



Smithsonian

*National Museum of American History Kenneth E. Behring Center*

## Guide to the Worthington Pump and Machinery Corporation, Engineering Records

NMAH.AC.0947

NMAH Staff

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Archives Center, National Museum of American History  
P.O. Box 37012  
Suite 1100, MRC 601  
Washington, D.C. 20013-7012  
Business Number: Phone: 202-633-3270  
Fax Number: Fax: 202-786-2453  
archivescenter@si.edu  
<https://americanhistory.si.edu/archives>

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## Collection Overview

<b>Repository:</b>	Archives Center, National Museum of American History
<b>Title:</b>	Worthington Pump and Machinery Corporation, Engineering Records
<b>Date:</b>	1955-1970
<b>Identifier:</b>	NMAH.AC.0947
<b>Creator:</b>	Aronson, David, 1923-2015 (Creator)
<b>Source:</b>	National Museum of American History (U.S.). Division of History of Technology (Collector) National Museum of American History (U.S.). Division of Work and Industry (Collector) National Museum of American History (U.S.). Division of Mechanical and Civil Engineering (Collector)
<b>Extent:</b>	3.3 Cubic feet (10 boxes, 1 oversize folder)
<b>Language:</b>	English .

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## Administrative Information

### Acquisition Information

Donated to the Division of Mechanical and Civil Engineering by David Aronson over the period 1986-1989.

### Provenance

Transferred to the Archives Center from the Division of Work and Industry in 2007.

### Processing Information

Processed by Alison Oswald, 2016. Additional biographical data about David Aronson contributed by Christopher Barfield, 2006.

### Preferred Citation

Worthington Pump and Machinery Corporation, Engineering Records, 1955-1970, Archives Center, National Museum of American History.

### Restrictions

Collection is open for research but is stored off-site and special arrangements must be made to work with it. Contact the Archives Center for information at [archivescenter@si.edu](mailto:archivescenter@si.edu) or 202-633-3270.

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## Biographical / Historical

David Aronson earned a degree in chemical engineering from Cooper Union and the Polytechnic Institute in New York. He joined the Engineering Department of the Worthington Corporation in 1951 as an engineer. While with Worthington, Aronson worked as a manager in development engineering for the Worthington Air Conditioning Company, a division of Worthington Corporation and was instrumental in the advancement of low temperature energy utilization equipment and the development of various energy recovery systems. Aronson served as the chief contact within the Worthington Corporation for individuals and companies interested in engaging in contract work or presenting their invention ideas for development.

Aronson was awarded thirty United States patents which included an oil burner for gas turbine application, large tonnage water chillers for air conditioning, a nuclear powered system using liquid metal coolant, and a heat pump using a fuel-fired engine or turbine. In 1964, Worthington recognized Aronson's achievements with the company's Worldwide Engineering Award.

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## Scope and Contents

This collection documents the correspondence and technical documents related to David Aronson's work as an engineer with the Worthington Pump and Machinery Corporation.

The correspondence files relate to acceptance or rejection of products and procedures used in the development and production of the company's products, responses to submissions to the company of inventions and products inventors hoped to license or sell to the company, responses to requests for donations and other funding by Worthington, and general company memos and reports.

The technical files represent the research, design and development processes that Aronson was involved in as a mechanical engineer. Topics include heat pumps, steam generation, geothermal power, gas turbine engines, and nuclear power. Types of material include articles, pamphlets, journal reprints, conference papers, schematics, blueprints and diagrams.

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## Arrangement

The collection is divided into three series.

Series 1: Correspondence of David Aronson, 1955-1970

Series 2: Technical Materials of David Aronson (numerical), circa 1960s-1970s

Series 3: Technical Files of David Aronson (alphabetical), circa 1960s-1970s

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## Names and Subject Terms

This collection is indexed in the online catalog of the Smithsonian Institution under the following terms:

Subjects:

- Engines
- Gas-turbine industry
- Geothermal engineering
- Geothermal resources
- Heat engineering

Nuclear energy  
Refrigeration and refrigerating machinery  
Steam

Types of Materials:

Articles  
Blueprints  
Correspondence -- 1950-2000  
Diagrams  
Pamphlets -- 1950-2000  
Reprints

Names:

National Museum of American History (U.S.). Division of History of Technology  
National Museum of American History (U.S.). Division of Mechanical and Civil Engineering  
National Museum of American History (U.S.). Division of Work and Industry

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## Container Listing

### Series 1: Correspondence of David Aronson, 1955 - 1970

Box 1, Folder 1	Correspondence, 1955
Box 1, Folder 2	Correspondence, 1956
Box 1, Folder 3	Correspondence, 1957 January-1957 August
Box 1, Folder 4	Correspondence, 1957 September-1957 December
Box 1, Folder 5	Correspondence, 1958 January-1958 May
Box 1, Folder 6	Correspondence, 1958 June-1958 December
Box 2, Folder 1	Correspondence, 1959 January-1959 August
Box 2, Folder 2	Correspondence, 1959 September-1959 December
Box 2, Folder 3	Correspondence, 1960 January-1960 April
Box 2, Folder 4	Correspondence, 1960 May-1960 October
Box 2, Folder 5	Correspondence, 1960 November-1961 April
Box 2, Folder 6	Correspondence, 1961 May-1961 September
Box 3, Folder 1	Correspondence, 1961 October-1962 January
Box 3, Folder 2	Correspondence, 1962 February-1962 December
Box 3, Folder 3	Correspondence, 1963
Box 3, Folder 4	Correspondence, 1964
Box 3, Folder 5	Correspondence, 1965 January-1965 December
Box 3, Folder 6	Correspondence, 1966
Box 3, Folder 7	Correspondence, 1967 January-1967 December
Box 4, Folder 1	Correspondence, 1968 January-1968 July

Box 4, Folder 2	Correspondence, 1968 July-1968 December
Box 4, Folder 3	Correspondence, 1969 January-1969 June
Box 4, Folder 4	Correspondence, 1969 June-1969 December
Box 4, Folder 5	Correspondence, 1970 January-1970 June
Box 4, Folder 6	Correspondence, 1970 December
Box 4, Folder 7	Correspondence (loose), 1958 - 1969

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## Technical Files of David Aronson (numerical), circa 1950s-1960s

Box 5, Folder 1	22.02, Steam power generation, surface condensers
Box 5, Folder 2	22.06, Steam power generation, seals and water make-up for Ft. Belvoir
Box 5, Folder 3	22.06, Steam power generation, turbines for steam plants and NOC
Box 5, Folder 4-5	22.09, Steam power generation, binary cycle, steam, freon for power generation
Box 5, Folder 6	22.09, Steam power generation, binary cycle
Box 5, Folder 7	22.09, Steam power generation, cycle studies for Ft. Belvoir
Box 5, Folder 8	22.09, Steam power generation, cycle study of binary cycle for Philip Sporn, American Gas and Electric
Box 5, Folder 9	22.09, Steam power generation, cycle studies
Box 6, Folder 1	22.09.40, Power generation, vapor cycle utilizing waste heat rust engineering
Box 6, Folder 2	22.09.40, Power generation, Engineering Controls Inc.
Box 6, Folder 3	22.09.40, Power generation, from engine exhaust, United Fuel Gas Company
Box 6, Folder 4	22.09.40, Power generation, from gas turbine exhaust, Allison Division, General Motors
Box 6, Folder 5	22.11.00, Steam power generation, Boiler Feed Dumps
Box 6, Folder 7	22.12, Steam power generation, controls for steam power plant for Ft. Belvoir
Box 6, Folder 8	23.02, Gas turbines
Box 6, Folder 10	Steam compression
Box 6, Folder 11	23.05, Gas turbines, cycle study for nuclear powered gas turbine
Box 6, Folder 12	new fuel fired prime movers, overall power plants, layouts, cycle arrangements
Box 6, Folder 13	24.01, Internal combustion engines
Box 6, Folder 14	29.11.00, Controls Instruments
Box 6, Folder 15	30.01, Pumps, centrifugal



Box 6, Folder 16	30.01, Pumps, centrifugal
Box 6, Folder 16	31.00, Compressor calculations
Box 6, Folder 17	31.00, Compressors, blowers, fans
Box 6, Folder 18	Heat transfer division
Box 7, Folder 2	Low grade heat power cycles
Box 7, Folder 3	32.03, refrigeration, air conditioning
Box 7, Folder 4	32.08.00, Refrigeration, low temperature processes
Box 7, Folder 5	32.08.00, Refrigeration, low temperature processes, Vitro Engineering Company
Box 7, Folder 6	32.08.23, Refrigeration, low temperature processes, liquefaction of methane
Box 7, Folder 7-8	32.08.21, Low temperature processes
Box 7, Folder 9	32.08.23, Natural gas liquefaction
Box 7, Folder 10	32.08.23, low temperature refrigeration
Box 7, Folder 11	Refrigeration, air conditioning
Box 7, Folder 10	32.10, American Gas Association Convention
Box 7, Folder 13	Geothermal power
Box 7, Folder 14	Geothermal power, United Nations Symposium

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**Series 3: Technical Files of David Aronson (alphabetical), circa 1950s-1960s**

Box 8, Folder 1	Aronson invention of combined evaporator/condenser in single shell
Box 8, Folder 2	Aronson, miscellaneous files
Box 8, Folder 3	Cryogenics
Box 8, Folder 4	Carbon Dioxide Engine
Box 8, Folder 5	Carbon dioxide power cycle
Map-folder 1	Combined closed gas turbine, organic fluid vapor cycle, 1957 - 1957
Box 8, Folder 6	Cryogenics, xylene
Box 8, Folder 7	Engines, gas, oil, diesel
Box 8, Folder 8	Expander turbine for general chemical
Box 8, Folder 9-10	Gas Turbines
Box 8, Folder 11	Geothermal related
Box 8, Folder 12	Intercoolers for compressors
Box 8, Folder 13	Liquefied natural gas, 1968
Map-folder 1	Methane Liquefaction flow sheet, 1958 - 1958
Box 9, Folder 1	Nuclear reactors, gas cooled
Box 9, Folder 2	Low pressure oil burners
Box 9, Folder 3	Oil coolers for small compressors
Box 9, Folder 4	Open cycle absorption
Box 9, Folder 5	Oxygen pilot plant, 1948
Box 9, Folder 6	Power (articles about)
Box 9, Folder 7	Refrigerant properties
Box 9, Folder 8	Refrigeration systems

Map-folder 1	Shin-Osaka Building, schematic diagram of the system of year-round air conditioning by steam powered refrigeration, 1961 - 1961 2 Drawings (visual works)
Box 10, Folder 1	Total energy systems
Box 10, Folder 2	Refrigeration and air conditioning
Box 10, Folder 3	Transport of LPG and other
Box 10, Folder 4	Worthington Corporation compressor policy, 1957
Box 10, Folder 5-6	Miscellaneous articles
Box 11, Folder 1-3	Miscellaneous articles

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