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Collection Overview

Repository: Archives Center, National Museum of American History
Title: Peter J. Bier Papers
Identifier: NMAH.AC.0973
Date: 1915-1970 (bulk 1934-1959)
Extent: 3.3 Cubic feet (7 boxes)
Creator: Bier, Peter J.
Work and Industry, Division of, NMAH, SI
Mechanical and Civil Engineering, Division of [former name], NMAH, SI.
Language: Collection is in English. Some materials in Spanish.
Summary: Peter J. Bier, born in Hungary, immigrated to the United States in 1904. Bier worked as an engineer for the Bureau of Reclamation in the Department of the Interior from 1923-1954, and continued to work as a consultant in the field after retirement. The collection includes materials related to his work with the Bureau of Reclamation, including project materials, drawings, designs, and inspection reports and data, along with materials documenting his time as an engineering consultant.

Administrative Information

Acquisition Information
Immediate source of acquisition unknown.

Provenance
Original provenance unknown, collected by the Division of Work and Industry (then called the Division of Mechanical and Civil Engineering), transferred to the Archives Center in 2007.

Processing Information
Processed by Sara Wheeler, intern, August 2017; supervised by Alison Oswald, archivist.

Preferred Citation

Restrictions
The collection is open for research use. Gloves must be worn when handling unprotected photographs and negatives.
Conditions Governing Use

Collection items available for reproduction, but the Archives Center makes no guarantees concerning copyright restrictions. Other intellectual property rights may apply. Archives Center cost-recovery and use fees may apply when requesting reproductions.

Biographical / Historical

Peter J. Bier was born on April 22, 1884 in Ujnely, Hungary. He completed his college education at the State Technical School at Timisoara, Hungary. In 1904, Bier moved to the United States and in 1906 he started a job at Babcock and Wilcox Boiler Company. He worked for a series of companies as a draftsman and designer, and in 1923 he began working as an engineer for the Bureau of Reclamation in the Department of the Interior in Denver, Colorado. Bier specialized in steel pipes and penstocks, which are pipes that deliver water to hydraulic turbines, for various dams.

Over the course of Bier's career, he was involved with project planning for irrigation and power developments, hydraulic structures and equipment, and inspections of equipment. He later supervised the design, specifications, and inspections for penstocks and related equipment. Bier wrote inspection manuals, monographs, and articles related to penstock and pipe design. Upon his retirement from the Bureaus of Reclamation in 1954, he remained active in the field and traveled as an engineering consultant.

Scope and Contents

The collection documents Bier's work with the Bureau of Reclamation on dams and power stations in the Pacific Northwest and Southwest regions of the United States and his contract work in the United States and Mexico. It includes project files, reports, correspondence, notes, blueprints, and technical drawings.

Arrangement

This collection is arranged into four series.

Series 1: Biographical, 1918-1965

Series 2: Articles, Manuals, and Research Materials, 1923-1970

Series 3: Bureau of Reclamation, 1915-1970

Subseries 3.1: Projects, 1934-1958

Subseries 3.2: Inspections and Testing, 1915-1954

Subseries 3.3: Technical Drawings and Designs, 1923-1970

Subseries 3.4: Employee Related Documents, 1950-1954

Names and Subject Terms

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

Subjects:
- Dams -- Colorado
- Dams -- Mexico
- Engineers
- Hydraulic engineering -- 1920-1960
- Pipelines
- Power stations -- Colorado

Types of Materials:
- Black-and-white photographs
- Blueprints
- Correspondence -- 20th century
- Memorandums -- 20th century
- Monographs
- Technical drawings
- Technical manuals -- 20th century

Names:
- Mechanical and Civil Engineering, Division of [former name], NMAH, SI.
- United States. Bureau of Reclamation
- Work and Industry, Division of, NMAH, SI

Geographic Names:
- Denver (Colo.)
Container Listing

Series 1: Biographical, 1918 - 1965
Series 1 contains photographs of Peter J. Bier, awards, personal correspondence, and materials related to Bier's retirement.

Box 1, Folder 1 Photos of Peter J. Bier, circa 1918-1955
Box 1, Folder 2 Application for admission to American Society of Mechanical Engineers, 1926
Box 1, Folder 3 Awards and accolades, 1947 - 1954
Box 1, Folder 4 Retirement party guest list and letters, 1954
Box 1, Folder 5 Record of experience, 1954
Box 1, Folder 6 Letters and greeting cards, 1961
Box 1, Folder 7 Insurance claims and personal expenses, 1961 - 1964
Box 1, Folder 8 Letters in regards to publishing articles, 1962 - 1965
Box 1, Folder 9 Letters and greeting cards, 1962 - 1965
Box 1, Folder 10 Engineering Consultants Incorporated profile, undated

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Series 2: Articles, Manuals, and Research Materials, 1923 - 1970

Series 2 contains articles and manuals collected by Bier about penstocks, welded pipes, and dams. It also contains articles written by Bier.

Box 1, Folder 11  Engineering-related bulletins, 1923 - 1941
Box 1, Folder 12  Published articles by Bier, 1927 - 1944
Box 1, Folder 13  Water hammer and surge tank articles, 1927 - 1958
Box 1, Folder 14  Collected articles and notes about water service pipe lines, 1931 - 1953
Box 1, Folder 15  Penstocks and welding problems, 1934 - 1964
Box 1, Folder 16  Inspection articles, 1936 - 1952
Box 1, Folder 17  Reprinted journal articles, 1936 - 1953
Box 2, Folder 1   Papers on features of dams, 1940
Box 2, Folder 2   Papers on features of dams, 1940
Box 2, Folder 3   Welding and research data-stress relieving, 1942 - 1956
Box 2, Folder 4   Instructions for hydrostatic pressure test, 1943
Box 2, Folder 5   Notes on inspection methods, gamma rays, and radiographic techniques, 1943 - 1953
Box 2, Folder 6   Articles by Peter J. Bier related to welding and pressure, 1943 - 1953
Box 2, Folder 7   Advertisements and brochures for new inspection equipment, circa 1945-1953
Box 2, Folder 8   Manual on Industrial Radiography with radium, 1948
Box 2, Folder 9   Reports on features of dams, 1950 - 1952
Box 2, Folder 10  Collected articles about cylinder or arch shells for design, 1950 - 1956
Box 2, Folder 11  Fundamentals of pipeline x-ray, 1951
Box 2, Folder 12  Reports on early steel water pipe lines, 1951
Box 3, Folder 1
Collected articles on radiography and pressure tests, 1951 - 1960

Box 3, Folder 2
Outline of codes for pressure vessels, 1952

Box 3, Folder 3
A copy of a survey of brittle failure in steel structures, 1953

Box 3, Folder 4
Collected articles authored by Bier, 1953 - 1960

Box 3, Folder 5
Articles by Peter J. Bier on penstocks, 1954 - 1958

Box 3, Folder 6
Articles by Peter J. Bier about hydroelectric and penstock projects, 1954 - 1959

Box 3, Folder 7
General rules for the design, construction, and inspection of large welded steel pipe, 1958

Box 3, Folder 8
Rules for construction of steel pressure pipelines for hydroelectric power plants, 1958

Box 3, Folder 9
Welded Steel Water Pipe manual, 1970

Box 3, Folder 10
Draft of "Function Problems and Welding Controls of Large Steel Pipe Lines", undated

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Series 3: Bureau of Reclamation, 1915 - 1970

Series 3 contains materials related to Bier's work for the Bureau of Reclamation, including photographs, bids, and related materials to various penstock projects. It also includes materials created for or during the inspection or testing process, technical drawings and data, as well as organizational charts, employee status, and government pay scales.

Subseries 3.1: Projects, 1934 - 1958

- Box 3, Folder 11: Bids for Owyhee and Deschutes projects in Oregon, 1934 - 1947
- Box 3, Folder 12: Photographs of Estes penstocks, circa 1940-1950
- Box 3, Folder 13: Memorandums related to penstock projects, 1940 - 1950
- Box 3, Folder 14: Photographs of various river siphon projects, circa 1945-1949
- Box 3, Folder 15: Davis Dam project in Arizona and Nevada, 1948
- Box 4, Folder 1: Photographs of Bridge River penstocks, 1949
- Box 4, Folder 2: Invitation, bid, award, and schedule for Central Valley Project, 1951
- Box 4, Folder 3: Missouri River Basin Project, 1954
- Box 4, Folder 4: List of projects with data, 1951 - 1958
- Box 4, Folder 5: List of projects, undated
- Box 4, Folder 6: Photographs of various penstock repairs, undated

Subseries 3.2: Inspections and Testing, 1915 - 1954

- Box 4, Folder 7: Experimental data cards, numbers 1-43, 1915 - 1923
- Box 4, Folder 8: A.S.M.E negatives displaying acceptable or unacceptable inspection standards, 1937
- Box 4, Folder 9: Radiography instruction and hydrostatic pressure tests instructions, 1939 - 1950
- Box 4, Folder 11: Field reports for Salt Lake Aqueduct and Bully Creek and Little Valley siphons, 1946 - 1949
- Box 4, Folder 12: Field trip report from Bridge River Power Plant, 1949 November 9
Box 4, Folder 13  Correspondence about survey of brittle fractures, 1954

Box 4, Folder 14  Anderson Ranch Dam failure photographs, undated

Subseries 3.3: Technical Drawings and Designs, 1923 - 1970

Box 4, Folder 15  Designs, calculations, and drawings for various rivers, 1923 - 1927

Box 4, Folder 16  Penstock designs, 1932 - 1952

Box 4, Folder 17  Surge tank computations and drawings, 1933 - 1934

Box 4, Folder 18  Drawings of ideas and patents, 1933 - 1951

Box 4, Folder 19  Assorted drawings and calculations, 1934 - 1950

Box 4, Folder 20  Steel pipe designs, 1936 - 1954

Box 4, Folder 21  Pipe design data, 1942 - 1946

Box 5, Folder 1  Joint expansion data, 1944

Box 5, Folder 2  Design manual, 1946

Box 5, Folder 3  Black and white photographs and diagrams of water supply systems, circa 1948-1954

Box 5, Folder 4  Monograph and data for welded steel penstocks, 1949

Box 5, Folder 5  Drawings of pipe coupling, 1951 - 1954

Subseries 3.4: Employment Related Documents, 1950 - 1954

Box 5, Folder 7  Retirement and leave data, 1954

Box 5, Folder 6  Ratings, organizational chart, pay charts, and brochure, 1950 - 1953

Series 4 contains project plans, memorandums, correspondence, drawings, and photographs related to Bier's work as an engineering consultant.

Box 5, Folder 8  Boulder Canyon Project invitation, bid, award, schedule, and drawings, 1954
Box 5, Folder 9  Garrison Dam reports and related patent notes, 1954
Box 5, Folder 10 Design of Wye Branch pipes review, 1954
Box 5, Folder 11 Record of installed penstocks and pipe liners, 1954 - 1959
Box 6, Folder 1  Comision Federal de Electricidad guide, 1956
Box 6, Folder 2  Photographs of Mexico projects, 1957 - 1959
Box 6, Folder 3  Plans for the Temaxcal plant, 1955 - 1956
Box 6, Folder 4  Temaxcal Project reports and drawings, 1956 - 1958
Box 6, Folder 5  Temaxcal Project penstock plans, research, and drawings, 1956 - 1958
Box 6, Folder 6  Photographs of Temaxcal penstocks, power plant, and dam, 1959
Box 6, Folder 7  Mazatepec Project plans and drawings, 1955 - 1958
Box 6, Folder 8  Mazatepec memorandums and correspondence, 1957
Box 6, Folder 9  Mazatepec data and reports, 1957 - 1958
Box 6, Folder 10 Correspondence for Mazatepec Project, 1957 - 1959
Box 6, Folder 11 Mazatepec drawings and designs, 1957 - 1958
Box 7, Folder 1  Maps and drawings of Mexico, 1957
Box 7, Folder 2  Mazatepec Project general records, 1958
Box 7, Folder 3  El Fuerte memorandums, design, data sheets, and correspondence, 1957 - 1958
Box 7, Folder 4  General rules for inspecting large welded steel pipe, 1958
Box 7, Folder 5  Correspondence about proof testing, 1959
Box 7, Folder 6  Rules for design, construction, and inspection of welded steel pipe, 1959
Box 7, Folder 8  Correspondence about potential bids and projects, 1959 - 1964
Box 7, Folder 9  Sweetwater penstocks, 1960 - 1961
Box 7, Folder 10 Correspondence and drawings for Karadj Project, 1961 - 1967
Box 7, Folder 11  Boulder Canyon final reports, 1968
Box 7, Folder 12  Professional correspondence, 1967 - 1969
Box 7, Folder 13  Australian photographs of pipe lines, undated