



Catalogue of the papers and correspondence of

**Leonard Rotherham
(1913-2001)**



Title: Catalogue of the papers and correspondence of Leonard Rotherham (1913-2001), physicist and metallurgist

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LIST OF CONTENTS

	Items	Page
GENERAL INTRODUCTION		5
SECTION A BIOGRAPHICAL	A.1-A.59	9
SECTION B RESEARCH	B.1-B.29	16
SECTION C PUBLICATIONS	C.1-C.41	20
SECTION D LECTURES AND SPEECHES	D.1-D.75	25
SECTION E VISITS AND CONFERENCES	E.1-E.157	33
SECTION F SOCIETIES AND ORGANISATIONS	F.1-F.77	50
SECTION G CORRESPONDENCE	G.1-G.23	57
INDEX OF CORRESPONDENTS		59
SECTION H APPENDIX	H.1-H.17	66

GENERAL INTRODUCTION

PROVENANCE

An original deposit of material by Rotherham in the University of Bath archives was supplemented in December 1999 by papers received from his son, Mr Miles Rotherham.

OUTLINE OF THE CAREER OF LEONARD ROTHERHAM

Leonard Rotherham was born on 31 August 1913. He was educated at The Herbert Strutt School, Belper, Derbyshire and won a Derby County Major Scholarship as well as a state scholarship to attend University College, London where he obtained a first class degree in physics with subsidiary mathematics. In 1935 he received an MSc from the same institution for research on the viscosity of liquids carried out under the supervision of Professor E. N. da C. Andrade.

Rotherham's first industrial appointment was at the Brown-Firth Research Laboratories in Sheffield where he conducted work on the physical and mechanical properties of metals with particular reference to magnetism, fatigue and creep. By 1939 the laboratories under Rotherham's direct control constituted half of all the Brown-Firth research facilities. Rotherham's own research centred on the development of creep resistant materials. During World War II this area of study gained additional importance through its contribution to the evolution of jet propulsion engines and Rotherham was personally concerned with the manufacture of the special materials which went into the production of the experimental Whittle engines. He also had special responsibilities for the monitoring and development of shells and armour manufacture.

After eleven years in Sheffield Rotherham became head of the Metallurgy Department at the Royal Aircraft Establishment, Farnborough, Hampshire. Though he joined the Establishment at a difficult time, when the Department of Metallurgy was recovering from a post-war decline, Rotherham initiated new programmes of research on the extraction and characteristics of titanium, the corrosion behaviour and high-temperature properties of aircraft structural materials and the fatigue and creep of metals. After four years he had become an authority on the creep of metals and left behind a much healthier department to take up a new post with the UK Atomic Energy Authority (UKAEA), Industrial Group, Risley, Cheshire.

As Director of Research at the UKAEA he set up and oversaw the large organisation which was responsible for almost all the metallurgical work involved in the design, installation and maintenance of the Calder Hall and Dounreay nuclear reactors.

Rotherham left the UK Atomic Energy Authority in 1958 to become the Member for Research of the Central Electricity Generating Board (CEGB). At the CEGB Rotherham renewed his working association with C. Hinton, later Lord Hinton of Bankside. Hinton was Managing Director of the UKAEA, Industrial Group between 1954 and 1957. His departure to become Chairman of the CEGB preceded Rotherham's own transfer to that organisation by a year. Their subsequent collaborations resulted in several co-authored conference papers and publications.

In 1966 Hinton was appointed Chancellor of the newly established Bath University of Technology (later the University of Bath) and in 1969 Rotherham joined him as the institution's second Vice-Chancellor. He remained in this position until his retirement in 1976.

In recognition of his contributions to the fields of science and engineering Rotherham was elected to the Fellowship of the Royal Society in 1963 and became a Founder Fellow of the Fellowship of Engineering (later the Royal Academy of Engineering) in 1976. He was President of the Institution of Metallurgists, 1964 and the Institute of Metals, 1965. He served on the Defence Scientific Advisory Council, 1967-1977, the Central Advisory Council for Science and Technology, 1968-1970, and the Advisory Council for Applied Research and Development, 1976-1981.

DESCRIPTION OF THE COLLECTION

The material is presented in the order given in the contents list. It covers the period from 1932 to 1996.

Section A, Biographical, contains a small amount of material relating to various aspects of Rotherham's career. It includes correspondence and papers concerning Rotherham's appointments at Brown-Firth, the UKAEA and the CEGB, and his membership of professional societies and organisations. It also contains documentation, in photographic form, relating to his career between 1957 and 1967.

Section B, Research, comprises a number of notebooks documenting Rotherham's scientific interests and study as an undergraduate and postgraduate at University College, London. The section also contains correspondence relating to the British Fast Reactor Project, a government initiative with which Rotherham became involved between 1975 and 1976. Rotherham's report on fast reactors, prepared in collaboration with C. Hinton, for the Cabinet Office is included in this section.

Section C, Publications, is composed of off-prints of Rotherham's contributions to various journals. Rotherham's collaborative work with his colleagues at the Brown-Firth Laboratories, the Royal Aircraft Establishment, the UK Atomic Energy Authority and the Central Electricity Generating Board is reflected in the number of jointly authored papers in this section. The section includes a small amount of correspondence with publishers.

Section D, Lectures and speeches, presents a good record of lectures, speeches and talks given by Rotherham throughout his later career. Drafts and final versions of most of Rotherham's lectures between 1951 and 1966 have been preserved. The sequence includes material relating to informal talks given by Rotherham to colleagues and members of staff within his own organisation. It also contains documentation of lectures he gave to a variety of professional audiences as a representative of the UKAEA and the CEGB and as President of the Institution of Metallurgists and the Institute of Metals. Rotherham delivered the 13th Hatfield Memorial Lecture in November 1960 and the 10th Coal Science Lecture in October 1961.

Section E, Visits and conferences, is composed of correspondence and papers relating to conferences and meetings attended by Rotherham between 1956 and 1969. Rotherham frequently contributed a talk or discussion paper to these conferences, most of which took place in the UK. The section includes material concerning two Royal Society Discussion Meetings, on heavy section steel structures and advanced methods of energy conversion chaired and organised by Rotherham in 1964 and 1965.

Section F, Societies and organisations, contains material relating to the various societies and organisations with which Rotherham was connected in an academic, professional or personal capacity. It includes a series of minutes and papers of the Central Advisory Council for Science and Technology of which Rotherham was a member between 1968 and 1970 and papers concerning the University Grants Committee Technology Sub-Committee on which Rotherham served for ten years from 1961.

Section, G, Correspondence, contains a small amount of miscellaneous correspondence relating to a variety of topics including Institution of Metallurgists business, Windscale Nuclear Power Station, Rotherham's appointment to the Central Electricity Generating Board and the setting up of a Ministry of Defence Study Group.

There is also an index of correspondents.

ACKNOWLEDGEMENTS

We are very grateful to Mr M. Rotherham for his assistance in making this material available.

L. Richmond
Bath 2001

SECTION A	BIOGRAPHICAL	A.1-A.59
	A.1-A.6	BIOGRAPHICAL AND PERSONAL
	A.7-A.23	CAREER, HONOURS AND AWARDS
	A.24-A.31	PERSONAL AND BUSINESS DOCUMENTS
	A.32, A.33	DIARIES
	A.34-A.59	PHOTOGRAPHS
A.1-A.6	BIOGRAPHICAL AND PERSONAL	1957-1996
A.1	2pp typescript curriculum vitae, 1 July 1957.	
A.2	1p resumé publicity leaflet produced on the occasion of the 13th Hatfield Memorial Lecture, 29 November 1960. See also D.30-D.33.	
A.3	<i>Who's Who</i> 1996 entry, p 1675.	
A.4-A.6	Correspondence <i>re</i> the assembling of information concerning Rotherham's early career for his Royal Society biographical memoir, 1990-1991. Includes personal accounts of early collaborative projects by some of Rotherham's colleagues. Three folders.	

A.7-A.23	CAREER, HONOURS AND AWARDS	1934-1982
A.7-A.16	Correspondence <i>re</i> job applications, testimonials and letters of reference, recommendation and appointment, 1934-1956.	
A.7	1934.	
A.8	1935.	
A.9	1937. Deed of Agreement by which Rotherham was employed as a technical assistant for a period of five years by Thomas Firth and John Brown Ltd, Atlas Works, Sheffield, 24 September 1937.	
A.10	1940.	
A.11	1946-1948.	
A.12	1950.	
A.13	1952, 1953.	
A.14	1954. Includes correspondence <i>re</i> Rotherham's appointment to the post of Director, Industrial Group, United Kingdom Atomic Energy Authority (UKAEA).	
A.15	1955, 1956.	

A.16	1957. Correspondence <i>re</i> Rotherham's formal acceptance of an invitation to serve as a full-time member of the Central Electricity Generating Board (CEGB) from 1 April 1958. See also F.49.	
A.17	Correspondence, papers and certificate <i>re</i> Rotherham's admittance to the Fellowship of University College, London, February 1959.	
A.18	Certificate <i>re</i> Rotherham's election as a Fellow of the Institute of Fuel, 21 May 1959.	
A.19	Certificate of life membership of the American Society of Mechanical Engineers, 27 August 1963.	
A.20-A.22	Letters of congratulation on Rotherham's election to the Fellowship of the Royal Society, 1963. Three folders.	
A.23	Letter from M. Thatcher, Prime Minister, on Rotherham's retirement from the Advisory Council for Applied Research and Development, 8 April 1982.	
A.24-A.31	PERSONAL AND BUSINESS DOCUMENTS	1947-1980
A.24-A.26	Correspondence and papers <i>re</i> various superannuation schemes and life assurance plans, 1947-1956. Three folders.	
A.27	'Woodlands.' Contents of folder so inscribed. Correspondence <i>re</i> the insurance, maintenance and sale of a property called 'Woodlands', Helsby, Cheshire, 1958-1959.	

- A.28, A.29 'Stoneley.' Contents of folder so inscribed divided into two for ease of reference.
- Correspondence *re* the insurance and maintenance of Rotherham's home in Bickley, Kent, 1958-1963.
- Two folders.
- A.30 Driving licence, 1 January 1966-10 January 1969.
- A.31 'Travel Claim Forms'. Contents of folder so inscribed.
- Correspondence *re* travel reimbursement arrangements in respect of Rotherham's various professional activities, 1975-1980.
- A.32, A.33 DIARIES 1970-1977**
- A.32 Hardback desk diary. Used during 1970. Loose material intercalated.
- A.33 Hardback desk diary. Used August 1976-July 1977.
- A.34-A.59 PHOTOGRAPHS 1957-1967**
- The presentation is chronological. Undated photographs can be found at the end of the sequence.
- A.34 Two black and white UKAEA publicity photographs of Rotherham, Director of Research and Development, Industrial Group, 4 March 1957.
- A.35 Black and white photograph and covering correspondence *re* Rotherham's visit to CEGB North West, Merseyside and North Wales Region Headquarters, Manchester, 18 April 1958.

- A.36 Black and white photograph of HRH the Duke of Edinburgh leaving Bankside House, London, after attending an informal lunch with the Chairman, C. Hinton, and other members of the CEGB, 27 November 1958.
- A.37 Thirteen black and white photographs, with covering note, showing construction work at Hunterston, South of Scotland Electricity Board Nuclear Generating Station, 1959.
- A.38 Four black and white photographs taken during a visit by Rotherham to CEGB North Western Region, 8 September 1961.
- A.39 Black and white photograph, with covering correspondence, of Rotherham and colleagues at the Iron and Steel Institute Annual Dinner, 1961.
- A.40 Five black and white photographs, with covering correspondence, of the official opening of the Central Electricity Research Laboratories (CERL), Leatherhead, Surrey, 10 May 1962.
- A.41 Black and white photograph of Rotherham and colleagues at the Iron and Steel Institute Annual Dinner, Grosvenor Hotel, London, 1 May 1963.
- A.42 Four black and white photographs, with covering letter, taken during a visit by Rotherham to CEGB North Eastern Region, Leeds, 13 November 1963.
- A.43 Two black and white photographs taken during the Joint International Conference on Creep, New York, USA, 25-29 August 1963.
- See also C.27, E.81-E.84.
- A.44 Eight black and white photographs taken during C. Hinton's visit to the Central Electricity Research Laboratories, Leatherhead, Surrey, 18 December 1963.
- A.45 Black and white photograph taken during a visit by a delegation from the Czechoslovak Board of Energy to the Central Electricity Research Laboratories, Leatherhead, Surrey, 23 April 1964.

- A.46 Two black and white photographs taken during Rotherham's visit to the laboratories of the CEGB North Western Region, Manchester, 8 July 1964.
- A.47 Two black and white photographs, with covering correspondence, taken during Rotherham's visit to Brush Electrical Engineering Co Ltd, Falcon Works, Loughborough, Leicestershire, 25 September 1964.
- A.48 Nineteen black and white photographs taken during a visit of electrical manufacturers to the Central Electricity Research Laboratories, Leatherhead, Surrey, 16 March 1965.
- A.49 Seventeen black and white photographs, with covering letter, taken during CEGB North Western Region Annual Speech Day, Manchester, 26 March 1965.

See also D.62-D.64.
- A.50 Black and white photograph of Rotherham attending the Institute of Metals Autumn Meeting, Grenoble, France, 19-24 September 1965.
- A.51 Black and white photograph of Rotherham receiving his certificate of Honorary Fellowship of the Institute of Welding, 1 November 1965.
- A.52 Two black and white photographs of the 'BIOS' Dinner, 8 August 1966.
- A.53 Colour photograph, with covering letter, of Rotherham and Japanese visitors, 22 May 1967.
- A.54 Black and white photograph, with covering letter, taken during a visit by the CEGB Chairman to CEGB South Eastern Region Headquarters, October 1967.
- A.55 Black and white photograph of Rotherham during a visit to the Hungarian Embassy, London, 12 December 1967.

- A.56 Formal black and white photograph of Rotherham with unidentified colleagues, nd.
- A.57 Black and white photograph of Rotherham with unidentified group, nd.
- A.58 Black and white photograph taken during ?Annual Dinner, Dorchester Hotel, London, nd.
- A.59 Various black and white CEGB publicity photographs of Rotherham, nd.

SECTION B RESEARCH B.1-B.29

B.1-B.19 NOTEBOOKS

B.20-B.29 CORRESPONDENCE AND REPORTS

B.1-B.19 NOTEBOOKS 1932-1990

Most of the notebooks in this sub-section, though undated, appear to have been used by Rotherham during his time as an undergraduate and postgraduate at University College, London. However many of them bear printed labels on the front cover indicating that they were once the property of The Herbert Strutt School, Belper, Derbyshire. Inscriptions added to these labels seem to suggest that Rotherham first received them as exercise books while he was at school and later used them for university notes and calculations.

The notebooks are presented in chronological order. Those without dates have been placed at the end of the sequence.

B.1 Hardback notebook containing notes on and results of scientific experiments. Used October 1932-March 1933.

B.2 Softback notebook containing scientific notes. Loose material intercalated includes University of London sessional examination paper in physics, April 1933.

B.3 Hardback notebook containing notes on and results of scientific experiments. Used March 1933-March 1934.

B.4 Hardback notebook containing notes on and results of scientific experiments. Used April-May 1934.

B.5 Softback notebook containing scientific notes. Loose material intercalated includes University of London special intermediate examination paper in science, June 1935.

B.6 Hardback notebook containing scientific notes. Latest bibliographical reference 1939.

B.7 Hardback notebook containing scientific notes for a paper by Rotherham entitled 'Heat Treatment and Heat Transfer'. Used October 1945. Loose material *re* the publication of the paper intercalated.

B.8 Hardback notebook. Used October 1979-May 1983. Loose correspondence intercalated.

B.9 Hardback notebook. Used September 1983-December 1990. Loose material intercalated.

B.10 Softback notebook containing notes on viscosity, nd.

Rotherham received a MSc Degree in 1935 for research on the viscosity of liquids.

B.11 Softback notebook containing scientific notes inscribed on the front cover 'Calculus, Trigonometry', nd.

B.12 Softback notebook containing scientific notes inscribed on the front cover 'Maths - Geom', nd.

B.13 Softback notebook containing scientific notes inscribed on the front cover 'Geometry', nd.

B.14 Softback notebook containing scientific notes inscribed on the front cover 'Scripture', nd.

B.15 Softback notebook containing scientific notes, nd.

- B.16 Softback notebook containing scientific notes entitled 'Third Term', nd.
- B.17 Softback notebook containing notes entitled 'Nuclear Physics', nd.
- B.18 Softback notebook containing notes entitled 'Modern Electricity, nd.
- B.19 Hardback notebook containing scientific notes, nd.
- B.20-B.29 CORRESPONDENCE AND REPORTS 1949-1979**
- The presentation is chronological.
- B.20 *Significance of the Parameter Sigma, in the Relationship between Initial Susceptibility and the Variation of Remanence with Tensile Stress, W. Koster* (translated by R. C. Murray), Royal Aircraft Establishment, August 1949.
- B.21, B.22 Correspondence re the Central Electricity Generating Board Research and Development Programme 1957-1958.
- Principally copies of letters between F. H. S. Brown and C. Hinton re CEGB research activities, sent to Rotherham for information on the commencement of his appointment at CEGB.
- See also F.49-F.56.
- Two folders.

- B.23-B.26 'Cabinet Office - Fast Reactors.' Contents of folder so inscribed divided into four for ease of reference.
- Correspondence and papers re the British Fast Reactor Project, 1975-1976.
- Rotherham agreed to undertake a personal investigation (in collaboration with C. Hinton) into the prospects for a UK commercial fast reactor.
- Includes 27pp typescript report by C. Hinton and Rotherham and copy of 7pp typescript entitled 'Analysis of Proposals for Rehabilitation of the Prototype Fast Reactor at Dounreay' by C. Hinton.
- Four folders.
- B.27 4pp typescript report and accompanying research material re a visit by Rotherham, L. Atkinson and T. Knapp to NEI Parsons Ltd, Newcastle, to discuss six flow versus four flow turbine generator designs as part of a Central Policy Review Staff (Cabinet Office) investigation, 27 November 1978.
- B.28 33pp report entitled 'Export of Four and Six Exhaust Steam Turbines: Information Relating to the Comparative Export Potential of Four and Six Exhaust Steam Turbines of Designs Similar to those considered for Heysham/Torness Powers Stations', January 1979.
- B.29 11pp typescript entitled 'Working Group Report (4th Draft)' re the contribution of applied research and development to industrial innovation with manuscript draft notes, nd.

SECTION C PUBLICATIONS C.1-C.41

This section contains copies of papers and other publications written and co-authored by Rotherham. It also includes a small amount of correspondence with publishers concerning Rotherham's contributions to various journals.

C.1-C.36 OFF-PRINTS

C.37-C.41 DRAFTS AND CORRESPONDENCE

C.1-C.36 OFF-PRINTS 1942-1984

A chronological sequence of off-prints, reprints etc of Rotherham's publications. Not a complete sequence.

C.1 *The Damping Capacity of Engineering Materials*, W. H. Hatfield, G. Stanfield and L. Rotherham, North East Coast Institution of Engineers and Shipbuilders, 1942.

W. H. Hatfield was Rotherham's supervisor at the Brown-Firth Laboratories, Sheffield, 1935-1946.

C.2 *Further Experiments on the Damping Capacity of Metals*, W. H. Hatfield, L. Rotherham and E. M. A. Harvey, North East Coast Institution of Engineers and Shipbuilders, 1944.

C.3 'A Rapid Method for the Analysis of Light Alloys, Based on Electrical Resistivity', L. Rotherham and J. Morley, *Journal of the Institute of Metals* **73(4)**, 1946.

C.4 *Creep of Metals*, L. Rotherham, Institute of Physics, 1951.

C.5 'Internal Friction and Grain-Boundary Viscosity of Tin', L. Rotherham, A. D. N. Smith and G. B. Greenough, *Journal of the Institute of Metals* **79(6)**, 1951.

C.6 'Ceramics for Gas Turbines', L. Rotherham, W. Watt, J. P. Roberts and F. J. Bradshaw, *Symposium on High-Temperature Steels and Alloys for Gas Turbines Special Report 43*, 1951.

C.7 'The Solid Solubility of Silver in Aluminium', L. Rotherham and L. W. Larke, *Journal of the Institute of Metals* **81**, 1952-53.

C.8 'Metallurgical Trends of Interest to Chemical Engineers', L. Rotherham, *Chemistry and Industry* pp 1164-1170, 1954.

C.9 'Some Applications of Welding in the Development of Atomic Energy', L. Rotherham, *British Welding Journal*, September 1955.

C.10 'Internal Friction and Grain Boundary Viscosity of Silver and Binary Silver Solid Solutions', S. Pearson and L. Rotherham, *Journal of Metals*, August 1956.

C.11 'Internal Friction and Grain Boundary Viscosity of Copper and Binary Copper Solid Solutions', L. Rotherham and S. Pearson, *Journal of Metals*, August 1956.

C.12 'Applied Research and Development Within the Industrial Group of the UK Atomic Energy Authority', L. Rotherham and A. B. McIntosh, *Nature* **178** 524-527, September 1956.

See also C.37.

C.13 'The Calder Reactors: Research and Development Problems', L. Rotherham, *Nature* **178** 825-828, October 1956.

See also C.38.

- C.14 'The Role of Metallurgy in a Nuclear Energy Project', L. Rotherham, *Journal of Applied Physics* Supplement 5 S91-S95, 1956.
- C.15 'Metallurgical Problems of Atomic Energy', L. Rotherham, *Journal of the Institute of Metals* **85** 393-396, 1956-57.
- C.16 'Calder Hall Nuclear Power Station', L. Rotherham, *Science* **125(3245)** 452-454, 8 March 1957.
- C.17 'The First Nuclear Power Stations: Calder Hall', L. Rotherham, Organisation for European Economic Co-operation Information Conference on Nuclear Energy for Management, Paris, France, 2 April 1957.

See also E.9-E.11.
- C.18 'The First Nuclear Power Stations: Calder Hall', L. Rotherham, *The Industrial Challenge of Nuclear Energy* pp 111-119, July 1957.
- C.19 'Metallurgical Problems of Atomic Energy', L. Rotherham, *Journal of the Institute of Metals*, May 1957.
- C.20 'Application of Welding in the Atomic Energy Field', L. Rotherham and I. H. Hogg, British Commonwealth Welding Conference 1957.
- C.21 'The Physicist in the Industrial Group of the UK Atomic Energy Authority', L. Rotherham and T. Edge, *Bulletin of the Institute of Physics* pp60-65, March 1958.
- C.22 'A Review of the Future of Nuclear Reactor Systems in the Light of the Available Research and Operating Experience', C. Hinton and L. Rotherham, World Power Conference Paper 48/B₃/5, 1958.

See also E.18-E.22.
- C.23 'The Research Branch of the Industrial Group of the United Kingdom Atomic Energy Agency', L. Rotherham, *Proceedings of the Royal Society* **249(A)** 1-15, 1958.

- C.24 'Energy for the World's Needs', L. Rotherham, *Contemporary Physics* **2(2)** 81-92, December 1960.
- C.25 'The Contribution of Metallurgy to Electric Power Generation', L. Rotherham, *Journal of the Iron and Steel Institute* **197**, February 1961.
- C.26 'High-Strength Steels', L. Rotherham, *Journal of the Iron and Steel Institute*, January 1963.
- C.27 'Some High-Temperature Research Problems for an Expanding Electrical Power Industry', L. Rotherham, Institution of Mechanical Engineers, 1963.

See also E.81-E.84.
- C.28 'Some Advances in Metallurgical Practice Introduced for Nuclear Engineering', L. Rotherham, *Journal of the Institute of Metals* **92**, 1963-64.
- C.29 'The Growth of Qualified Manpower and the Role of the Professional Institutions', L. Rotherham, *The Metallurgist*, July 1964.
- C.30 'The Brittle Fracture of Steel', L. Rotherham, nd latest bibliographical reference 1964.
- C.31 'Presidential Address: Science and Industry', L. Rotherham, *Journal of the Institute of Metals* **93** 369-375, 1964-65.
- C.32 'A Discussion on Damage and Failure Mechanisms of Heavy-Section Steel Organized by L. Rotherham, FRS', *Proceedings of the Royal Society* **285(A)** 1-174, 1965.
- C.33 'Electricity's Nationwide Research Programme', L. Rotherham, *Metals and Materials*, January 1967.

- C.34 'A Discussion on Advanced Methods of Energy Conversion - Magneto-hydrodynamic Power Generation Organized by L. Rotherham, FRS', *Philosophical Transactions of the Royal Society* **261(A)** 345-582, July 1967.
See also E.114-E.130.
- C.35 'Supply Industry Research Benefits Overseas Buyers', L. Rotherham, *Electrical Times* **155(18)** 72-77, 1 May 1969.
- C.36 *Research and Innovation: A Record of The Wolfson Technological Projects Scheme 1968-1981*, L. Rotherham, Oxford Science Publications, 1984.
See also F.75-F.77.
- C.37-C.41 DRAFTS AND CORRESPONDENCE 1956-1957**
- C.37 8pp typescript entitled 'Organisation and Management of Applied Research and Development within the Industrial Group of the UKAEA' by L. Rotherham and A. B. McIntosh with covering correspondence *re* its publication in *Nature*, 1956.
See also C.12.
- C.38 Two versions, 5pp and 10pp, of a typescript entitled "The Calder Reactors: Research and Development Problems' by L. Rotherham and covering correspondence *re* publication, 1956.
See also C.13.
- C.39 10pp typescript entitled 'Metallurgical Problems of Atomic Energy' with covering note *re* publication, February 1957.
- C.40 Two versions, 7pp and 5pp, of a typescript draft with amendments entitled 'Careers for Young Scientists in Atomic Energy' by L. Rotherham and covering correspondence *re* publication, 1957.
- C.41 2pp typescript list of papers by Rotherham published in various journals, 1946-1955.

- SECTION D LECTURES AND SPEECHES D.1-D.75**
- This section contains material relating to lectures, speeches and broadcasts delivered by Rotherham at various events and venues. For documentation of larger meetings and conferences at which Rotherham was one of several speakers see Visits and Conferences.
- D.1-D.69 DRAFTS
- D.70-D.75 CORRESPONDENCE
- D.1-D.69 DRAFTS 1951-1966**
- D.1, D.2 'Titanium', College of Aeronautics, 1951.
- D.1 6pp typescript (annotated) with illustrative figures.
- D.2 Correspondence arising.
- D.3 'The Role of Metallurgy in a Nuclear Energy Project', ICI Scientific Society, [London], 7 February 1957.
13pp typescript with appendix.
- D.4, D.5 'Metallurgical Problems of Atomic Energy', Institute of Metals, London, February 1957.
- D.4 10pp typescript (annotated) with manuscript notes and correspondence arising.
- D.5 10pp typescript prepared by Rotherham for publication.

- D.6-D.9 The Axel Ax:son Johnson Lecture, Stockholm, Sweden, 15 March 1957.
C. Hinton, Managing Director, Industrial Group, UKAEA, gave a lecture entitled 'The Future of Nuclear Power'. Rotherham worked on the preparation of the lecture with Hinton.
- D.6 Typescript and manuscript note entitled 'Draft for Managing Director's Swedish Lecture'.
- D.7, D.8 Various typescript drafts.
Two folders.
- D.9 Copies of published text.
- D.10-D.13 Radiodiffusion Télévision Française (RDTF), August 1957.
Rotherham was invited to write three talks on nuclear centres to be translated into French and broadcast as part of a series on atomic industries in different countries.
- D.10 Correspondence *re* arrangements.
- D.11 Two versions, 5pp and 4pp, of a typescript entitled 'Radiodiffusion Télévision Française August 1957: First Talk' with amendments.
- D.12 Two versions, 6pp and 3pp, of a typescript entitled 'RDTF - Second Talk August 1957' with amendments.
- D.13 Two versions, 6pp and 4pp, of a typescript entitled 'Third Talk for RDTF - August 1857' with amendments.
- D.14-D.17 Royal Society, London, 20 March 1958.
Rotherham gave a lecture entitled 'The Research Branch of the Industrial Group of the United Kingdom Atomic Energy Authority'.
- D.14 Correspondence and papers *re* arrangements.

- D.15 Various manuscript and typescript drafts and notes.
- D.16 Two versions, 19pp and 11pp, of typescript lecture.
- D.17 Correspondence and papers arising.
- D.18 'What is a Metallurgist?', Institution of Metallurgists, London Group, London, 10 December 1959.
Typescript and manuscript notes with correspondence *re* arrangements.
- D.19, D.20 'Are We Making the Best of Our Research Resources?', Institution of Electrical Engineers, London, 22 February 1960.
- D.19 Correspondence *re* arrangements and 9pp typescript.
- D.20 Correspondence arising.
- D.21 'Radiation Effects in Solids', Sheffield Metallurgical Association, Sheffield, 4 October 1960.
13pp typescript notes and correspondence *re* arrangements.
- D.22-D.24 'The Implications of the Nuclear Power Programme', Science Masters Association, London, 6 October 1960.
- D.22 Correspondence and papers *re* arrangements.
- D.23 13pp typescript (annotated) draft.
- D.24 Correspondence arising with published text of lecture.

- D.25-D.29 'Metallurgical Problems in the Generation of Electricity', Institute of Metals (Oxford Section), 6 November 1962.
- D.25 Correspondence *re* arrangements.
- D.26, D.27 Central Electricity Research Laboratories reports sent to Rotherham for information.
Two folders.
- D.28 Various manuscript and typescript notes and drafts.
- D.29 Correspondence arising.
- D.30-D.33 'The Contribution of Metallurgy to Electric Power Generation', 13th Hatfield Memorial Lecture, Iron and Steel Institute, London, 29 November 1960.
- D.30, D.31 Correspondence and papers *re* arrangements.
Two folders.
- D.32 15pp typescript.
- D.33 Correspondence arising including published text of lecture.
- D.34 'The Research Programme of the Central Electricity Generating Board', UKAEA Atomic Energy Research Establishment, Harwell, Berkshire, 14 December 1960.
Correspondence *re* arrangements and 6pp typescript.
- D.35, D.36 Introductory speech in a series of ten lectures on reactor fuel element technology, Imperial College, London, 4 May 1961.
- D.35 Correspondence *re* arrangements and lecture programme.

- D.36 13pp typescript (annotated) draft.
- D.37, D.38 Talk to section heads *re* research and development at the Central Electricity Generating Board Central Electricity Research Laboratories, Leatherhead, Surrey, 25 May 1961.
- D.37 Letter *re* arrangements.
- D.38 Manuscript notes and 4pp untitled typescript draft.
- D.39-D.43 'The Position of Coal in Electric Power Generation', British Coal Utilisation Research Association (BCURA) 10th Coal Science Lecture, London, 11 October 1961.
- D.39, D.40 Correspondence and papers *re* arrangements.
Two folders.
- D.41 13pp typescript (annotated) with draft illustrative figures.
- D.42 Correspondence and papers arising.
- D.43 *BCURA Quarterly Gazette*, 44, 1961 containing published text and photographs.
- D.44 'Engineering Metallurgy', Central Electricity Research Laboratories, Leatherhead, Surrey, 15 December 1961.
20pp typescript draft.

- D.45, D.46 Talk on CEGB research, National Joint Advisory Council for the Electricity Supply Industry General Purposes Committees, London, 30 November 1962.
- Rotherham was subsequently requested by the Council to submit a paper on the economic benefits of research.
- D.45 Letter *re* arrangements and 1p typescript notes.
- D.46 Correspondence *re* the drafting of a paper by committee with 10pp typescript entitled 'Economic Benefits of Research: A memorandum by L. Rotherham'.
- D.47 Lecture on the CEGB research programme, Atomic Energy Research Establishment, Harwell, Berkshire, 29 October 1963.
- Correspondence *re* arrangements.
- D.48-D.50 'The Growth of Qualified Manpower and the Role of the Professional Institutions', Institute of Metallurgists, London, 13 May 1964.
- D.48 Correspondence *re* arrangements.
- D.49 12pp typescript with 1p typescript notes.
- D.50 Published text of lecture.
- D.51-D.53 Talk on reactor materials research, Institute of Metals, Sheffield Local Section, 14 January 1965.
- D.51 Correspondence *re* arrangements.
- D.52, D.53 Various versions of typescript talk.
- Two folders.

- D.54, D.55 'The Structure of the Electricity Supply Industry and the Trend of Technical Developments', University of Manchester Extra-Mural Department: Management Forum, Manchester, 9 February 1965.
- D.54 Correspondence *re* arrangements.
- D.55 38pp typescript.
- D.56-D.61 'Science and Industry', Institute of Metals, London, 9 March 1965.
- D.56 Correspondence *re* arrangements.
- D.57 20pp typescript draft with illustrative figures.
- D.58 32pp typescript draft with amendments.
- D.59 9pp typescript with illustrative figures.
- D.60 Correspondence arising.
- D.61 Published lecture.
- D.62-D.64 Address, Central Electricity Generating Board Annual Speech Day (North West Region), Manchester, 26 March 1965.
- See also A.49.
- D.62 Correspondence and papers *re* arrangements and programme.
- D.63 Various typescript versions of Rotherham's address.
- D.64 Correspondence and papers arising. Includes 3pp typescript.

- D.65, D.66 Speech to students and apprentices at the annual prize-giving event held by G. A. Harvey Group of Companies, London, 11 March 1966.
- D.65 Correspondence *re* arrangements.
- D.66 5pp untitled typescript.
- D.67-D.69 Institute of Metals, Scottish Local Section, Glasgow, 11 October 1966.
Rotherham gave a lecture entitled 'Metallurgical research in the Central Electricity Generating Board.
- D.67 Correspondence *re* arrangements.
- D.68 7pp typescript lecture with illustrative figures and slide list.
- D.69 Correspondence arising.
- D.70-D.75 CORRESPONDENCE 1956-1957**
- D.70-D.75 Correspondence and papers *re* CEGB policy on lectures given by members of staff, arrangements for lectures at conferences and meetings, invitations to attend lectures to be given by Rotherham's colleagues and requests to give lectures on various occasions.
Includes published texts of lectures given by C. Hinton.
Six folders.

- SECTION E VISITS AND CONFERENCES E.1-E.157**
- A chronological sequence of correspondence and papers relating to visits made and conferences attended by Rotherham, 1956-1969.
- E.1, E.2 Institute of Physics Conference on the Physics of Nuclear Reactors, London, 3-6 July 1956.
Rotherham gave a talk entitled 'The Role of Metallurgy in a Nuclear Energy Project'.
- E.1 Correspondence *re* arrangements and programme.
- E.2 11pp typescript talk.
- E.3, E.4 Meeting of the British Association for the Advancement of Science, Sheffield, 3 September 1956.
Rotherham gave a talk entitled 'The Role of Metallurgy in a Nuclear Energy Project'.
- E.3 Correspondence *re* arrangements.
- E.4 1p typescript (annotated) draft talk.
- E.5 British Nuclear Energy Conference: Calder Hall Symposium, London, 22-23 November 1956.
Rotherham was invited to contribute a report on the conference for publication in *Science*.
Two typescript versions of report and correspondence.

- E.6-E.8 Advanced-Type Reactor Systems Conference with Industry, Harwell, Berkshire, 30 November 1956.

Rotherham gave a short talk on the sodium-graphite system.
- E.6, E.7 Programme and papers prepared for the conference.

Two folders.
- E.8 Various manuscript and typescript versions of Rotherham's paper.
- E.9-E.11 Organisation for European Economic Co-operation (OEEC) Information Conference on Nuclear Energy for Management, Paris, France, 2 April 1957.

Rotherham gave a talk entitled 'The First Nuclear Power Stations: Calder Hall'.

See also C.17.
- E.9 Correspondence *re* arrangements.
- E.10 Two typescript versions, 3pp and 12pp, of Rotherham's talk.
- E.11 Published text.
- E.12-E.17 Portugal 1957.

Rotherham was invited to give a series of four lectures during a visit to Portugal which included trips to Lisbon and Coimbra.
- E.12 Correspondence *re* arrangements.

See also D.66-D.71.
- E.13 Two versions, both 10pp, of a typescript entitled 'The Development of Gas-Cooled Reactors for Nuclear Power' with typescript and manuscript notes.

- E.14 Two versions, both 7pp, of a typescript entitled 'Future Development of Gas-Cooled Reactors for Power Production'.
- E.15 11pp typescript entitled 'Metallurgy and Atomic Energy' with 2pp appendix.
- E.16 13pp typescript entitled 'Chemistry in Atomic Energy'.
- E.17 Portuguese translations of Rotherham's lectures with covering correspondence.
- E.18-E.22 World Power Conference, Montreal, Canada, 7-11 September 1958.

Rotherham submitted a paper jointly with C. Hinton entitled 'A Review of the Future of Nuclear Reactor Systems in the Light of the Available Research and Operating Experience'.

See also C.22.
- E.18 Correspondence *re* arrangements.
- E.19 16pp typescript draft paper with architectural drawings.
- E.20 18pp typescript (annotated) draft paper with 3pp typescript notes.
- E.21 4pp typescript comments on the paper by C. P. Haigh.
- E.22 Published text (annotated).
- E.23, E.24 Conference of University Professors: Research Problems of the Supply Industry, London, 27-28 November 1958.

Rotherham delivered a lecture entitled 'Research Problems of the Supply Industry'.
- E.23 Correspondence *re* arrangements and programme.

- E.24 Correspondence arising and copy of published proceedings.
- E.25, E.26 Administrative Staff College Senior Conference on Expansion, Henley on Thames, Oxfordshire, 7-10 July 1959.
Rotherham gave a talk on scientific development.
- E.25 Programme and correspondence *re* arrangements.
- E.26 Letter of thanks.
- E.27, E.28 National Union of Mineworkers Summer School: The Future of Nuclear Energy, Bingley, Yorkshire, 18-24 July 1959.
Rotherham gave a talk entitled 'The Future of Nuclear Power'.
- E.27 Correspondence *re* arrangements and programme.
- E.28 2pp typescript summary of Rotherham's talk with covering correspondence.
- E.29-E.31 University Institute of Education Oxford Summer Conference on Science as a General Study in the 6th Form, Oxford, 26 July-1 August 1959.
Rotherham gave a talk entitled 'The World's Power Problems'.
- E.29 Correspondence *re* arrangements and programme.
- E.30 Two versions, 17pp and 19pp, draft typescript.
- E.31 Correspondence and papers arising.

- E.32, E.33 Public Schools Career Masters Convention, London, 4-8 April 1960.
Rotherham gave an opening talk entitled 'Research and Development' during a visit by the convention to the Central Electricity Research Laboratories, Leatherhead, Surrey.
- E.32 Programme and correspondence *re* arrangements.
- E.33 4pp typescript of Rotherham's talk.
- E.34-E.37 London School of Economics and Political Science Seminar on Problems in Industrial Administration, London, 24 May 1960.
Rotherham gave a talk entitled 'Economics and Organisation of Industrial Research'.
- E.34 Correspondence *re* arrangements.
- E.35 11pp typescript notes for discussion.
- E.36 18pp typescript talk.
- E.37 Correspondence arising.
- E.38-E.42 World Power Conference, Madrid, Spain, 5-9 June 1960.
Rotherham presented a joint paper entitled 'The Economics of Nuclear Power in Great Britain' with C. Hinton and F. H. S. Brown.
- E.38-E.40 Correspondence *re* arrangements.
Three folders.
- E.41 2pp typescript talk with illustrative figures.
- E.42 Published text.

- E.43-E.45 Central Electricity Generating Board Regional Management Conference (Midlands and East Midlands Region), Stratford upon Avon, 17-18 October 1960.
Rotherham gave a talk on research and development.
- E.43 Correspondence *re* arrangements and programme.
- E.44 10pp typescript (annotated) talk.
- E.45 Letter of thanks and correspondence arising.
- E.46-E.48 School of Welding Technology Course, London, 27 February-3 March 1961.
Rotherham gave the opening address.
- E.46 Programme and correspondence *re* arrangements.
- E.47 Correspondence *re* slides to accompany Rotherham's speech.
- E.48 3pp manuscript and typescript notes.
- E.49, E.50 Central Electricity Generating Board Management Conference for Station Superintendents (Midlands Region), Château Impney, Worcestershire, 10-11 May 1961.
Rotherham was due to give a talk but was forced to withdraw as a result of a car accident. His place was taken by C. P. Haigh.
- E.49 Correspondence *re* arrangements and programme.
- E.50 9pp typescript entitled 'Research and Development' with amendments.

- E.51 Regional Advisory Council for Technological Education Conference on Applied Nuclear Science, Kingston upon Thames, Surrey, 26 May 1961.
Rotherham gave a talk on the UK Nuclear Power Programme.
Correspondence and papers *re* arrangements.
- E.52 International Conference on the Properties of Reactor Materials, Berkeley Castle, Gloucestershire, 1 June 1961.
22pp typescript entitled 'Materials Problems of Nuclear Power - Historical', with correspondence arising.
- E.53, E.54 Conference of Supply Industry Delegates to the British Electrical Power Convention, Eastbourne, Sussex, 12 June 1961.
Rotherham gave a talk on research.
- E.53 Correspondence *re* arrangements.
- E.54 3pp typescript draft talk with typescript notes.
- E.55-E.57 European Atomic Energy Society Enlarged Symposium on Principles, Implementation and Trends of National Nuclear Programs, Lisbon, Portugal, 16-20 October 1961.
Rotherham gave a lecture entitled 'Relations between the Atomic Energy Authority, the Central Electricity Generating Board and Industrial Consortia'.
- E.55 Correspondence *re* arrangements and the contents of Rotherham's lecture.
- E.56 Programme and list of participants.
- E.57 5pp typescript draft lecture with amendments.

- E.58-E.62 Conference of University Professors, London, 9-10 November 1961.
Rotherham gave a talk entitled 'Research in the Electricity Supply Industry'.
- E.58 Correspondence and papers *re* arrangements and programme.
- E.59 14pp typescript of C. Hinton's introductory address entitled 'Some Points of Interest in the Design and Operation of the Central Electricity Generating Board's System'.
- E.60 49pp typescript transcript of conference proceedings on the morning of 10 November including Rotherham's talk.
- E.61 Correspondence and papers arising. Includes 4pp typescript of Rotherham's talk.
- E.62 Published conference proceedings.
- E.63 Central Electricity Generating Board Headquarters Local Advisory Committee Annual General Meeting of Employees, London, 14 November 1961.
Correspondence *re* arrangements and 3pp typescript notes *re* CEGB research programmes.
- E.64-E.67 Institute of Metals Symposium on Uranium and Graphite, London, 21 March 1962.
Rotherham gave an introductory talk.
- E.64, E.65 Correspondence and papers *re* arrangements and the contents of Rotherham's talk.
Two folders.
- E.66 2pp untitled typescript talk with list of available graphite illustrations.
- E.67 Correspondence and papers arising.

- E.68-E.76 Royal Society of Health 69th Health Congress, Scarborough, Yorkshire, 9-13 April 1962.
Rotherham gave the presidential address to the Radiation Section of the Congress.
- E.68-E.71 Correspondence *re* arrangements and programme. Includes drafts of papers prepared for presentation at the Congress and sent to Rotherham for comment and information.
Four folders.
- E.72 Papers for discussion.
- E.73 Exhibition catalogue.
- E.74 Various typescript drafts (annotated) entitled 'Introductory Talk to Radiation Section'.
- E.75 Published text of Rotherham's presidential address.
- E.76 Letters of thanks and correspondence arising.
- E.77-E.80 British Electrical Power Convention, Torquay, Devon, 16-20 June 1963.
Rotherham co-authored a paper entitled 'Research and Design in the Electricity Supply Industry' with G. N. Green and E. S. Booth.
- E.77 Correspondence *re* arrangements.
- E.78, E.79 Correspondence and papers *re* collaboration and composition of joint paper. Includes various typescript versions of draft paper.
Two folders.
- E.80 Correspondence and papers arising.

- E.81-E.84 Joint International Conference on Creep, New York, USA, 25-29 August 1963.
- Rotherham delivered the American Society of Mechanical Engineers Calvin Rice Lecture entitled 'Some High Temperature Research Problems for an Expanding Electrical Power Industry' to the Conference, 17 August.
- See also A.43, C.27.
- E.81 Correspondence *re* arrangements. Includes 27pp typescript entitled 'The Research Worker and His Community', by N. P. Allen and C. H. Shumaker.
- E.82 19pp typescript of Rotherham's lecture.
- E.83 Correspondence arising.
- E.84 Published text of lecture.
- E.85-E.90 Institute of Metals Autumn Meeting, Milan, Italy, 22-27 September 1963.
- Rotherham delivered the 2nd Metallurgical Engineering Lecture entitled 'Some Advances in Metallurgical Practice Introduced for Nuclear Engineering', 23 September.
- E.85 Correspondence *re* arrangements and programme.
- E.86 44pp typescript with manuscript notes and amendments entitled 'Metallurgical Engineering Lecture'.
- E.87 8pp typescript entitled 'Advances in Metallurgical Practice Introduced by Nuclear Engineering (Skeleton Draft Modified for Translation)'.
- E.88 Correspondence arising.
- E.89 Black and white photographs of nuclear installations and illustrative figures prepared for publication.

- E.90 Published text of Rotherham's lecture.
- E.91-E.95 Royal Society Discussion Meeting on Damage and Failure Mechanisms of Heavy Section Steel Structures, London, 28 May 1964.
- The meeting was organised and chaired by Rotherham.
- E.91 Programme and 2pp typescript notes.
- E.92, E.93 Correspondence and papers *re* arrangements.
- Two folders.
- E.94 Correspondence arising. Principally *re* the preparation and publication of proceedings.
- E.95 *Proceedings of the Royal Society*, Series A, **285 (1400)**, 16 April 1965.
- E.96-E.98 British Iron and Steel Federation 2nd Industry/University Conference, Ashorne Hill, Leamington Spa, Warwickshire, 27-28 September 1964.
- Rotherham gave the closing address.
- E.96, E.97 Correspondence and papers *re* arrangements.
- Two folders.
- E.98 9pp typescript (annotated) entitled 'Notes for Closing Address' with manuscript notes and illustrative figures.
- E.99 Correspondence and papers arising.

- E.100-E.105 The Challenge of Modern Engineering: Royal Society Conference for Headmasters and Headmistresses, Cambridge, 29-31 March 1965.
Rotherham gave a talk on research.
- E.100-E.102 Correspondence and papers *re* arrangements.
Three folders.
- E.103 4pp manuscript draft entitled 'The Challenge of Modern Engineering - Research Aspects'.
- E.104 Correspondence arising.
- E.105 Conference proceedings.
- E.106-E.108 HM Treasury Training and Education Division Organisation and Management Course, Cambridge, 29 March-9 April 1965.
Rotherham gave a lecture entitled 'The Principles and Organisation of a Research Department'.
- E.106 Correspondence and papers *re* arrangements.
- E.107 22pp typescript lecture with illustrative figures.
- E.108 Letter of thanks.
- E.109-E.111 European Symposium on Electrical Conduction at Low Temperatures, London, 20-21 May 1965.
Rotherham gave the opening address.
- E.109 Correspondence and papers *re* arrangements and programme.

- E.110 10pp typescript notes entitled 'Power Transmission - The Dilemma' with list of slides and 1p manuscript notes.
- E.111 Letter of thanks.
- E.112, E.113 Conference on Fuel Research, Eastbourne, Sussex, 4-8 October 1965.
Rotherham presented a paper entitled 'The Organisation of Research in the Central Electricity Generating Board' written jointly with D. J. V. Murray.
- E.112 Correspondence and papers *re* arrangements.
- E.113 Three typescript versions of joint paper.
- E.114-E.130 Royal Society Discussion Meeting on Advanced Methods of Energy Conversion - Magneto-hydrodynamic Power Generation, London, 4 November 1965.
The meeting was organised and chaired by Rotherham.
See also C.34.
- E.114 Programme and invitation list.
- E.115 List of contributors.
- E.116 Chairman's notes and points for the final summary.
- E.117-E.121 Correspondence and papers *re* arrangements. Includes summaries of papers to be given at the meeting.
Five folders.
- E.122-E.130 Correspondence and papers arising. Principally *re* the preparation and publication of proceedings.
Nine folders.

- E.131, E.132 Institution of Electrical Engineers Research Discussion Meeting, London, 4 November 1965.
Rotherham gave an introductory talk.
- E.131 Correspondence and papers *re* arrangements.
- E.132 Two versions, 4pp and 6pp, of a typescript entitled 'The Selection of Topics for Research in Electrical and Electronic Engineering'.
- E.133 Electrical Power Engineers Association Leatherhead and Guildford HQ Section Annual General Meeting, Leatherhead, Surrey, 1 December 1965.
Rotherham gave a talk on research and development in the electrical supply industry.
Agenda and letter of thanks.
- E.134, E.135 6th Ordinary Meeting of the Royal Society of Edinburgh, Edinburgh, 2 May 1966.
Rotherham gave a lecture entitled 'Some Aerodynamic Studies in the Electricity Supply Industry'.
- E.134 Correspondence *re* arrangements.
- E.135 28pp typescript (annotated) lecture with typescript notes and list of slides.
- E.136-E.138 University of Southampton Appointments Board Annual Meeting, Southampton, 23 November 1966.
Rotherham attended as a guest speaker. He gave a talk entitled 'The Graduate in an Industrial Setting'.
- E.136 Correspondence and papers *re* arrangements.
- E.137 15pp typescript lecture notes.

- E.138 Letter of thanks.
- E.139, E.140 Science of Science Foundation Postgraduate Seminar, Imperial College of Science and Technology, London, 22 March 1967.
Rotherham gave a lecture entitled 'Formulating a Research and Development Policy'.
- E.139 Correspondence *re* arrangements.
- E.140 15pp typescript (annotated) lecture.
- E.141-E.143 Electricity Council Spring School, Cambridge, 5-13 April 1967.
Rotherham gave a lecture on research and development.
- E.141 Correspondence *re* arrangements.
- E.142 Programme and summaries of lectures.
- E.143 Various typescript drafts entitled 'Research and Development'.
- E.144, E.145 Southern Electricity Board Senior Management Conference, Maidenhead, Berkshire, 3-4 May 1967.
Rotherham gave a talk on distribution and appliance research.
- E.144 Correspondence and papers *re* arrangements.
- E.145 32pp typescript entitled 'Talk to be Given to the Southern Electricity Board'.

- E.146, E.147 Reinforced Plastics Group of the British Plastics Federation Biennial Group Discussion, Folkestone, Kent, 14-16 November 1967.
Rotherham was a guest speaker.
- E.146 Programme and correspondence *re* arrangements.
- E.147 8pp typescript entitled 'Use of Glass Reinforced Plastics in CEGB (Written by N. H. Holland for use by Dr Rotherham at an Institute of Plastics Function)'.
Rotherham was an opening speaker.
- E.148-E.150 Institution of Mechanical Engineers Discussion Meeting, London, 1 February 1968.
Rotherham was an opening speaker.
- E.148 Correspondence *re* arrangements.
- E.149 14pp typescript notes entitled 'Metallurgy is the Most Important Discipline in Tribology'.
Rotherham gave an opening speech entitled 'Research in the Electricity Supply Industry'.
- E.150 Letter of thanks and correspondence arising.
- E.151, E.152 Institution of Mechanical Engineers Discussion Meeting, London, 7 March 1968.
Rotherham gave an opening speech entitled 'Research in the Electricity Supply Industry'.
- E.151 Correspondence and papers *re* arrangements.
- E.152 4pp typescript speech.

- E.153-E.155 Research and Development Society Symposium: The Relevance of Industrial Research and Development Today, London, 26 September 1968.
Rotherham presented a paper entitled 'Research in the Engineering Industries' for discussion.
- E.153 Correspondence and papers *re* arrangements.
- E.154 10pp typescript draft paper.
- E.155 Correspondence arising.
- E.156, E.157 Electricity Council Summer School, University of Southampton, 9-15 July 1969.
Rotherham gave a lecture on development and research.
- E.156 Programme and correspondence *re* arrangements.
- E.157 Letter of thanks.

SECTION F	SOCIETIES AND ORGANISATIONS	F.1-F.77
F.1-F.4	ADVISORY COUNCIL FOR APPLIED RESEARCH AND DEVELOPMENT (ACARD)	
F.5	THE ATHENAEUM	
F.6-F.48	CENTRAL ADVISORY COUNCIL FOR SCIENCE AND TECHNOLOGY	
F.49-F.56	CENTRAL ELECTRICITY GENERATING BOARD	
F.57	ROYAL SOCIETY OF ARTS	
F.58-F.60	UNIVERSITY COLLEGE, LONDON	
F.61-F.66	UNIVERSITY GRANTS COMMITTEE	
F.67-F.74	WILTON PARK	
F.75-F.77	WOLFSON FOUNDATION	

F.1-F.4	ADVISORY COUNCIL FOR APPLIED RESEARCH AND DEVELOPMENT (ACARD)	1976-1978
		The Advisory Council for Applied Research and Development was established to ensure that the government was kept informed of British research and development trends with particular reference to the economy. Rotherham was invited to serve on the Council for a three-year term from its inception in September 1976 under the chairmanship of Lord Peart.
F.1		Invitation to become a member of the Council and letter of acceptance.
F.2-F.4		Papers and minutes of meetings, October 1977-February 1978. Includes notes on the future work of the Council by Rotherham and letter on the same topic by Sir Peter Matthews. Three folders.
F.5	THE ATHENAEUM	1958-1962
F.5		Correspondence and papers <i>re</i> election and membership.
F.6-F.48	CENTRAL ADVISORY COUNCIL FOR SCIENCE AND TECHNOLOGY	1968-1969
		The Central Advisory Council for Science and Technology was established to advise the government on the most effective national strategy for the use and development of scientific and technological resources. Rotherham served on the Council from 1968 to 1970.
F.6-F.48		Minutes and papers of meetings, January 1968-June 1969.
F.6		January 1968.

F.7-F.11 February 1968.
Five folders.

F.12-F.14 March 1968.
Three folders.

F.15-F.17 May 1968.
Three folders.

F.18-F.26 June 1968.
Nine folders.

F.27, F.28 July 1968.
Two folders.

F.29 August 1968.

F.30, F.31 September 1968.
Two folders.

F.32-F.35 October 1968.
Four folders.

F.36-F.38 November 1968
Three folders.

F.39 December 1968.

F.40 January 1969.

F.41 February 1969.

F.42 March 1969.

F.43-F.45 April 1969.
Three folders.

F.46, F.47 May 1969.
Two folders.

F.48 June 1969.

F.49-F.56 CENTRAL ELECTRICITY GENERATING BOARD 1958-1963

Rotherham served as Member for Research, Central Electricity Generating Board, from 1958 to 1969.
See also A.16, B.21, B.22.

F.49 Letters welcoming Rotherham to his new post, 1958.

F.50-F.56 'CEGB Correspondence.' Contents of folders so inscribed divided into seven for ease of reference.
Principally papers and correspondence *re* Central Electricity Generating Board organisation and activities copied to Rotherham for information on his appointment, 1957-1958.

F.50 Correspondence and papers *re* proposed extensions to the CEGB laboratories in Leatherhead, Surrey to accommodate research investigations involving the handling of radioactive materials.

F.51 45pp Central Electricity Authority Eastern Division Technical (Electrical) Department Report.

F.52-F.55 Correspondence and papers *re* current position of CEGB research and development.

Four folders.

F.56 Album produced by CEGB containing black and white photographs taken during the official opening of the Berkeley, Gloucestershire and Bradwell, Essex, Nuclear Power Stations, 5 April 1963.

F.57 ROYAL SOCIETY OF ARTS 1969

Rotherham was elected a Fellow of the Royal Society of Arts in 1969.

F.57 Correspondence and papers *re* Rotherham's nominations and election.

F.58-F.60 UNIVERSITY COLLEGE, LONDON 1960-1969

Rotherham was elected a Fellow of University College, London in 1959. He served on the College Fellows Committee June 1969 to September 1970.

F.58 Correspondence and papers *re* the nomination of candidates for Fellowship of the College, Rotherham's appointment to the Nuclear Safety Advisory Committee and the College Association of Friends, 1960-1962.

F.59 Agendas and minutes of meetings of the University College, London Association of Friends, 1962-1966.

F.60 Letter of invitation to join the Fellows Committee and Rotherham's acceptance, 1969.

F.61-F.66 UNIVERSITY GRANTS COMMITTEE 1960-1966

Rotherham served on the University Grants Committee Technology Sub-Committee for two five-year terms from 1 January 1961 at the invitation of Sir Keith Murray, Chairman of UGC.

F.61-F.66 Correspondence and papers *re* the organisation, meetings and activities of the Technology Sub-Committee, 1960-1966.

F.61 1960.

F.62 1961.

F.63 1962.

F.64 1963.

F.65 1965.

F.66 1966.

F.67-F.74	WILTON PARK	1970-1977
	<p>Wilton Park was founded in 1946 as a British contribution to the cultivation of an informed international public opinion. Aiming to promote greater co-operation in Europe it offered those influencing policies in their own countries an opportunity to exchange views on political, economic and social topics of common interest. Funded mainly by the British Government, Wilton Park organised at least ten conferences each year.</p> <p>Rotherham served on the Wilton Park (British) Academic Council.</p>	
F.67-F.70	<p>Correspondence and papers <i>re</i> the organisation of Wilton Park, 1970-1977. Principally agendas and minutes of meetings of the Academic Council.</p> <p>Four folders.</p>	
F.71	<p>Publicity papers <i>re</i> Wilton Park conferences, 1976.</p>	
F.72	<p><i>Wilton Park</i>, 3rd edition, 1970 (Central Office of Information).</p>	
F.73	<p><i>Purpose, Aims and Methods of Wilton Park</i>, H. Koepler, 1971.</p>	
F.74	<p><i>Wilton Park Journal</i>, 52, Summer 1976.</p>	
F.75-F.77	WOLFSON FOUNDATION	1982
F.75-F.77	<p>Correspondence and papers <i>re</i> the assessment of scientific and technological applications for Wolfson Foundation research and project grants, 1982.</p> <p>See also C.36.</p> <p>Three folders.</p>	

SECTION G	CORRESPONDENCE	G.1-G.23
	<p>This section contains miscellaneous correspondence on various aspects of Rotherham's work which may once have formed part of a larger filing system.</p>	
G.1-G.9	<p>'Personal Correspondence.' Contents of folder so inscribed divided into nine for ease of reference, 1952-1958.</p>	
	<p>Correspondence <i>re</i> business and scientific meetings, invitations and letters of thanks. Includes letters of congratulation on Rotherham's appointment to the Central Electricity Generating Board, 1958.</p>	
G.1	<p>1952-1954.</p>	
G.2-G.5	<p>1957.</p>	
	<p>Four folders.</p>	
G.6-G.9	<p>1958.</p>	
	<p>Four folders.</p>	
G.10-G.14	<p>'Correspondence - W. E. Ballard.' Contents of folders so inscribed divided into five for ease of reference, 1956.</p>	
	<p>Correspondence with and <i>re</i> W. E. Ballard, Director of Metallisation Ltd, mainly concerning Institution of Metallurgists business and relations between commercial companies and nuclear research development.</p>	
	<p>Five folders.</p>	
G.15-G.23	<p>'Miscellaneous Correspondence.' Contents of folder so inscribed divided into nine for ease of reference, 1976-1990.</p>	
G.15	<p>1976.</p>	
	<p>Includes correspondence <i>re</i> the Directorship of Chemring Ltd.</p>	

- G.16 1980-1982.
Includes letters *re* Rotherham's work at the University of Bath and the establishment of a Ministry of Defence Study Group.
- G.17 1988.
Letter from one of Rotherham's former colleagues at the Central Electricity Generating Board.
- G.18-G.23 1990.
Letter *re* Royal Society biographical memoir of Lord Hinton of Bankside, typescript draft entitled 'The Windscale Accident 1957' by L. Arnold with covering note and letter *re* magnox fuel and its potential with reference to 'burn-up' with enclosures sent to Rotherham for information.
Six folders.

INDEX OF CORRESPONDENTS

ADAMS, C. A.	E.68-E.71
ALLEN, Sir George V.	D.71
ALVEY, John	G.15
ANDRADE, Edward Neville da Costa	A.7, A.8, A.15, A.20, F.5, G.1, G.2, G.8
ARNOLD, Lorna	G.19
ASHLEY, J. W.	E.69
ATKINSON, L.	B.27
AUSTIN, George Wesley	D.33, G.5
BAILEY, George L.	G.9
BALL, John Geoffrey	A.22
BALLARD, W. E.	G.10-G.14
BATES, Leslie Fleetwood	A.20
BERRILL, Sir Kenneth	B.23, B.25, B.26
BILBY, B. A.	E.94
BOOTH, Eric Stuart	E.78
BOWDEN, Frank Philip	D.25

BROGAN, Thomas R.	E.125, E.127, E.128, E.130
BROOKS, W. H. F.	E.96
BROWN, Sir Frederick Herbert Stanley	B.21, B.22, E.39, E.40, F.50
CAVE, L.	E.70
CHESTER, T. E.	D.54
CHURCHMAN, A. Trevor	E.144
CLAUSEN, Hugh	D.75
COCKCROFT, Sir John (Douglas)	G.9
COOPER, Andrew Ramsden	F.49
COTTRELL, Sir Alan (Howard)	E.94, E.97
DANCKWERTS, Peter Victor	A.21, G.5
DAVIDSON, John Frank	F.77
DIAMOND, Jack	D.72
DUNN, Peter D.	E.121
DUNWORTH, John Vernon	E.55
ECCLES, Sir Josiah	D.40, E.23, E.38
EDGE, T.	D.73-D.75

EDWARDS, Sir Ronald Stanley	A.20
ELDRED, Vernon Walter	A.6
EVANS, Sir Ifor	A.22
FAIRBROTHER, F.	D.73
FELLS, Ian	E.125, E.127, E.128, E.130
FINNISTON, Sir (Harold) Montague	G.7
FLECK, Alexander, 1st Baron	A.21, D.39, D.40
FORD, F. A. J.	E.69
FRANK, Sir (Frederick) Charles	A.22
GABOR, Dennis	A.20
GIBSON, A. F.	F.77
GOWING, Margaret Mary	G.18
GRAINGER, Leslie	A.5
GREEN, George Norman	E.78
HAIGH, C. P.	E.21
HAINES, M. G.	E.126
HALÁSAZ, Dénes	E.122
HART, Michael	B.26

HARTLEY, Sir Harold (Brewer)	G.9
HAWTHORNE, Sir William (Rede)	E.121, E.130
HINTON, Sir Christopher, Baron Hinton of Bankside	A.36, B.21, B.22, B.23, B.25, B.26, D.6, E.18, E.39, E.77, F.49
HOLDER, R. W.	A.6
HOLLAND, N. H.	E.150
HORN, G.	E.130
HUET, Pierre	D.74
IBBERSON, V. J.	E.123, E.128
JACKSON, Willis, Baron Jackson of Burnley	A.20
JENKINS, Ivor	G.10
JONES, Sir Henry (Frank Harding)	A.20
JONES, Josiah W.	D.70
JONES, Sir Owen Haddon WANSBOROUGH-	A.22
JONES, W. Idris	D.39
JOSLIN, S. W.	E.68-E.70
KAY, J. M.	G.3, G.7, G.9
KING, R.	A.22
KURTI, Nicholas	A.15

LEAK, G. M.	D.75
LEES, R. J.	G.15
LINSTEAD, Sir (Reginald) Patrick	A.20
MADDOCK, Sir Ieuan	G.15
MARSHALL, W.	A.26
MATTHEWS, Sir Peter	F.2
McINTOSH, A. B.	A.22, G.8, G.10, G.11
McLEAN, Andrew S.	E.69
McLINTOCK, Frank A.	E.92-E.94
McNEIL, Hector	G.8
MEDIN, S. A.	E.126, E.128, E.130
MENTER, Sir James (Woodham)	F.4
MOORE, R. V.	B.26
MOTT, Sir Nevill Francis	A.21
MURRAY, Sir Keith	F.61
MYERS, Rupert H.	A.22
NEMET, Anthony	G.3, G.8
NICHOLSON, Robin B.	F.77
NORRIS, W. T.	E.125-E.127

OATLEY, Sir Charles (William)	F.77
O'NEILL, Hugh	D.75
OWEN, Sir (William) Leonard	G.8
PARKER, Albert	E.68, E.71
PEIRSON, David Edward Herbert	G.12
PERROTT, Sir Donald (Cyril Vincent)	A.14
PILKINGTON, Sir Lionel Alexander Bethune (Sir Alastair)	F.75
POMEY, Jacques	D.74, D.75
PRATT, P. L.	E.93
RABY, G. W.	E.68, E.69
RAFFLE, John Frederick	F.77
RICHARDS, Peter	F.76
ROTHERY, William HUME-	A.21, D.25, D.29
ROYAL SOCIETY	A.4-A.6, A.20-A.22, D.14-D.17, E.91-E.95, E.114-E.130
ROYAL SOCIETY OF ARTS	F.57
SADDINGTON, K.	A.4
SALESSE, M.	D.74
SHUMAKER, C. H.	E.81

SZENDY, Charles	E.122
TAYLOR, H. G.	G.7
THATCHER, Margaret Hilda, Baroness	A.23
THRING, Meredith Wooldridge	E.121
TOTTLE, Charles Ronald	G.1-G.3
TOWNLEY, C. H. A.	A.4
TURNER, C. E.	E.94
UBBELOHDE, Alfred Rene John Paul	A.20
UNIVERSITY COLLEGE, LONDON	A.17, F.59, F.60
VICK, Sir (Francis) Arthur	E.55
WARNER, B.	A.4, A.6
WELLS, P. Arthur	E.68, E.69
WILLIAMS, L. R.	D.72
WOLFENDEN, John Frederick, Baron	F.65, F.66
YEROUCHALMI, D.	E.122, E.124, E.126, E.128

SECTION H **APPENDIX** **H.1-H.17**

This section contains a small amount of biographical material received in May 2001 after the main catalogue of the correspondence and papers of Leonard Rotherham was complete. The material covers the period 1928 to 1997. It includes some documents relating to Nora Mary Thompson whom Rotherham married in 1937.

See also Section A.

- H.1 Examination certificate, Herbert Strutt School, Belper, Derbyshire, July 1928.
- H.2 Matriculation certificate, Herbert Strutt School, Belper, Derbyshire, July 1928.
- H.3 Examination certificate (Nora Mary Thompson), Herbert Strutt School, Belper, Derbyshire, July 1930.
- H.4 Matriculation certificate (Nora Mary Thompson), Herbert Strutt School, Belper, Derbyshire, July 1930.
- H.5 Examination certificate, University College, London, 1932.
- H.6 BSc certificate, University College, London, 20 July 1934.
- H.7 Diploma awarded to Nora Mary Thompson, College of Physical Education, Chelsea Polytechnic, London, July 1934.
- H.8 MSc certificate, University College, London, 20 November 1935.
- H.9 Certificate of election to the Institute of Physics, 12 February 1941.

- H.10 Certificate of election as an Associate of the Institution of Metallurgists, 23 May 1946.
- H.11 Certificate of election to the Fellowship of the Institution of Metallurgists, 16 March 1942.
- H.12 Honorary LLD certificate, University of Bristol, July 1972.
- H.13 Honorary DSc certificate, University of Bath, 10 December 1975.
- H.14 Letter of thanks for Rotherham's service on the Fellowships Selection Subcommittee of the International Relations Committee of the Royal Society, 11 October 1977.
- H.15 Certificate of election to the Fellowship of Imperial College of Science and Technology, London, 5 December 1986.
- H.16 Certificate of membership, American Society of Mechanical Engineers, 1990.

See also A.19.
- H.17 Passport, issued 1997.