco Industries, Inc.
1973	Keystone Metal Company
1942	Koppers Company, Inc.
1970	Laclede Steel Company
1968	Homer Laughlin China Company
1972	Lee-Norse Company
1962	Louisiana Army Ammunition Plant, Sperry Rand Corporation
1937	J. S. McCormick Company
1966	Marcona Mining Company
1970	Marion Health and Safety
1937	Metropolitan Life Insurance Company
1965	Miles Laboratories, Inc.
1936	Mine Safety Appliances Company
1949	Mobil Oil Corporation
1956	Jesse S. Morie & Son, Inc.
1936	Motor Vehicle Mfrs. Assn. of U.S., Inc.
1937	NL Industries, Inc.
1971	National Association of Manufacturers
1973	National Forge Company
1938	National Slag Association
1972	Organization Resources Counselors, Inc.
1953	Owens-Corning Fiberglas Corporation
1936	Owens-Illinois, Inc.
1937	PPG Industries Inc.
1937	Pennsylvania Glass Sand Corporation

Date Joined	Company
1972	Peoples Natural Gas Company
1970	Pneumafil Corporation
1938	Portland Cement Association
1970	Potters Industries, Inc.
1973	Pullman-Standard
1937	H. H. Robertson Company
1972	Safety First Industries, Inc.
1973	The Sayer Glove Corporation
1937	St. Joe Minerals Corporation
1956	Sauersbach Cements Company
1956	Textile Services Division
	The Boeing Company
1971	Selenium-Tellurium Development Association, Inc.
1972	Shell Oil Company
1966	Sinclair-Koppers Company
1956	Soap and Detergent Association
1973	Stark Associates, Inc.
1962	Stauffer Chemical Company
1973	A. Stuckl Company

Date Joined	Company
1965	Sturm, Ruger & Company, Inc.
1969	Tenneco, Inc.
1938	Texasgulf, Inc.
1966	Thermal Insulation Manufacturers, Inc.
1960	Toms River Chemical Corporation
1970	Travelers Insurance Companies
1972	Tri-State Engineering Company
1936	Union Carbide Corporation
1970	United States Mineral Products Company
1936	United Potters Association
1936	United States Steel Corporation
1960	Van Straaten Chemical Company
1938	Vesuvius Crucible Company
1937	Weldron Silica Div.
	Del Monte Properties Company
1962	Western Electric Company, Inc.
1937	Westinghouse Electric Corporation
1968	Arthur C. Withrow Company

IHF MEMBERS

Date Joined	Company	Date Joined	Company
1937	Abrasive Grain Association	1953	Can Manufacturers Institute, Inc.
1936	Allegheny Ludlum Industries, Inc.	1952	Celanese Corporation
1956	Allied Chemical Corporation	1971	*Cemented Carbide Producers Association
1936	Aluminum Company of America	1968	Certain-Teed Saint Gobain Insulation Corp.
1969	Aluminum Company of Canada, Ltd.	1974	Chrysler Corporation
1974	AMETEK, Inc.	1958	Ciga-Geigy AG
1947	American Can Company	1972	Columbia Gas System Service Corporation
1971	American Foundrymen's Society	1958	Companhia Siderurgica Nacional
1938	*American Insurance Association	1973	Consolidated Edison Company of New York, Inc.
1914	American Iron and Steel Institute	1972	Consolidated Natural Gas Service Company
1957	American Metal Climax, Inc.	1974	Colt Industries Inc.
1937	American Mining Congress	1962	Creole Petroleum Corporation
1945	American Mutual Insurance Alliance	1974	DeSoto, Inc.
1944	American Optical Corporation	1952	Diamond Shamrock Corporation
1967	American Petroleum Institute	1971	Dow Chemical U. S. A.
1916	American Smelting & Refining Co.	1937	Drakenfeld Division, Hercules, Inc.
1969	American Textile Mfrs. Institute, Inc.	1937	Dravo Corporation
1966	ARCO/Polymers, Inc.	1936	E. I. du Pont de Nemours & Company
1970	Argonaut Insurance Company	1966	*Eastman Kodak Company
1974	BASF Wyandotte Corporation	1973	Minerals & Chemicals Division,
			Engelhard Minerals & Chemicals Corp.
1970	The Bahnsen Company	1956	Equitable Life Assurance Society of United States
1974	Brake Drum & Equipment Company	1964	Exxon Corporation
1941	Brush Wellman, Inc.	1973	Falcon Foundry Company
1961	Butler County Mushroom Farm, Inc.	1949	Ferro Corporation
1955	CPC International, Inc.	1947	Ford Motor Company

* Multiple Membership

Date Joined	Company
1974	Fostoria Glass Company
1936	Foundry Supply Manufacturers Group
1968	General Asbestos & Rubber Division, Raybestos-Manhattan, Inc.
1970	General Cigar Company, Inc.
1947	General Electric Company
1951	General Mills, Inc.
1942	General Motors Corporation
1974	General Refractories Company
1954	Georgia Kaolin Company
1937	Glenshaw Glass Company, Inc.
1937	*Grinding Wheel Institute
1950	Gulf Oil Corporation
1936	Hall China Company
1972	Heinz U. S. A. (Div. of H. J. Heinz Co.)
1973	Howell Industrial Clinic
1937	Huntington Alloy Products Division, International Nickel Co., Inc.
1947	ICI America, Inc.
1973	Ingersoll-Rand Company
1947	Inland Steel Company
1947	International Business Machines Corp.
1970	International Lead Zinc Research Org.
1974	International Technical Information Institute
1936	Johns-Manville Corporation
1939	Jones & Laughlin Steel Corporation
1955	Kawecki Beryleo Industries, Inc.

Date Joined	Company
1973	Keystone Metal Company
1974	Kopp Glass, Inc.
1942	Koppers Company, Inc.
1970	Laclede Steel Company
1968	Homer Laughlin China Company
1974	Lenox Crystal, Inc.
1962	Louisiana Army Ammunition Plant Thiokol/Louisiana Division
1937	J. S. McCormick Company
1966	Marcona Mining Company
1970	Marion Health & Safety, Inc.
1974	Jas. H. Matthews & Company
1937	Metropolitan Life Insurance Company
1965	Miles Laboratories, Inc.
1974	Milliken Brick Company
1936	Mine Safety Appliances Company
1974	Mobay Chemical Company
1949	Mobil Oil Corporation
1936	Motor Vehicle Manufacturers Assn. of U. S., Inc.
1937	NI Industries, Inc.
1971	National Annealing Box Company
1973	National Forge Company
1974	National Independent Coal Operators' Assn.
1938	National Slag Association
1972	Organization Resources Counselors, Inc.
1953	Owens-Corning Fiberglas Corporation

Date Joined	Company
1936	Owens-Illinois, Inc.
1937	PPG Industries, Inc.
1937	Pennsylvania Glass Sand Corp.
1972	Peoples Natural Gas Company
1970	Pneumafil Corporation
1938	Portland Cement Association
1970	Potters Industries, Inc.
1973	Pullman-Standard
1937	H. H. Robertson Company
1972	Safety First Industries, Inc.
1973	The Sager Glove Corporation
1937	St. Joe Minerals Corporation
1956	Sauders-Cement Company
1956	Seattle Services Division, The Boeing Company
1971	Selenium-Tellurium Development Association, Inc.
1974	Sharon Steel Corporation
1972	Shell Oil Company
1974	Shenango Incorporated
1956	Soap and Detergent Association

Date Joined	Company
1973	Starks Associates, Inc.
1962	Stauffer Chemical Company
1965	Sturm, Ruger & Company, Inc.
1969	Tenneco, Inc.
1966	Thermal Insulation Manufacturers Assn., Inc.
1970	Travelers Insurance Companies
1972	Tri-State Engineering Company
1936	Union Carbide Corporation
1974	United States Gypsum Company
1970	U. S. Mineral Products Company
1936	U. S. Potters Association
1936	United States Steel Corporation
1960	Van Straaten Chemical Company
1938	Vesuvius Crucible Company
1974	Watson-Standard Company
1937	Wedron Silica Division, Del Monte Properties Company
1962	Western Electric Company, Inc.
1937	Westinghouse Electric Corporation
1968	Arthur C. Withrow Company

1937	*Abrasive Grain Association	1937	*Grinding Wheel Institute
1936	Allegheny Ludlum Industries, Inc.	1950	Gulf Oil Corporation
1956	Allied Chemical Corporation	1936	Hall China Company
1936	Aluminum Company of America	1972	Heinz U.S.A. (Div. of H. J. Heinz Co.)
1969	Aluminum Company of Canada, Ltd.	1973	Howell Industrial Clinic
1947	American Can Company	1937	Huntington Alloys, Inc.
1971	American Foundrymen's Society	1975	Industrial Gasket & Shim Co., Inc.
1938	*American Insurance Association	1973	Ingersoll-Rand Company
1944	American Iron and Steel Institute	1947	Inland Steel Company
1957	American Metal Climax, Inc.	1947	IBM Corporation
1937	American Mining Congress	1970	International Lead Zinc Research Org.
1945	*American Mutual Insurance Alliance	1974	International Technical Information Inst.
1944	American Optical Corporation	1936	Jonna-Manville Corporation
1967	American Petroleum Institute	1939	Jones & Laughlin Steel Corporation
1936	ASARCO Incorporated	1955	Kawecki Beryllco Industries, Inc.
1969	American Textile Mfrs. Institute, Inc.	1974	Kopp Glass, Inc.
1966	ARCO/Polymers, Inc.	1942	Koppers Company, Inc.
1970	Argonaut Insurance Company	1970	Laclede Steel Company
1974	BASF Wyandotte Corporation	1968	Homier Laughlin China Company
1970	The Bahnsen Company	1974	Lenox Crystal, Inc.
1944	Brush Wellman, Inc.	1937	J. S. McCormick Company
1955	CPC International, Inc.	1966	Marrona Mining Company
1953	Can Manufacturers Institute, Inc.	1970	Marion Health & Safety, Inc.
1952	Celanese Corporation	1937	Metropolitan Life Insurance Company
1971	*Cemented Carbide Producers Assn.	1965	Miles Laboratories, Inc.
1968	Certain-Trend St. Gobain Insulation Corp.	1974	Milliken Brick Company
1974	Chrysler Corporation	1936	Mine Safety Appliances Company
1958	Ciba-Geigy AG	1974	Mobay Chemical Company
1974	Cult Industries Inc.	1975	Monongahela Iron & Metal Company, Inc.
1972	Columbia Gas System Service Corporation	1936	Motor Vehicle Mfrs. Assn. of U.S., Inc.
1975	Commercial Shearing, Inc.	1937	NL Industries, Inc.
1958	Companhia Siderurgica Nacional	1974	National Annealing Box Company
1973	Consolidated Edison Co. of New York, Inc.	1973	National Forge Company
1972	Consolidated Natural Gas Service Company	1972	Organization Resources Counselors, Inc.
1975	Consolidation Coal Company, Inc.	1953	Owens-Corning Fiberglas Corporation
1975	D'Appolonia Consulting Engineers, Inc.	1936	Owens-Illinois, Inc.
1974	DeSoto, Inc.	1937	PPG Industries, Inc.
1952	Diamond Shamrock Corporation	1937	Pennsylvania Glass Sand Corporation
1973	Dow Chemical U.S.A.	1972	Peoples Natural Gas Company
1937	Drakenfeld Division, Hercules, Inc.	1975	Pittsburgh & Lake Erie Railroad
1937	Dravo Corporation	1970	Pneumafil Corporation
1936	E. I. du Pont de Nemours & Company	1938	Portland Cement Association
1966	Eastman Kodak Company	1970	Potters Industries, Inc.
1971	Minerals & Chemicals Division, Engelhard Minerals & Chemicals Corp.	1973	Pulman-Standard
1975	Epic Metals Corporation	1968	Raybestos-Manhattan, Inc.
1956	Equitable Life Assurance Society of U.S.	1937	H. H. Robertson Company
1964	Faxon Corporation	1972	Safety First Industries, Inc.
1973	Falcon Foundry Company	1973	The Sager Glove Corporation
1974	Fostoria Glass Company	1937	St. Joe Minerals Corporation
1936	Foundry Supply Manufacturers Group	1956	Sauersheim Cements Company
1970	General Cigar Company, Inc.	1956	Seattle Services Division, The Boeing Co.
1947	General Electric Company	1971	Selenium-Tellurium Development Assn., Inc.
1951	General Mills, Inc.	1974	Sharon Steel Corporation
1942	General Motors Corporation	1972	Shell Oil Company
1974	General Refractories Company	1974	Shenango Incorporated
1954	Georgia Kaolin Company	1956	Soap and Detergent Association
		1975	The Standard Oil Company

Multiple Membership

<u>Date Joined</u>	<u>Company</u>
1962	Stauffer Chemical Company
1965	Sturm, Ruger & Company, Inc.
1969	Tenneco, Inc.
1966	Thermal Insulation Manufacturers Association, Inc.
1970	Travelers Insurance Companies
1972	Tri-State Engineering Company
1936	Union Carbide Corporation
1974	United States Gypsum Company
1970	U. S. Mineral Products Company
1936	U. S. Potters Association
1936	United States Steel Corporation

<u>Date Joined</u>	<u>Company</u>
1960	Van Straaten Chemical Company
1938	Vesuvius Crucible Company
1975	Vulcan Mold & Iron Company
1975	Washington Mould, Machine & Foundry Company
1974	Watson-Standard Company
1937	Wedron Silica Division, Del Monte Properties Company
1962	Western Electric Company, Inc.
1937	Westinghouse Electric Corporation
1968	Arthur C. Withrow Company
1975	Young Galvanizing, Inc.

NEW MEMBERS

The Ansul Company
 Consolidation Coal Company, Inc.
 E. D'Appolonia Consulting Engineers, Inc.
 Epic Metals Corporation
 Industrial Gasket & Shim Company, Inc.
 Monongahela Iron & Metal Company, Inc.
 Pittsburgh & Lake Erie Railroad
 The Standard Oil Company
 Vulcan Iron & Mold Company
 Washington Mould, Machine & Foundry Company
 Young Galvanizing, Inc.

ALL MEMBERS - 1976 Annual Reports

<u>Date</u> <u>Joined</u>	<u>Company</u>	<u>Date</u> <u>Joined</u>	<u>Company</u>
1937	*Abrasive Grain Association	1973	Falcon Foundry Co.
1976	Allegheny County Sanitary Authority	1976	Fort Pitt Steel Casting
1936	Allegheny Ludlum Industries, Inc.	1974	Fortoria Glass Co.
1956	Allied Chemical Corp.	1976	Franklin Glue Co.
1936	Aluminum Company of America	1936	Foundry Supply Manufacturers Group
1969	Aluminum Company of Canada, Ltd.	1970	General Cigar Co., Inc.
1947	American Can Co.	1947	General Electric Co.
1971	American Foundrymen's Society	1951	General Mills, Inc.
1938	*American Insurance Association	1942	General Motors Corp.
1944	American Iron and Steel Institute	1974	General Refractories Co.
1957	AMAX, Inc.	1954	Georgia Kaolin Co.
1937	American Mining Congress	1937	*Grinding Wheel Institute
1945	*American Mutual Insurance Alliance	1950	Gulf Oil Corp.
1944	A. O. Safety Products (Div. of American Optical Corp.)	1976	Halcon International, Inc.
1967	American Petroleum Institute	1936	Hall China Co.
1976	American Restaurant China Council, Inc.	1976	Harbison-Walker Refractories
1936	ASARCO Incorporated	1972	Heinz U.S.A. (Div. of H. J. Heinz Co.)
1969	American Textile Mfrs. Institute, Inc.	1976	Hill & Griffith Co.
1976	American Welding & Manufacturing Co.	1973	Howell Industrial Clinic
1976	American Wood Preservers Institute	1937	Huntington Alloys, Inc.
1976	Americhem Inc.	1975	Industrial Gasket & Seals Co., Inc.
1976	Anaconda Co., Wire & Cable Div.	1973	Ingersoll-Rand Co.
1966	ARCO/Polymers, Inc.	1947	Inland Steel Co.
1970	Argonaut Insurance Co.	1947	IBM Corp.
1974	BASF Wyandotte Corp.	1970	International Lead Zinc Research Org.
1970	The Bahrson Co.	1974	International Technical Information Inst
1944	Brush Wellman, Inc.	1936	John-Marville Corp.
1955	CPC International, Inc.	1939	Jones & Laughlin Steel Corp.
1953	Can Manufacturers Institute, Inc.	1955	Kawachi Beryllite Industries, Inc.
1971	*Cemented Carbide Producers Association	1974	Kopp Glass, Inc.
1968	Certain-Ted St. Gobain Insulation Corp.	1942	Koppers Co., Inc.
1974	Chrysler Corp.	1970	Laclede Steel Co.
1958	Ciba-Geigy AG	1962	Lagow, S.A.
1974	Colt Industries Inc.	1968	Homier Laughlin China Co.
1972	Columbia Gas System Service Corp.	1974	Lenox Crystal, Inc.
1976	Commercial Shearing, Inc.	1937	J. S. McCormick Co.
1958	Companhia Siderurgica Nacional	1976	Marathon Oil Co.
1973	Consolidated Edison Co. of New York, Inc.	1966	Marcone Mining Co.
1972	Consolidated Natural Gas Service Co.	1970	Marion Health & Safety, Inc.
1975	Consolidation Coal Co., Inc.	1937	Metropolitan Life Insurance Co.
1975	D'Appolonia Consulting Engineers, Inc.	1965	Miller Laboratories, Inc.
1974	DeSoto, Inc.	1974	Milliken Brick Co.
1952	Diamond Shamrock Corp.	1936	Mine Safety Appliances Co.
1976	Dick Corp.	1974	Mobay Chemical Co.
1973	Dow Chemical U.S.A.	1975	Monongahela Iron & Metal Co., Inc.
1976	Dow Corning Corp.	1936	Motor Vehicle Mfrs. Assn. of U.S., Inc.
1947	Drakefield Division, Hercules, Inc.	1937	NL Industries, Inc.
1937	Dravo Corp.	1974	National Annular Box Co.
1936	E. I. du Pont de Nemours & Co.	1973	National Forge Co.
1966	Eastman Kodak Co.	1972	Organization Research & Consulting, Inc.
1973	Minerals & Chemicals Division, Engelhard Minerals & Chemicals Corp.	1953	Owens-Illinois Glass Corp.
1976	Epic Metals Corp.	1937	PPC Industries, Inc.
1951	Equitable Life Assurance Society of U. S.	1937	Pennsylvania Glass & Sand Corp.
1964	Exxon Corp.	1972	Peoples Natural Gas Co.
1976	Essex Group	1975	Pittsburgh & Lake Erie Railroad
		1970	Pneumatic Corp.
		1938	Portland Cement Association

*Multiple Membership

IHF Members (continued)

<u>Date Joined</u>	<u>Company</u>	<u>Date Joined</u>	<u>Company</u>
1970	Potters Industries, Inc.	1969	Tenneco, Inc.
1973	Pullman-Standard	1966	Thermal Insulation Mfrs. Assn., Inc.
1976	RAD Services, Inc.	1976	Tile Council of America, Inc.
1968	Raybestos-Manhattan, Inc.	1970	Travelers Insurance Co.
1976	The Refractories Institute	1972	Tri-State Engineering Co.
1937	H. H. Robertson Co.	1976	II-VI Inc.
1976	SCM Corp.	1936	Union Carbide Corp.
1972	Safety First Industries, Inc.	1974	United States Gypsum Co.
1976	Schering-Plough Corp.	1970	U. S. Mineral Products Co.
1973	The Sager Glove Corp.	1936	U. S. Potters Association
1937	St. Joe Minerals Corp.	1936	United States Steel Corp.
1956	Sauerebaer Cements Co.	1960	Van Stratten Chemical Co.
1956	Seattle Services Div., The Boeing Co.	1972	Vesuvius Crucible Co.
1971	Selecon-Tellurium Development Assn., Inc.	1975	Vulcan Mold & Iron Co.
1976	Senco Products, Inc.	1976	WABCO Transportation Systems Group
1974	Sharon Steel Corp.	1975	Washington Mould Machine & Foundry Co.
1972	Shell Oil Co.	1974	Watson-Standard Co.
1974	Shenango Inc.	1937	Wedron Silica Division, Del Monte Properties Co.
1956	Soap and Detergent Association	1962	Western Electric Co., Inc.
1975	The Standard Oil Co.	1937	Westinghouse Electric Corp.
1962	Stauffer Chemical Co.	1976	Williams & Co., Inc.
1976	Stellite Division, Cabot Corp.	1968	Arthur C. Withrow Co.
1965	Sturm, Ruger & Co., Inc.	1975	Young Galvanizing, Inc.

NEW MEMBERS

Allegheny County Sanitary Authority
 American Restaurant China Council, Inc.
 American Welding and Manufacturing Company
 American Wood Preservers Institute
 Americhem, Incorporated
 Anacosta Company, Wire and Cable Division
 Commercial Searing, Incorporated
 Dick Corporation
 Dow Corning Corporation
 Essex Group, Incorporated
 Fort Pitt Steel Casting
 The Franklin Glue Company
 Halcon International, Incorporated
 Harbison-Walker Refractories
 Hill and Griffith Company
 Marathon Oil Company
 RAD Services, Incorporated
 The Refractories Institute
 Schering-Plough Corporation
 Senco Products, Incorporated
 SCM Corporation
 Stellite Division, Cabot Corporation
 Tile Council of America, Incorporated
 II-VI Incorporated
 WABCO Transportation Systems Group
 Williams and Company, Incorporated

III MEMBERS - 1977 Annual Report

<u>Date Joined</u>	<u>Company</u>	<u>Date Joined</u>	<u>Company</u>
1937	*Abrasive Grain Association	1956	Equitable Life Assurance Society
1976	Allegheny County Sanitary Authority	1976	Essex Group, Inc.
1936	Allegheny Ludlum Industries, Inc.	1964	Exxon Corp.
1945	*Alliance of American Insurers	1973	Falcon Foundry Co.
1956	Allied Chemical Corp.	1976	Fort Pitt Steel Casting
1936	Aluminum Co. of America	1974	Fostoria Glass Co.
1969	Aluminum Co. of Canada, Ltd.	1936	Foundry Supply Manufacturers Group
1957	AMAX, Inc.	1976	The Franklin Glue Co.
1947	American Can Co.	1970	General Cigar & Tobacco Co., Inc. of Culbro Corp.
1971	American Foundrymen's Society	1947	General Electric Co.
1973	American Industrial Hygiene Association	1951	General Mills, Inc.
1938	*American Insurance Association	1942	General Motors Corp.
1944	American Iron & Steel Institute	1974	General Refractories Co.
1937	American Mining Congress	1954	Georgia Kaolin Co.
1967	American Petroleum Institute	1937	*Grinding Wheel Institute
1976	American Restaurant China Council, Inc.	1950	Gulf Oil Corp.
1936	ASARCO, Inc.	1976	Halcon International, Inc.
1969	American Textile Manufacturers Institute, Inc.	1936	Hall China Co.
1976	American Welding & Manufacturing Co.	1977	Hankison Corp.
1976	American Wood Preservers Institute	1976	Harbison-Walker Refractories
1976	Americhem, Inc.	1972	Heinz U.S.A. (Div. of H.J. Heinz Co.)
1976	Anaconda Co., Wire & Cable Division	1966	Hierro-Peru
1966	ARCO/Polymers, Inc.	1976	Hill & Griffith Co.
1970	Argonaut Insurance Co.	1973	Howell Industrial Clinic
1974	BASF Wyandotte Corp.	1937	Huntington Alloys, Inc.
1977	Borg-Warner Chemicals	1975	Industrial Gasket & Shim Co., Inc.
1944	Brush Wellman, Inc.	1947	Inland Steel Co.
1977	Buffalo Color Corp.	1947	International Business Machines Corp.
1955	CPC International, Inc.	1970	International Lead-Zinc Research Organization
1977	Campbell Soup Co.	1936	Johns-Manville Corp.
1971	Cemented Carbide Producers Association	1939	Jones & Laughlin Steel Corp.
1977	Central Medical Health Services	1955	Kawecky Beryllco Industries, Inc.
1968	CertainFeed Corp.	1974	Kopp Glass, Inc.
1974	Chrysler Corp.	1970	Laclede Steel Co.
1958	Ciba-Geigy AG	1962	Lagoven, S.A.
1974	Coh Industries Inc.	1968	Homer Laughlin China Co.
1972	Columbia Gas System Service Corp.	1974	Lenox Crystal, Inc.
1975	Commercial Shearing, Inc.	1937	J. S. McCormick Co.
1958	Companhia Siderurgica Nacional	1976	Marathon Oil Co.
197	Consolidated Edison Co. of New York, Inc.	1977	Metropolitan Life Insurance Co.
1977	Consolidated Natural Gas Service Co.	1936	Mine Safety Appliances Co.
1977	Consolidation Coal Co., Inc.	1971	Mobay Chemicals
1977	Cummins Engine Co., Inc.	1977	Monongahela Iron & Steel Corp.
1972	Dana and Shumaker Corp.	1977	Motor Coils Manufacturing Co.
1976	Danaher Corp.	1936	Motor Vehicle Manufacturers Assn. of U.S., Inc.
1975	Dow Chemical U.S.A.	1974	National Annealing Box Co.
1976	Dow Corning Corp.	1972	National Forge Co.
1937	Drakenteld Division, Hercules, Inc.	1977	National Health Watch, Inc.
1937	Dravo Corp.	1972	Organization Resources Consultants, Inc.
1966	Eastman Kodak Co.	1953	Owens-Corning Fiberglas Corp.
1966	E. I. du Pont de Nemours & Co.	1937	PPG Industries, Inc.
1975	Minerals & Chemicals Division Fugelhard Minerals & Chemicals Corp.	1937	Pennsylvania Glass Sand Corp.

*Multiple Membership

IHF MEMBERS (continued)

<u>Date</u> <u>Joined</u>	<u>Company</u>	<u>Date</u> <u>Joined</u>	<u>Company</u>
1972	Peoples Natural Gas Co.	1976	Stellite Division, Cabot Corp.
1975	Pittsburgh & Lake Erie Railroad	1969	Tenneco, Inc.
1970	Pneumafil Corp.	1966	Thermal Insulation Manufacturers Assoc.
1938	Portland Cement Association	1976	Tile Council of America, Inc.
1970	Potters Industries, Inc.	1970	Travelers Insurance Companies
1973	Pullman-Standard	1972	Tri-State Engineering Co.
1977	Quaker State Oil Refining Corp.	1976	U-VI Inc.
1976	RAD Services, Inc.	1936	Union Carbide Corp.
1968	Raybestos-Manhattan, Inc.	1974	United States Gypsum Co.
1976	The Refractories Institute	1970	U. S. Minerals Products Co.
1937	H. H. Robertson Co.	1936	U. S. Potters Association
1976	SCM Corp.	1936	United States Steel Corp.
1972	Safety First Industries, Inc.	1960	Van Strater Chemical Co.
1973	The Sager Glove Corp.	1972	Vesuvius Crucible Co.
1937	St. Joe Minerals Corp.	1977	Volkswagen Mfg. Corp. of America
1937	Sauzeisen Cements Co.	1976	WABCO Railway Products Group
1977	Schuylkill Metals Corp.	1975	Washington Electric Machine & Foundry Co.
1956	Seattle Services Div., The Boeing Co.	1974	Watson-Standard Co.
1976	Senco Products, Inc.	1937	Wedron Silica Div., Public Beach Corp.
1974	Sharon Steel Corp.	1977	Wendel Tile Co.
1972	Shell Oil Co.	1962	Western Electric Co., Inc.
1974	Shenango Inc.	1937	Westinghouse Electric Corp.
1956	Soap & Detergent Association	1977	Whirlpool Corp.
1977	Spartek, Inc.	1976	Williams & Co., Inc.
1975	The Standard Oil Co.	1975	Young Galvanizing, Inc.
1937	Stauffer Chemical Co.		

NEW MEMBERS — 1977

Borg-Warner Chemicals
 Buffalo Color Corp.
 Campoli Soap Co.
 Central Medical Health Services
 John D. Copanos Co., Inc.
 Hankison Corp.
 Motor Colds Manufacturing Co.
 National Health Watch, Inc.
 Quaker State Oil Refining Corp.
 Schuylkill Metals Corp.
 Spartek, Inc.
 Volkswagen Manufacturing Corp. of America
 Wendel Tile Co.
 Whirlpool Corp.

IHF MEMBERS - 1978 Annual Report

<u>Date</u> <u>Joined</u>	<u>Company</u>	<u>Date</u> <u>Joined</u>	<u>Company</u>
1937	*Abrasive Grain Association	1976	Essex Group
1978	Alberta Dept. of Labour	1964	Exxon Corp.
1976	Allegheny County Sanitary Authority	1973	Falcon Foundry Co.
1936	Allegheny Ludlum Industries, Inc.	1978	Fisher Controls Co.
1945	*Alliance of American Insurers	1976	Fort Pitt Steel Casting
1956	Allied Chemical Corp.	1974	Fostoria Glass Co.
1936	Aluminum Co. of America	1936	Foundry Supply Manufacturers Group
1969	Aluminum Co. of Canada	1976	The Franklin Glue Co.
1957	AMAX, Inc.	1978	General Alloy Casting Co.
1947	American Can Co.	1970	General Cigar & Tobacco Co.
1971	American Foundrymen's Society	1947	General Electric Co.
1973	American Industrial Hygiene Association	1951	General Mills, Inc.
1938	*American Insurance Association	1942	General Motors Corp.
1944	American Iron & Steel Institute	1974	General Refractories Co.
1937	American Mining Congress	1954	Georgia Kaolin Research
1967	American Petroleum Institute	1937	*Grinding Wheel Institute
1976	American Restaurant China Council, Inc.	1950	Gulf Oil Corp.
1969	American Textile Mfrs. Institute, Inc.	1976	Halcon International, Inc.
1976	American Welding & Manufacturing Co.	1936	Hall China Co.
1976	American Wood Preservers Institute	1977	Hankison Corp.
1976	Americhem Inc.	1976	Harbison-Walker Refractories
1976	Anaconda Co., Wire & Cable Div.	1978	Harvey Industries, Inc.
1966	ARCO/Polymers, Inc.	1966	Hierro-Peru
1970	Argonaut Insurance Co.	1976	Hill & Griffith Co.
1936	ASARCO, Inc.	1975	Howell Industrial Clinic
1977	Borg-Warner Chemicals	1937	Huntington Alloys, Inc.
1944	Brush Wellman, Inc.	1978	Huntington Plating, Inc.
1977	Buffalo Color Corp.	1978	ICI Americas, Inc.
1977	Campbell Soup Co.	1978	ILCO, Inc.
1971	*Cemented Carbide Producers Assn.	1978	Imaging Systems Corp.
1977	Central Medical Health Services	1975	Industrial Gasket & Shim Co.
1968	CertainTeed Corp.	1947	Inland Steel Co.
1974	Chrysler Corp.	1947	International Business Machines Corp.
1958	Ciba-Geigy AG	1970	International Lead Zinc Research Org.
1974	Colt Industries Inc.	1936	Johns-Manville Corp.
1972	Columbia Gas System Service Corp.	1939	Jones & Laughlin Steel Corp.
1978	Columbia Nitrogen Corp.	1955	Kaweck Berylo Industries, Inc.
1975	Commercial Shearing, Inc.	1974	Kopp Glass, Inc.
1958	Companhia Siderurgica Nacional	1942	Koppers Co., Inc.
1973	Consolidated Edison Co. of New York, Inc.	1970	Laclede Steel Co.
1972	Consolidated Natural Gas Service Co.	1962	Lafoven, S.A.
1975	Consolidation Coal Co., Inc.	1968	Horner Laughlin China Co.
1977	John D. Copanos Co., Inc.	1974	Lenox Crystal, Inc.
1978	D'Appolonia Consulting Engineers, Inc.	1978	M & T Chemicals, Inc.
1952	Diamond Shamrock Corp.	1927	J. S. McCormick Co.
1976	Dick Corp.	1976	Marathon Oil Co.
1973	Dow Chemical U.S.A.	1978	C. H. Masland & Sons
1976	Dow Corning Corp.	1937	Metropolitan Life Insurance Co.
1937	Drakenfeld Div., Hercules, Inc.	1936	Mine Safety Appliances Co.
1937	Dravo Corp.	1974	Mobay Chemical Co.
1936	E. I. du Pont de Nemours & Co.	1976	Molded Fiber Glass Tray Co.
1978	Duraloy Blaw-Knox, Inc.	1975	Monongahela Iron & Metal Co.
1973	Minerals & Chemicals Division	1977	Motor Coils Manufacturing Co.
	Engelhard Minerals & Chemicals Corp.	1936	Motor Vehicle Manufacturers Assn.
1975	Epic Metals Corp.	1974	National Annealing Box Co.

*Multiple Membership

IHF MEMBERS (continued)

<u>Date Joined</u>	<u>Company</u>	<u>Date Joined</u>	<u>Company</u>
1977	National Health Watch, Inc.	1974	Shenango Inc.
1972	Organization Resources Counselors, Inc.	1956	Soap & Detergent Association
1953	Owens-Corning Fiberglas Corp.	1977	Spartek, Inc.
1937	Pennsylvania Glass Sand Corp.	1975	The Standard Oil Co.
1978	Pennsylvania Power Co.	1976	Stellite Div., Cabot Corp.
1972	Peoples Natural Gas Co.	1969	Tenneco Inc.
1975	Pittsburgh & Lake Erie Railroad	1966	Thermal Insulation Manufacturers Assn.
1970	Pneumafil Corp.	1978	Tile Council of America, Inc.
1938	Portland Cement Association	1970	Travelers Insurance Companies
1970	Potters Industries, Inc.	1972	Tri-State Engineering Co.
1937	PPG Industries, Inc.	1976	II-VI Inc.
1973	Pullman-Standard	1936	Union Carbide Corp.
1977	Quaker State Oil Refining Corp.	1974	United States Gypsum Co.
1976	RAD Services, Inc.	1970	U. S. Mineral Products Co.
1968	Raybestos-Manhattan, Inc.	1936	U. S. Pottery Association
1976	The Refractories Institute	1960	Van Straaten Chemical Co.
1937	H. H. Robertson Co.	1972	Vesuvius Crucible Co.
1978	Roux Laboratories, Inc.	1977	Volkswagen Mfg. Corp. of America
1972	Safety First Industries, Inc.	1976	WABCO Railway Products Group
1973	The Sager Glove Corp.	1975	Washington Metal, Machine & Foundry Co.
1937	St. Joe Minerals Corp.	1974	Watson-Standard Co.
1956	Sauereisen Cements Co.	1977	Wencsel Tile Co.
1977	Schuylkill Metals Corp.	1962	Western Electric Co.
1976	SCM Corp.	1937	Westinghouse Electric Corp.
1956	Seattle Services Div., Boeing Co.	1977	Whirlpool Corp.
1976	Senco Products, Inc.	1976	Williams & Co.
1974	Sharon Steel Corp.	1975	Young Galvanizing, Inc.
1972	Shell Oil Co.		

NEW MEMBERS — 1978

Alberta Department of Labour
 Columbia Nitrogen Corp.
 Duraloy Blaw-Knox, Inc.
 Fisher Controls Co.
 General Alloy Casting Co.
 Harvey Industries, Inc.
 Huntington Plating, Inc.
 ILCO, Inc.
 Imaging Systems Corp.
 M. & T Chemicals, Inc.
 C. H. Masland & Sons
 Molded Fiber Glass Tray Co.
 Pennsylvania Power Co.
 Roux Laboratories, Inc.

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IAF Members

Date Joined	Company
1937	*Abrasive Grain Association
1978	Alberta Workers' Health, Safety & Compensation
1976	Allegheny County Sanitary Authority
1936	Allegheny Ludlum Industries, Inc.
1943	*Alliance of American Insurers
1934	Allied Chemical Corp.
1974	Aloe Coal Co.
1936	Aluminum Company of America
1949	Aluminum Company of Canada
1957	AMAX, Inc.
1947	American Can Co.
1973	American Industrial Hygiene Association
1937	American Mining Congress
1967	American Petroleum Institute
1976	American Restaurant Chain Council, Inc.
1969	American Textile Manufacturers Inst.
1976	American Welding & Manufacturing Co.
1976	American Wood Preservers Institute
1976	Americanchem, Inc.
1979	Anaconda Company, Aluminum Division
1976	Anaconda Company, Wire & Cable Division
1970	Argonaut Insurance Co.
1936	ASARCO, Inc.
1979	Yitumbone Insurance Companies
1977	Borg-Warner Chemicals
1979	Brack Institute of America
1944	Brush Wellman, Inc.
1977	Buffalo Color Corp.
1977	Campbell Soup Co.
1971	*Cemented Carbide Producers Association
1968	CertainTeed Corp.
1958	Ciba-Geigy AG
1972	Columbia Gas System Service Corp.
1978	Columbia Rotopac Corp.
1973	Commercial Bearings, Inc.
1958	Companhia Siderurgica Nacional
1973	Consolidated Edison Co. of New York, Inc.
1972	Consolidated Natural Gas Service Co.
1975	Consolidation Coal Co., Inc.
1979	Contraves Gear Corp.
1977	Corb B. Copeland Co., Inc.
1952	Diamond Shamrock
1976	Dico Corp.
1973	Dow Chemical U.S.A.
1976	Dow Corning Corp.
1937	Durhamfield Colors, Ciba-Geigy Corp.
1937	Uva Corp.
1936	E. I. DuPont de Nemours & Co.
1978	Duraloy Aluminum, Inc.
1973	*Minerals & Chemicals Division, Engelhard Minerals & Chemicals Corp.
1979	Engineering & Safety Department, American Insurance Association

Date Joined	Company
1975	Epic Metals Corp.
1964	Exxon Corp.
1973	Falcon Foundry Corp.
1979	Joseph B. Fay Co.
1978	Fisher Controls Co.
1979	PMC Corp.
1974	Fostoria Glass Co.
1976	The Franklin Glue Co.
1979	Fusion Ceramics, Inc.
1979	General Accident Group
1978	General Alloy Casting Co.
1947	General Electric Co.
1942	General Motors Corp.
1974	General Refractories Co.
1954	Georgia Kaolin Research
1937	*Grinding Wheel Institute
1950	Gulf Oil Corp.
1976	Halcon International, Inc.
1936	Hill China Co.
1977	Hankison Corp.
1976	Harbison-Walker Refractories
1978	Harvey Industries, Inc.
1979	Helmick Corp.
1976	Hill & Griffith Co.
1973	Howell Industrial Clinic
1937	Huntington Alloys, Inc.
1978	Huntington Plating, Inc.
1978	ICI Americas, Inc.
1978	ILCO, Inc.
1978	Imaging Systems Corp.
1975	Industrial Gasket & Shim Co., Inc.
1947	Inland Steel Co.
1947	International Business Machines Corp.
1970	International Lead Zinc Research Organization
1936	Jonas-Manville Corp.
1955	Kawacki Berylco Industries, Inc.
1974	Kopp Glass, Inc.
1942	Koppers Company, Inc.
1962	Lapoven, S.A.
1968	Hower Laughlin China Co.
1974	Lenox Crystal, Inc.
1978	M & T Chemicals, Inc.
1937	J. S. McCormick Co.
1976	Marathon Oil Co.
1978	C. H. Masland & Sons
1937	Metropolitan Life Insurance Co.
1936	Mini Safety Appliances Co.
1974	Mobay Chemical Co.
1978	Holod Fiber Glass Tray Co.
1975	Monongahela Iron & Metal Co., Inc.
1977	Motor Coils Manufacturing Co.
1936	Motor Vehicle Manufacturers Association
1974	National Annealing Box Co.
1977	National Health Watch, Inc.

*Multiple Membership

Date Joined	Company
1953	Owens-Corning Fiberglass Corp.
1937	Pennsylvania Glass Sand Corp.
1978	Pennsylvania Power Co.
1972	Peoples Natural Gas Co.
1979	Phelps Dodge Brass Co.
1975	Pittsburgh & Lake Erie Railroad
1970	Pneumafil Corp.
1979	Port Authority of Allegheny County
1938	Portland Cement Association
1970	Potters Industries, Inc.
1937	PPC Industries, Inc.
1979	P. Q. Corp.
1976	RAC Services, Inc.
1968	Levestos-Manhattan, Inc.
1976	The Refractories Institute
1979	Reichhold Limited
1937	R. E. Robertson Co.
1978	Rour Laboratories, Inc.
1972	Safety First Industries, Inc.
1973	The Sager Glove Corp.
1937	St. Joe Minerals Corp.
1977	Schuylkill Metal Corp.
1976	SDX Corporation
1956	Seattle Services Division, Boeing Co.
1974	Sharon Steel Corp.
1972	Shell Oil Co.

Date Joined	Company
1979	New Castle Refractories Co.
1972	Organization Resources Counselors, Inc.
1974	Shenango Inc.
1977	Spartek, Inc.
1975	The Standard Oil Co.
1976	Stellite Division, Cabot Corp.
1966	Thermal Insulation Manufacturers Association
1978	Tile Council of America, Inc.
1970	Travelers Insurance Companies
1972	Tri-State Engineering Co.
1976	II-VI, Inc.
1936	Union Carbide Corp.
1979	U.S. Fidelity & Guaranty Co.
1974	United States Gypsum Co.
1936	U.S. Potters Association
1972	Vesuvius Crucible Co.
1977	Volkswagen of America Inc.
1976	WABCO Railway Products Group
1975	Washington Mould, Machine & Foundry Co.
1974	Wataon-Standard Co.
1977	Wenzel Tile Co.
1962	Western Electric Company, Inc.
1937	Weatinghouse Electric Corp.
1979	Whitacre-Greer Fireproofing Co.
1977	Whirlpool Corp.
1979	Wickwire Systems Company, Inc.
1976	Williams & Co.

New Members

Aloe Coal Company
 Anaconda Company, Aluminum Division
 Bituminous Insurance Companies
 Brick Institute of America
 Contraves Coerz Corporation
 Engineering & Safety Department, American Insurance Association
 Joseph B. Fay Company
 FMC Corporation
 Fusion Ceramics, Incorporated
 General Accident Group
 Helmick Corporation
 New Castle Refractories Company
 Phelps Dodge Brass Company
 Port Authority of Allegheny County
 P. Q. Corporation
 Reichhold Limited
 U.S. Fidelity & Guaranty Company
 Whitacre-Greer Fireproofing Company
 Wickwire Systems Company, Incorporated

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IHF Members - Alphabetical

Date Joined	Company
1937	Abrasive Grain Association Cleveland, Ohio 44107
1976	Allegheny County Sanitary Authority Pittsburgh, Pa. 15233
1936	Allegheny Ludlum Industries, Inc. Pittsburgh, Pa. 15230
1945	Alliance of American Insurers Chicago, Ill. 60606
1956	Allied Chemical Corporation Morristown, N.J. 07960
1979	Alco Coal Company Imperial, Pa. 15126
1936	Aluminum Company of America Pittsburgh, Pa. 15219
1957	AMAX, Inc. New York, N.Y. 10020
1947	American Can Company Greenwich, Conn. 06830
1973	American Industrial Hygiene Association Akron, Ohio 44313
1937	American Mining Congress Washington, D.C. 20036
1967	American Petroleum Institute Washington, D.C. 20037
1967	American Restaurant Chain Council, Inc. Alexandria, Va. 22314
1976	American Wood Preservers Institute McLean, Va. 22101
1976	Americhem, Inc. Cuyahoga Falls, Ohio 44221
1979	Anaconda Company, Aluminum Division Louisville, Ky. 40232
1976	Anaconda Company, Wire & Cable Division Greenwich, Conn. 06830
1970	Argonaut Insurance Company Menlo Park, Calif. 94025
1936	ASARCO, Inc. New York, N.Y. 10071
1980	Badische Corporation Williamsburg, Va. 23185
1980	BMI, Inc., Refractory Division Carnegie, Pa. 15106
1959	The Boeing Company Seattle, Wash. 98114
1977	Borg-Warner Chemicals Washington, W. Va. 26181
1979	Brick Institute of America McLean, Va. 22101
1944	Brush Wellman, Inc. Cleveland, Ohio 44110
1977	Buffalo Color Corporation Buffalo, N.Y. 14210
1980	Cabot Corporation Pampa, Tex. 79065
1977	Campbell Soup Company Camden, N.J. 08101
1971	Cemented Carbon Producers Association Cleveland, Ohio 44107

Date Joined	Company
1980	Centre Foundry & Machine Company Wheeling, W. Va. 26003
1968	CertainTeed Corporation Valley Forge, Pa. 19482
1972	Columbia Gas System Service Corp. Wilmington, Del. 19807
1978	Columbia Nitrogen Corporation Augusta, Ga. 30903
1975	Commercial Shearing, Inc. Youngstown, Ohio 44501
1973	Consolidated Edison Company of New York, Inc. New York, N.Y. 10003
1972	Consolidated Natural Gas Service Company Pittsburgh, Pa. 15222
1975	Consolidation Coal Company, Inc. Pittsburgh, Pa. 15241
1979	Contraves Goerz Corporation Pittsburgh, Pa. 15238
1980	Cooper Industries, Inc. Houston, Tex. 77210
1977	John D. Copanos Company, Inc. Baltimore, Md. 21225
1980	D'Appolonia Consulting Engineers, Inc. Pittsburgh, Pa. 15235
1952	Diamond Shamrock Corporation Cleveland, Ohio 44114
1976	Dick Corporation Pittsburgh, Pa. 15236
1980	Didier Taylor Refractories Corp. South Shore, Ky. 41175
1939	Dow Chemical U.S.A. Midland, Mich. 48640
1976	Dow Corning Corporation Midland, Mich. 48640
1937	Drakenfeld Colors, Ciba-Geigy Corp. Washington, Pa. 15301
1937	Dravo Corporation Pittsburgh, Pa. 15225
1936	E. I. du Pont de Nemours & Company Wilmington, Del. 19898
1978	Duraloy Blaw-Knox, Inc. Scottsdale, Pa. 15683
1973	Engelhard Minerals & Chemicals Corporation, Minerals & Chemicals Division Edison, N.J. 08817
1979	Engineering & Safety Department, American Insurance Association New York, N.Y. 10038
1975	Epic Metals Corporation Rankin, Pa. 15104
1964	Exxon Corporation New York, N.Y. 10020
1973	Falcon Foundry Company Lowellville, Ohio 44436
1979	Joseph B. Fay Company Pittsburgh, Pa. 15238
1978	Fisher Controls Company Coraopolis, Pa. 15108

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Date Joined	Company
1979	FMC Corporation Philadelphia, Pa. 19103
1974	Fostoria Glass Company Moundsville, W. Va. 26041
1976	The Franklin Glue Company Columbus, Ohio 43207
1979	Fusion Ceramics, Inc. Carrollton, Ohio 44615
1979	General Accident Group Philadelphia, Pa. 19105
1978	General Alloy Casting Company Rochester, Pa. 15074
1947	General Electric Company New York, N.Y. 10022
1942	General Motors Corporation Detroit, Mich. 48202
1974	General Refractories Company Bala-Cynwyd, Pa. 19004
1954	Georgia Kaolin Research Springfield, N.J. 07081
1937	Grinding Wheel Institute Cleveland, Ohio 44107
1950	Gulf Oil Corporation Pittsburgh, Pa. 15219
1976	Halcon R & E Corporation Montvale, N.J. 07645
1936	The Hall China Company East Liverpool, Ohio 43920
1977	Hankison Corporation Canonsburg, Pa. 15317
1976	Harbison-Walker Refractories Pittsburgh, Pa. 15222
1978	Harvey Industries, Inc. Salem, W. Va. 26426
1979	Helmick Corporation Fairmont, W. Va. 26554
1976	Hill & Griffith Company Cincinnati, Ohio 45204
1980	Home Insurance Company New York, N.Y. 10038
1980	The O. Hornel Company Pittsburgh, Pa. 15230
1968	The Homer Laughlin China Company Newell, W. Va. 26050
1973	Howell Industrial Clinic Atlanta, Ga. 30308
1937	Huntington Alloys, Inc. Huntington, W. Va. 25720
1978	Huntington Plating, Inc. Huntington, W. Va. 25704
1978	ICI Americas, Inc. Wilmington, Del. 19897
1978	ILCO, Inc. Leeds, Ala. 35094
1978	Imaging Systems Corporation Derry, Pa. 15627
1975	Industrial Gasket & Shim Company, Inc. Meadowlands, Pa. 15347
1947	Inland Steel Company Chicago, Ill. 60603
1947	International Business Machines Corporation Armonk, N.Y. 10504
1970	International Lead Zinc Research Organization New York, N.Y. 10017

Date Joined	Company
1980	Irvine Park Medical Clinic, Inc. Irvine, Calif. 92714
1936	Johns-Manville Corporation Denver, Colo. 80217
1955	Kawecky Beryllco Industries, Inc. Reading, Pa. 19603
1974	Kopp Glass, Inc. Pittsburgh, Pa. 15215
1942	Koppers Company, Inc. Monroeville, Pa. 15146
1974	Lenox Crystal, Inc. Mt. Pleasant, Pa. 15666
1978	M & T Chemicals, Inc. Rahway, N.J. 07065
1937	J.S. McCormick Company Pittsburgh, Pa. 15222
1976	Marathon Oil Company Findlay, Ohio 45840
1978	C. H. Masland & Sons Carlisle, Pa. 17013
1937	Metropolitan Life Insurance Company New York, N.Y. 10010
1936	Mine Safety Appliances Company Pittsburgh, Pa. 15235
1974	Mobay Chemical Corp. Pittsburgh, Pa. 15205
1978	Molded Fiber Glass Tray Company Lanesville, Pa. 16424
1980	Molded Materials Company, Division of Carlisle Corporation Ridgeway, Pa. 15853
1975	Monongahela Iron & Metal Company, Inc. Monongahela, Pa. 15061
1977	Motor Coils Manufacturing Company Braddock, Pa. 15104
1936	Motor Vehicle Manufacturers Assn. Detroit, Mich. 48201
1974	National Annealing Box Company Washington, Pa. 15301
1977	National Health Watch, Inc. Cleveland, Ohio 44101
1979	New Castle Refractories Company New Castle, Pa. 16101
1972	Organization Resources Counselors, Inc. Washington, D.C. 20006
1953	Owens-Corning Fiberglas Corporation Toledo, Ohio 43659
1937	Pennsylvania Glass and Ceramics Berkeley Springs, W. Va. 26001
1978	Pennsylvania Power Company Shippensburg, Pa. 17077
1972	Peoples Natural Gas Company Pittsburgh, Pa. 15212
1979	Phelps Dodge Brass Company Anniston, Ala. 36402
1980	Pittsburgh Corning Corporation Pittsburgh, Pa. 15205
1975	Pittsburgh & Lake Erie Railroad Pittsburgh, Pa. 15215
1970	Pharmatell Corporation Charlotte, N.C. 28216
1979	Port Authority of Allegheny County Pittsburgh, Pa. 15203
1938	Portland Cement Association Skokie, Ill. 60077

1970 Ann. Rpt.

<u>Date Joined</u>	<u>Company</u>
1970	Potters Industries, Inc. Carlstadt, N.J. 07072
1937	PPG Industries, Inc. Pittsburgh, Pa. 15222
1979	P.O. Corporation Valley Forge, Pa. 19482
1976	RAD Services, Inc. Pittsburgh, Pa. 15235
1968	Raybestos-Mannhattan, Inc. Trumbull, Conn. 06611
1976	The Refractories Institute Pittsburgh, Pa. 15222
1937	H.H. Robertson Company Pittsburgh, Pa. 15212
1978	Roux Laboratories, Inc. W. Jacksonville, Fla. 32217
1972	Safety First Industries, Inc. McKees Rocks, Pa. 15236
1973	Sager Glove Corporation Chicago, Ill. 60634
1937	St. Joe Minerals Corporation New York, N.Y. 10017
1977	Schuylkill Metals Corporation Baton Rouge, Louisiana 70807
1976	SCM Corporation New York, N.Y. 10017
1974	Sharon Steel Corporation Farrell, Pa. 16121
1972	Shell Oil Company Houston, Tex. 77210
1974	Snenango, Inc. Pittsburgh, Pa. 15225
1977	Spartek, Inc. Canton, Ohio 44711
1975	The Standard Oil Company Cleveland, Ohio 44114
1976	Stellite Division, Cabot Corporation Kokomo, Ind. 46901
1966	Thermal Insulation Manufacturers Association, Inc. (TIMA) Mt. Kisco, N.Y. 10549
1978	Tile Council of America, Inc. Princeton, N.J. 08540
1970	Travelers Insurance Companies Hartford, Conn. 06115
1972	Tri-State Engineering Company Washington, Pa. 15301
1976	TVI, Inc. Saxonburg, Pa. 16056
1936	Union Carbide Corporation New York, N.Y. 10017
1979	United States Fidelity & Guaranty Company Baltimore, Md. 21202
1974	United States Gypsum Company Des Plaines, Ill. 60016
1980	United States Mineral Products Company Stanhope, N.J. 07874
1936	United States Potters Assn. East Liverpool, Ohio 44020
1980	United States Steel Corporation Pittsburgh, Pa. 15230
1938	Vesuvius Crucible Company Pittsburgh, Pa. 15213

<u>Date Joined</u>	<u>Company</u>
1977	Volkswagen of America, Inc. New Stanton, Pa. 15672
1976	WABCO Railway Products Group Pittsburgh, Pa. 15222
1975	Washington Mould, Machine & Foundry Company Washington, Pa. 15301
1974	Watson-Standard Company Pittsburgh, Pa. 15238
1977	Wenczel Tile Company Trenton, N.J. 08638
1962	Western Electric Company, Inc. New York, N.Y. 10038
1937	Westinghouse Electric Corporation Pittsburgh, Pa. 15222
1979	Whitacre-Greer Fireproofing Co. Waynesburg, Ohio 44688
1979	Wickwire Systems Company, Inc. Sewickley, Pa. 15143
1976	Williams & Company, Inc. Pittsburgh, Pa. 15233
<u>BRAZIL</u>	
1958	Companhia Siderurgica Nacional Biblioteca Volta Redonda, Estado do Rio, Brazil
<u>CANADA</u>	
1978	Alberta Workers' Health, Safety & Compensation 9820 106th St. Edmonton, Alberta, Canada T5K 2J6
1979	Reichhold Limited 1919 Wilson Ave. Weston, Ontario, Canada M9M 1B1
<u>SWITZERLAND</u>	
1958	Ciba-Geigy AG CH-4002 Basel, Switzerland
<u>VENEZUELA</u>	
1962	Lagoven, S.A. Apartado 889 Caracas, Venezuela 1010-A

NEW MEMBERS 1980

Badische Corporation
 BMI, Inc. - Refractory Division
 Cabot Corporation
 Centre Foundry & Machine Company
 Cooper Industries, Inc.
 D'Appolonia Consulting Engineers, Inc.
 Didier Taylor Refractories Corporation
 Home Insurance Company
 The C. Hommel Company
 Irvine Park Medical Clinic, Inc.
 Moldes Materials Company
 Pittsburgh Corning Corporation
 United States Mineral Products
 United States Steel Corporation

American Can Co.	1947
American Ind. Hyg. Assn. (Reciprocal)	1973
The American Mining Congress	1957
American Petroleum Inst.	1967
Americhem Inc.	1976
Anaconda Co., Aluminum Div.	1979
Argonaut Insurance Co.	1970
ASARCO, Inc.	1986
Badische Corporation	1950
EMI, Inc. - Refractory Division	1980
The Boeing Company	1959
Borg-Warner Chemicals	1977
Brick Institute of America	1979
Brush Wellman, Inc.	1994
Buffalo Color Corp.	1972
Cabor Corporation	1980
Cemented Carbide Prod. Assn.	1971
Centre Foundry & Machine Co.	1982
Certain Teed Corporation	1968
Ciba-Geigy AG	1988
Columbia Gas Sys. Serv. Corp.	1972
Columbia Nitrogen Corp.	1978
Consolidated Edison Co. of N.Y., Inc.	1973
Consolidated Natural Gas Serv. Co.	1972
Consolidation Coal Co., Inc.	1975
Contraves Corp.	1979
Cooper Industries, Inc.	1980
John D. Cowens Co., Inc.	1977
D'Appolonia Consulting Engineers, Inc.	1977
Diamond Shamrock Corp.	1971
Dick Corp.	1971
Domtar, Inc.	1978
Dow Chemical U.S.A.	1989
Dow Corning Corp.	1976
Drakenfeld Colors	
Ciba-Geigy Corporation	1987

The Franklin Glue Co.	197
Fusion Ceramics, Inc.	1979
Galley, Inc.	1981
General Accident Group	1979
General Electric Co.	1947
General Motors Corp.	194
General Refractories Co.	197
Georgia Karan Research	195
Grinding Wheel Institute	1937
Gulf Oil Corp.	1950
Halcon R. & D. Corporation	1970
The Hall China Company	193
Hallmark Cards, Inc.	1987
Harrison Corp.	1977
Harrison-Walker Refractories	1970
Harvey Industries, Inc.	1977
Helmick Corp.	1979
The Hill & Griffith Company	1970
Home Insurance Company	1980
The H. Hommel Company	1980
Howell Industrial Clinic	1977
Huntington Alloys, Inc.	1937
Huntington Plating, Inc.	1970
ICI Americas, Inc.	1978
ILCO, Inc.	1970
Imaging Systems Corp.	1978
Industrial Cabinet & Shim Co., Inc.	1977
IBM Corp.	1947
Industrial Research Org.	1970
Industriale, Inc.	1980
Int'l. Ind. Co.	1930
Kellogg Co.	197
Koppers Co., Inc.	1947
LACOVEN, S.A.	1962

Molded Fiber Glass Tray Co.	1974
Molded Materials Company (Div. of Carlisle Corporation)	1980
Motor Coils Manufacturing Co.	1977
National Annealing Box Co.	1974
New Castle Refractories Co.	1979
Organization Resources Counselors, Inc.	1972
Owens-Corning Fiberglas Corp.	1953
Penna. Glass Sand Corp.	1937
Pennsylvania Power Co.	1978
Peoples Natural Gas Co. *	1972
Minerals & Chemicals Div. Pahbro Corporation	1973
Pittsburgh Corning Corporation	1980
Pittsburgh & Lake Erie Railroad	1975
Portland Cement Assn.	1938
Potters Industries, Inc.	1970
PPG Industries, Inc.	1937
P. Q. Corporation	1979
The Refractories Institute	1976
Reichhold Ltd.	1979
H. H. Robertson Co.	1937
Safety First Industries, Inc.	1972
St. Joe Minerals Corp.	1937
Schneider, Inc.	1981
Schenck Metals Corp.	1977
Sharon Steel Corp.	1974
Shenango Incorporated	1974
The Standard Oil Co.	1975
Thermal Insulation Mfrs. Assn., Inc. (TIMA)	1966
Tile Council of America, Inc.	1978

United States Steel Corporation	1980
Vesuvius Crucible Co.	1938
Volkswagen of America, Inc.	1977
WABCO Railway Products Group	1976
Washington Mould Company	1975
Watson-Standard Co.	1974
Wenczel Tile Co.	1977
Western Electric Co., Inc.	1962
Westinghouse Electric Corp.	1937
The Whitacre-Greer Fireproofing Co.	1979
Wickwire Systems Co., Inc.	1979
Williams & Co., Inc.	1976

Company	Joined
The Homer Laughlin China Company	1968
Lenox Crystal, Inc.	1974
M & T Chemicals, Inc.	1978
J. S. McCormick Co.	1937
Marathon Oil Co.	1976
C. H. Masland & Sons	1978
Metropolitan Life Insurance Co.	1937
Metach Refractories, Inc.	1981
Mine Safety Appliances Co.	1936
Mobay Chemical Corp.	1974
Molded Fiber Glass Tray Co.	1978
Molded Materials Company (Div. of Carlisle Corporation)	1980
Motor Coils Manufacturing Co.	1977
National Annealing Box Co.	1974
New Castle Refractories Co.	1979
Organization Resources Counselors, Inc.	1972
Owens-Corning Fiberglas Corp.	1953
Penna. Glass Sand Corp.	1937
Pennsylvania Power Co.	1978
Peoples Natural Gas Co. *	1972
Minerals & Chemicals Div. Pulbro Corporation	1973
Pittsburgh Corning Corporation	1980
Pittsburgh & Lake Erie Railroad	1975
Portland Cement Assn.	1938
Potters Industries, Inc.	1970
PPG Industries, Inc.	1937
P. Q. Corporation	1979
The Refractories Institute	1976
Reichhold Ltd.	1979
H. H. Robertson Co.	1937
Safety First Industries, Inc.	1972
St. Joe Minerals Corp.	1937
Schneider, Inc.	1981
Schenck Metall Metals Corp.	1977
Sharon Steel Corp.	1974
Shenango Incorporated	1974
The Standard Oil Co.	1975
Thermal Insulation Mfrs. Assn., Inc.	1966

Company	Joined
Tri-State Engineering Co.	1972
TRW Bearings Division	1981
II-VI Incorporated	1976
Union Carbide Corp.	1936
U.S. Fidelity & Guaranty Co.	1979
United States Gypsum Co.	1974
United States Mineral Products Co. (Reinstated)	1980
The United States Potters Assn.	1936
United States Steel Corporation	1980
Vesuvius Crucible Co.	1938
Volkswagen of America, Inc.	1977
WABCO Railway Products Group	1976
Washington Mould Company	1975
Watson-Standard Co.	1974
Wenzel Tile Co.	1977
Western Electric Co., Inc.	1962
Westinghouse Electric Corp.	1937
The Whitacre-Greer Fireproofing Co.	1979
Wickwire Systems Co., Inc.	1979
Williams & Co., Inc.	1976

Attached lists of membership from 1963 through 1980

1963 list taken from Meeting of Members, October 23, 1963

1964 through 1970 taken from Annual Reports

1971 taken from Board of Trustees Meetings (minutebook)

1972 taken from Board of Trustees Meetings "

1973 through 1979 taken from Annual Reports

1980 taken from Acme

IHF MEMBERSHIP LISTS

- 1981 - From Acme dated Sept. 17, 1981
- 1980 - Complete (Annual Report)
- 1979 - " "
- 1978 - " "
- 1977 - " "
- 1976 - " "
- 1975 - " "
- 1974 - " "
- 1973 - " "
- 1972 - New members only (Minutes Board of Trustees Meetings, Feb. 8, May 9, Oct. 9)
- 1971 - New members only (Minutes Board of Trustees Meetings, Mar. 9 and Oct. 11)
- 1970 - Complete (Annual Report)
- 1969 - " "
- 1968 - " "
- 1967 - " "
- 1966 - " "
- 1965 - " "
- 1964 - " "
- 1963 - Members represented by proxies, new members, members resigned.
(Meeting of Members, October 23, 1963)
- 1962 - New members only (Annual Report)
- 1961 - " " " "
- 1960 - No record

IHF MEMBERSHIP LISTS (Contd.)

- 1959 - Complete (Annual Report)
- 1958 - No record
- 1957 - New members only (Transactions Bulletin No. 31, 22nd Annual Meeting, October 30-31, 1957)
- 1956 - New members only (Transactions Bulletin No. 30, 21st Annual Meeting, November 14-15, 1956)
- 1955 - New members only (Transactions Bulletin No. 29, 20th Annual Meeting, November 16-17, 1955)
- 1954 - New members only (Transactions Bulletin No. 28, 19th Annual Meeting, November 17-18, 1954)
- 1953 - New members only (Transactions Bulletin No. 26, 18th Annual Meeting, November 19, 1953)
- 1952 - No record
- 1951 - New members only (Transactions Bulletin No. 19, 16th Annual Meeting, November 15, 1951)
- 1950 - New members only (Transactions Bulletin No. 15, 15th Annual Meeting, November 16, 1950)
- 1949 - New members only (Transactions Bulletin No. 11, 14th Annual Meeting, November 17, 1949)
- 1948 - New members only (Transactions Bulletin No. 10, 13th Annual Meeting, November 18, 1948)
- 1947 - New members only (Transactions Bulletin No. 9, 12th Annual Meeting, November 20, 1947)
- 1946 - Complete (Transactions Bulletin No. 8, 11th Annual Meeting, November 7, 1946)
- 1945 - Complete (Proceedings, 10th Annual Meeting, November 14-15, 1945, Part IV)
- 1944 - Complete (Proceedings, 9th Annual Meeting, November 15-16, 1944, Part IV)
- 1943 - Complete (Proceedings, 8th Annual Meeting, November 10-11, 1943)
- 1942 - New members only (Proceedings, 7th Annual Meeting, November 10-11, 1942)

IHF MEMBERSHIP LISTS (Contd.)

- 1941 - New members only (Proceedings, 6th Annual Meeting, November 12-13, 1941)
- 1940 - New members only (Proceedings, 5th Annual Meeting, November 12-13, 1940)
- 1939 - No record
- 1938 - No record
- 1937 - Complete (Proceedings of Special Meeting, November 30, 1937)

Number Members -

Company	Joined
Abasive Grain Assn.	1917
Alg. Co. Sanitary Auth.	1971
Allegheny Ladium Steel Corp.	1931
Alliance of American Insurers (formerly AIAA)	1945
Applied Chemical Corp.	1958
Be Coal Co. (Reinst.)	1982
Aluminum Co. of America	1930
AX (formerly American Metal Climax)	1957
American Ind. Hyg. Assn. (Reciprocal)	1973
American Petroleum Inst.	1907
Merichem Inc.	1970
Alconda Co., Aluminum Div.	1979
Adische Corporation	1980
Askwith Machinery Co.	1983
The Boeing Company	1959
Borg-Warner Chemicals	1977
Brown Boveri Control Systems	1981
Cash Wellman, Inc.	1944
Halo China, Inc.	1981
Halo Color Corp.	1977
Polynated Carbide Prod. Assn.	1971
Centre Foundry & Machine Co.	1980
Ciba-Geigy AG	1988
Columbia Nitrogen Corp.	1974
Consolidated Edison Co. of N.Y., Inc.	1973
Consolidated Natural Gas Serv. Co.	1970
Coper Industries, Inc.	1980
Contraves, Div. Contraves Goerz Corporation	1981
Donald Shamrock Corp.	1982

Company	Joined
Dick Corp.	1976
Domtar, Inc.	1981
Dow Chemical U.S.A.	1939
Drakenfeld Colors	
Ciba-Geigy Corporation	1937
E.I. duPont de Nemours & Co.	1930
Duraloy Blaw-Knox, Inc.	1983
Engineering & Safety Dept., AIA	1979
Exxon Corp.	1964
Joseph B. Fay Co.	1979
Findlay Refractories Company	1981
Fostoria Glass Co.	1974
The Franklin Glass Co.	1976
Furnco Construction Corporation	1982
Fusion Ceramics, Inc.	1979
Gailey, Inc.	1981
General Accident Group	1979
General Electric Co.	1947
General Motors Corp.	1942
Geo-Con, Inc.	1983
Georgia Kaolin Research	1954
Grinding Wheel Institute	1937
Gulf Oil Corp.	1950
Halcon R & D Corporation	1976
The Hall China Company	1936
Hallmark Cards, Inc.	1981
Hankison Corp.	1977
Harbison-Walker Refractories	1976
Helmick Corp.	1979
The Hill & Griffith Company	1976
The O. Hommel Company	1980

Company	Joined
Well Industrial Clinic	1973
Antington Alloys, Inc.	1937
EM Corp.	1947
CI Americas, Inc.	1978
Wine Park Medical Clinic, Inc.	1980
Ans-Manville Corp.	1936
en All of America Corp.	1983
pp Glass, Inc.	1974
oppers Co., Inc.	1942
GOVEN, S.A.	1962
e Homer Laughlin China Company	1968
enox Crystal, Inc.	1974
I & T Chemicals, Inc.	1978
A. H. Masland & Sons	1978
S. McCormick Co.	1937
etropolitan Life Insurance Co.	1937
tsch Refractories, Inc.	1981
ne Safety Appliances Co.	1936
nerals & Chemicals Div.	
ngelhard Corporation	1973
obay Chemical Corp.	1974
onal Annealing Box Co.	1974
Castle Refractories Co.	1979
ens-Corning Fiberglas Corp.	1953
Man, Inc.	1978
na. Glass Sand Corp.	1937
nsylvania Power Co.	1978
oples Natural Gas Co. *	1972
sburgh Corrugating Corporation	1980
sburgh & Lake Erie Railroad	1975
sburgh Railroad, Inc.	1982
land Cement Assn.	1938
ers Industries, Inc.	1970

Company	Joined
PPG Industries, Inc.	1937
The Refractories Institute	1976
H. H. Robertson Co.	1937
Safety First Industries, Inc.	1972
St. Joe Minerals Corp.	1937
Sauereisen Cements Co.	1983
Schneider, Inc.	1981
Schuylkill Metals Corp.	1977
The Standard Oil Co.	1975
State Electric Supply Co.	1982
Thermal Insulation Mfrs. Assn., Inc. (TIMA)	1966
Tile Council of America, Inc.	1978
IRW Bearings Division	1981
H-W Incorporated	1976
U.S. Fidelity & Guaranty Co.	1979
United States Mineral Products Co. (Reinstated)	1980
The United States Pottery Assn.	1936
United Technologies Corporation	1982
Universal-Cyclops Div., Cyclops Corp.	1983
Vesuvius Crucible Co.	1938
Volkswagen of America, Inc.	1977
WABCO Railway Products Group	1976
Watson-Standard Co.	1974
Wenzel Tile Co.	1977
Western Electric Co., Inc.	1962
Westinghouse Electric Corp.	1937
The Whitcomb-Greer Fireproofing Co.	1979
Wickwire Systems Co., Inc.	1979