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Engineering
Ceramic Engineering
Research Reports 1925-66, 1977

Box 1:

Government Research Reports

W535, "Ceramic Type Coatings for Exhaust Disposal Systems," AAF Project Work
- 1943
- 1944
- 1945
- 1946-1947
- Reports 16-18, Mar.-July 1946

W33-083 ac-14520 (16071), "Ceramic Coatings and Ceramic Bodies for Aircraft Power Systems"
- Reports 19 and 20, 1946-1947
- 21, April 1947
- 22, July 1947
- 23, October 1947
- 24, February 1948
- 25, May 1948
- 26, July 1948
- AAF project work for the year 1948, Reports 27-33, Memoranda 21-13, Special Memorandum 76
- AAF project work for the year 1949, Reports 34-48, Memoranda 14-20, Special Memoranda 80
- Reports 49-54, 1950
- Reports 55-59, 1951
- Memoranda Reports 21-29, 1951
- Reports 60-62, 1952

Box 2:

W33-083 ac-14520 (16071), "Ceramic Coatings and Ceramic Bodies for Aircraft Power Systems," Reports 64 and 66, 1953
- Memoranda Report 30, 1953
- WADC Technical Report no. 54-194, "Metal Bonded Zirconium Diboride," 1954

AF 33 (616)-87, "Effects of Pre-compression on the Thermal Shock Resistance of Pure Oxide Ceramics," Quarterly Reports 1-5, 1952-1953

AF 33 (616)-320; Reports concerning ceramic coatings and titanium, Feb.-Nov. 1953, including 63, "The Effect of Ceramic Coatings on the Oxidation and the Impact Strength of Variously Heat Treated Titanium Specimens," 65, "The Effect of Ceramic Coatings on the Embrittlement of Titanium," 67, "Protective Ceramic Coatings for Titanium"

AF 33 (616)-2556, "Research on Elevated Temperature Resistant Ceramic Structural Adhesives"
- Monthly Progress Reports 1-6, 1954

7-11, 1955
12-17, 1956
WADC Technical Report Parts I and II, 1956
Monthly Progress Reports 18-24, 1956-1957

AF (616) 5468, "Research on Elevated Temperature Resistant Ceramic Structural Adhesives," Quarterly Progress Report 1, 1958

AF 33 (616)-2307, Reports pertaining to ceramic coatings, 1954-1956, including reports 69, "Effect of Ceramic Coatings on the Stress Rupture Characteristics of Stainless Steel," 70, "Effect of Ceramic Coatings on the Fatigue Strength of Type 321 Stainless Steel," 71, "Metal Protective Ceramic Coatings: Molecular Basis," 72, "High Alloy Content Cermets Containing Titanium Diboride as the Minor Constituent," 73, "The Fatigue Strength of Low Alloy Steel as Pre-stressed by Selected Ceramic Coatings," 74, "High Temperature Resistant Ceramic Coatings of Increased Long Heat Stability," and 75, "Metal Protective and Radiation Reflective Ceramic Coatings"
Quarterly Progress Reports 1-5, 1954-1955

AF 33 (616)-3943, "High Temperature Insulating Inorganic Coatings on Wire," Quarterly Progress Report 1, Feb.-May 1957

AF 18 (603)-28
Reports, 1956-1957, including nos. 76, "Devitrification of High Temperature Resistant Ceramic Coating Glasses," 22, "The Polymorphic Modifications of Silica in Ceramic Coatings," and 79, "The Effect of Pre-stressing on the Strength of Ceramic Coatings"
Reports, 1958, including nos. 81, "Some Studies of the Interaction of Cobalt and Nickel with Titanium Diboride," 82, "Studies of the Stability of High Temperature Resistant Ceramic Coating Glasses," 83, "Fatigue and Internal Stress Analysis of Ceramic Coated Metal Composites," 84, "Some Structure and Property Studies of Radiation Reflective Ceramic Coatings"

AF 33 (616)-7032, WADD Technical Report, "Research on Absorbefacient Surfaces," 1960

Special AAF Reports, *Miscellaneous Papers - Twenty in Number*, 1943-1944, 1948

"Boron Reinforcements for Structural Composites," Technical Documentary Report No. ASD-TDR-62-257, Part II, April 1963

DCIC Report No. 68-3, "The Evaluation and Interpretation of Mechanical Properties of Brittle Materials," 1968

DCIC Report No. 69-1, Parts I-III, "Ceramic-Armor Technology Proceedings of Symposium Sponsored by Air Force Materials Laboratory and Defense Ceramic Information Center, Columbus, Ohio, January 29-30, 1969"

Box 3:

Non-Governmental Research Reports

Chicago Carburetor Tests, Volumes 1-3, 1925
Instructions for Setting and Unloading a Carburetor, 1925
Progress Reports and Papers on Carburetor Brick Research, 1925
Bonded Soapstone Checkerbricks, 1926
Classification of Used Bricks, Good, Fair, Poor, and Bad, 1926
Compressive Strength vs. Absorption of Fireclay Bricks, and Uniformity of Fireclay Bricks,

1926
Fused Quartz Research and publication, "The Use of Fused Silica as a Raw Material in the Manufacture of Porcelain," 1927
An Investigation of Checkerbrick for Carburetors, Parts I-III, 1927
Investigation of Checkerbrick for Carburetors, Vols. 2-3, n.d.
Investigation of Checkerbrick for Carburetors of Water-Gas Machines, 1927
Thermal Expansion Refractories, Vol. I-II, 1927
Thermal Expansion of Fire Clay Bricks, 1928
A Chart for Proportioning the Errors of Sampling and Measurement, 1928
Kiln Investigation Summary Report, 1928

Box 4:

Reports on Gas Opacity, E. I. du Pont de Nemours and Co., Inc., 1935-1936
Enamel Film Strength, Reports, Ferro Enamel Corp., 1937-1940
Chicago Vitreous Enamel Product, including Memoranda 1-5 (1937), Monthly Reports 1-10 (1938), Summary Reports 1-2 (1938), Report on Trip (1938), and Memoranda 1-6 (1939) (1937-39)
Fundamental Studies of Opacity in Zirconium Enamels, Reports, Titanium Alloy Mfg. Co., 1939-1940
Enameled Utensil Manufacturer's Council
Monthly Reports 1-16, Memoranda 1-13, Tentative Standard Impact Test for Porcelain Enameled Cooking Utensils Report, 1940-1942
Monthly Reports 17-24 and Memoranda 14-23, 1942-1943
Reports 74-79, June 1950
Reports 80-89, Feb. 1950-May 1951
United Clay Mine Corporation Reports 1-6, 1943-1944
Use of Strontium Compounds in Ceramics for Barium Reduction Corp.
Monthly Reports 1-7, Nov. 1943 - July 1944
Monthly Reports 8-17, Nov. 1944-June 1945
Summary Report, Parts I-III, Sept. 1944
Annual Reports, Sept. 1944-Sept. 1945, Oct. 1944-Aug. 1945
Development of Refractories for Low Temperature Enamel Smelters for Chicago Vitreous Enamel, Ferro Enamel, and Porcelain Enamel Companies Corporations
Memoranda 1-6, Work Outline, 1949-1951
Reports 5-8, Summary, 1950-1951
Feldspar Research Program Memoranda 3, 5, 6, 10, 11, 17, 18, for Consolidated Feldspar Corp., 1950-1953
Development of Pyrolytic-Carbon Fixed Resistors, Summary Report, 1953
The Story of Champion Spark Plugs, 1926

Box 5:

Research Data and Logs
Calculation of Conversion Tables, n.d.
Carburetor Brick Second Semester and MgO-SiO_2-Na_2O Notebooks, 1924-1925

General Research, including Carburetor Brick, Glazes, Clays, and Equipment, 1924-1925
Brick Data, 1925
Champaign Checkerbrick Carburetor Tests, 1925-1926
Mercury Balance and Freezing Tests, 1925
Permeability of Fire Brick, 1925-1927
Permeameter, 1925
Precision Service Tests, 1925-1927
Summaries of Champaign Tests, 1925-1926
Summaries of Chicago Service Tests, 1925-1926
Transverse Strength of Tested Bricks, Chicago Carburetor Tests, 1925
Calibrations, 1926
Final Reduction of Correlations Coefficients and Errors of Service and Spalling Tests, 1926-1927
Frequency Distribution Strengths of New Brick, 1926
Laboratory Data for Apparent Volume, Coking Tests, Combustion, and Porosity 1926-1927 for Manufacturing and Miscellaneous, 1926-1927
Spalling Tests for All Brands, 1926
Statistical Tests of M. of R. Formula, 1926
Steam Tests, 1926
Temperature Fluctuations in Carburetor, Champaign Gas Plant, 1926
Thermal Expansion Vol. 3, Refractories Vol. 4, 1926-1927
Summaries: Thermal Expansion of Refractories, n.d.
Time Factor, 1926
Variations of 4 ½ Dimensions New Brick, 1926
Modulus of Rupture of Used Ajax Statistics, Champaign, 1927
Operating Data, Champaign, 1927
X-ray Generator Log, Dec.1960-Dec. 1977

Box 6:

Correspondence
Refractories Correspondence
A-G, 1925-1926
H-Z, 1925-1927
Alloy Correspondence, 1926-1927
Soapstone Correspondence, 1926

Box 7:

Reports and Memoranda
Annual Reports, Department of Ceramic Engineering, 1915-66

Box 8:

Enameled Utensil Manufacturers' Council Index of Reports and Memoranda, 1940-1954
Monthly Reports 12-47, 1941-1948
Monthly Reports 25-26, Memorandum 19, Directions for Enameled Utensil

Manufacturers' Council Impacts, Directions for Enameled Utensil Manufacturers' Council Tentative Thermal Shock Test, Directions for Enameled Utensil Manufacturers' Council Tentative Solubility Test, The Enameled Utensil Manufacturers' Council Tentative Standard Solubility Test for Porcelain Enameled Cooking Utensils, 1943
Utensils, 1943
Monthly Reports 25-28, 1943-1944
Monthly Reports 27-30, Standard Thermal Shock Test for Porcelain Enameled Utensils and Some Factors which Influence Thermal Shock Resistance of Enameled Ware, 1944
Monthly Reports 29-36, 1944-1946
Monthly Reports 31-40, 1945-46, Memoranda 29-31, 1946 (1945-46, 1946)
Monthly Reports 37-41, 1946-1947
Monthly Reports 41-45, 1947, Memorandum 32, 1947 (1947)
Monthly Reports 42-46, 1947-1948
Monthly Reports 47-51, 1948
Monthly Reports 46-57, Memoranda 34-37, Report on Meeting at Rockford, Illinois to Discuss Project 1a, Resume of Conferences on Handling Shipping, and Preshipment Tests for Packages Under 100 Lbs, 1948
Monthly Reports 48-57. 1948
Monthly Reports 52-57, 1948
Monthly Reports 58-61, 1949
Monthly Reports 58-66, Memoranda 39-41, 43-45, 1949

Box 9:

Monthly Report 58, 1949, Monthly Report 66, 1950 (1949-50)
Monthly Reports 62-71, 1949-1950
Monthly Reports 67-73, 1950
Monthly Report 67, Monthly Report 75, 1950
Monthly Reports 72-76, 1950
Monthly Report 76, 1950, Monthly Report 84, 1951 (1950-51)
Monthly Reports 77-87, 1950-1952
Monthly Reports 85-93, 1951-1952
Monthly Reports 88-93, 1952
Monthly Reports 90-97, 1952-1953
Monthly Reports 94-100, 1952-1953
Monthly Reports 98-105, 1953-1954
Monthly Reports 101-107, 1953-1954
Monthly Reports 106-113, 1954-1955
Monthly Report 114, 1955
Monthly Reports 108-115, 1954-1955
Monthly Reports 108-118, 1954-1955
Monthly Reports 114-118 and Index, 1955
Monthly Reports 116-118, 1955
Monthly Report 118, 1955

Box 10:

Enameled Utensil Manufacturers Council Lab Notes-Tests, Books 1-5, 1940-1945
Ohmite Manufacturing Company
Reports 4-6, 1942, Memoranda 1-13, 1942, Reports 7-18, 1943 (1942-43)
Progress Reports 1-2, 1943
Memoranda 14-19, 21-23, 25-26, 1943
Reports 19-30, 1944, Progress Reports, 1944, Annual Report, 1944, Memoranda 27-30, 1944, Reports 31-38, 1945, Survey of Resistor Enamel Processes, 1945, Memoranda by R. L. Cook, 1945 (1944-45)
Reports 45-52, 1946, Reports 53-61, 1947, Reports 62-70, 1948 (1946-48)
Development of High Dielectric Capacitors, Reports 1-4, 1952-1953
Reports 5-7, 1954-1955
Reports 8-11, 1955-1956

Box 11:

Canton Stamping and Enameling Co., Report of a Cooperative Investigation between the University of Illinois Engineering Experiment Station and Canton Stamping and Enameling Co., Canton, Ohio, Light-Colored Ground-Coat Enamels for Sheet-Steel, 1937
Special Report-Proposed Changes in Procurement Specification No. 523, Enamelware: Bake-shop and Kitchen, ca. 1945-1946
Testing the Resistance of Enameled Surfaces to Scratching, Gouging and Abrasion, 1946
The Effect of the Coefficient of Expansion of the Ground and Cover Coat Enamels on the Thermal Shock and Impact Resistance of Enameled Ware, 1946
The Effect of Size and Shape of Titanium Oxide Crystals on Spectrophotometric Properties of Titanium Bearing Porcelain Enamels, 1946
The Effect of Composition on the Properties of Titanium Enamels, 1947
A New method for Studying Fractures of Porcelain Enameled Specimens, 1947
A Systematic Study of Simple Titanium-Bearing Porcelain-Enamels, ca. 1950
The Development of Pyrolytic-Carbon Fixed Resistors, Reports 1-6, and 7-13, 1952
Summary Report-The Development of Pyrolytic-Carbon Fixed Resistors, 1953
Investigation of Feldspars for Use in Whiteware Bodies, 1950
Ferro Enamel Fellowship, Reports 1-8, November 1, 1937-February 15, 1940
Barium Reduction Company, Monthly and Annual Reports, 1943-45
Report on Investigation of Rate of Heating of Kitchen Utensils, 1948
Dr. A.I. Andrews Recommendations for a Post-War Sales Training Program to the Enameled Utensil Manufacturers Council, ca. 1947
Annual Report, Department of Theoretical and Applied Mechanics, 1930-31
Paper, Enamel Composition, ca. 1947
List of Illinois Clay Manufacturers' Association, ca. 1945
Graduates, 1940, 1941
Graduates, February 1951, June 1951
E. St. Memoranda, 49, 1950; 50, 54, 56, 1951; 58, 60, 1952; 62. 1953; 65, 66, 1954 (1950-54)

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Correspondence - 1917-18, 1931

Box 12:

A. O. Smith Corporation, Milwaukee, Wisconsin, Ceramic Research Department
- Investigation of Enamel-Ability and Properties of Car. & Ill. Steels A. B, C and D, ca. 1945
- Research Laboratory Numbered Report-Tentative Procedure, ARL-SP-1001, 1947
- Research Division Seminar notes, 1947
- Progress Report No. 1-The Role of Hydrogen in the Glassing of Metals, CRL-1071, 1951
- Report on Experimental Work Done on Coating 149 by te A. O. Smith NEPA Laboratory During the Period of March 1949 to September 1950, CRL-HTC-Topical 1, 1950
- GE-ANP Ceramic Coating Project (ANP-SC 2 - Item 2) at A. O. Smith, reports 40-49, 51, 53, 1951-52
- NEPA Project at A. O. Smith, reports 1-25, 27, 31-39, and Summary-NEPA Contract No. SC 2005, February 1949-April 1951