



**Catalogue of the papers of  
Professor R F Tylecote**

**by**

**C J Williams**

**Historical Metallurgy Society  
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## INTRODUCTION

Ronald Frank Tylecote (1916–90) was born in Manchester, the son of Frank Edward Tylecote, later Professor of Medicine at the University of Manchester, and his wife, Dr Mabel Tylecote DBE, Labour Party activist and adult educationalist. He was educated at Oundle School and Trinity Hall, Cambridge (MA 1938). He did research on stress concentration in welding at Manchester University, where he received his MSc in 1942. He then took up an appointment with Joseph Lucas Ltd as a welding research engineer. Subsequently he worked on the pressure welding of light alloys, and on the oxidation of copper at the British Non-Ferrous Metals Research Association, and published numerous pioneering papers on both these subjects. He continued his work as an ICI Fellow at the University of London, where he took his PhD in 1952. He then took up a lecturing post at the University of Newcastle in 1953, and became senior lecturer in metallurgy in 1956. Later he became Reader in Archaeo-Metallurgy, a post in which he remained until his retirement in 1978. From 1976 he lectured in archaeo-metallurgy at the Institute of Archaeology, University College, London, which made him an honorary Professor in 1979.

Tylecote's interest in archaeo-metallurgical problems started in 1939, when he worked on an excavation under H J Fleure, the Professor of Geography at Manchester. Subsequently he undertook a training course in archaeology, and then took part in excavations and field work, specializing in metallurgical problems. He directed excavations on Roman, medieval and later sites. From 1960 he acted mainly as advisor and consultant on archaeo-metallurgical problems, and in that capacity excavated in Nigeria with Bernard Fagg, director of the Pitt Rivers Museum, and at Meroë, Sudan, for Professor P L Shinnie of the University of Khartoum. He took part in several excavations of copper-smelting sites in Israel, directed by Beno Rothenberg of the University of Tel-Aviv. In 1968 he took part in the pyrotechnical expedition to Iran, Afghanistan and Turkey, sponsored by the National Geographic Society, and directed by Theodore A Wertime.

His major publications include *Metallurgy in Archaeology* (1962), *The Solid Phase Welding of Metals* (1968), *A History of Metallurgy* (1976), and *The Early History of Metallurgy in Europe* (1987). In 1962, with G R Morton, he founded the Historical Metallurgy Group, and edited its first *Bulletin*. He remained its editor for the rest of his life, as the group became the Historical Metallurgy Society, and the *Bulletin* became the journal, *Historical Metallurgy*.<sup>1</sup>

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<sup>1</sup> This summary of Tylecote's career is based on his own *curriculum vitae* in his papers (Tylecote 280), and on the appreciation of his life and work, with a list of his publications, in *Historical Metallurgy*, 25 (1) (1991), pp 1–20.



## TYLECOTE PAPERS

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### NOTES AND PUBLICATIONS

#### Notebooks

- 1–102 Rough notes by Tylecote in uniform spiral-bound notebooks on sites visited, objects examined, meetings and conferences of HMG and other groups, etc. Some entries overlap:
- 1–9 1958–62 (9 vols).
  - 10–19 1963–9 (10 vols).
  - 20–9 1968–71 (10 vols).
  - 30–9 1972–5 (10 vols).
  - 40–9 1975–9 (10 vols).
  - 50–9 1978–81 (10 vols).
  - 60–9 1981–2 (10 vols).
  - 70–8 1982–4 (9 vols).
  - [The number 79 was not assigned.]
  - 80–9 1984–6 (10 vols).
  - 90–9 1986–9 (10 vols).
  - 100–2 1989–90 (3 vols).
- 103–5 Notebook indexes – typed lists of contents of each vol in order of entry:
- 103 Index to vols 1–37. 1958–74 (1 vol).
  - 104 Index to vols 1–69. 1958–82 [some duplicates of 103 above] (1 vol).
  - 105 Index to vols 70–98 and 102, including some duplicates. 1982–90 (1 file).
- 106 Laboratory notebook with observations on effects of oxidation on thermobalance. 1949–58 (1 vol).
- 107 Laboratory notebook with observations on reduction of iron ore, doming experiments with copper, analyses of various slags, etc. 1956–74 (1 vol).
- 108 ‘Archaeo-Met I’: notebook relating to various excavations, etc: Weardale Rookhope lead smelter; High Bishopley; Leziate; Harthope Mill; Bedburn; Mount Pleasant, Egglestone, Teesdale; Swarland; experimental smelting of lead; Halkyn galena; Melbourne slags; axehead from Dumbarton; copper alloy finds from Irwell; lead pig from Cirencester; Middleton Tyas slags; slag from Wigg; Carrig[ ...] ring fort, Co Waterford; metallurgical remains from Cheddar; lead object and piece of wire from Weston Wood, Surrey; Bronze Age material from Joint Museum of University of Newcastle and Society of Antiquaries; charcoal and metal objects from Caerleon, etc. 1957–65 (1 vol).
- 109 Excavation notebook relating to Ashwicken, West Runton and Coed Ithel. 1959–64 (1 vol).
- 110 General archaeological notebook, with short MS and typescript reports pasted or stapled in, relating to slags and objects sent to Tylecote for examination; relates *inter alia* to finds from Caerleon; Wallington hoard of Bronze Age statues; Dorset coffins; axe, etc, from Gillam St Anthony in Meneage, Cornwall; iron smelting

samples from Jos Plateau, Nigeria; various late Bronze Age bronzes; finds from Huntsham Roman villa, Gatcombe, near Long Ashton, Bristol, and Sbeitla, Tunisia; palstaves from Shelf, near Halifax; various Israeli objects; Dumfries cauldrons; Taruga [Nigeria]; Roman bronze mirrors; lead and bronze from Fishbourne; Wharram Percy slags; ingots from Acemhüyük [Turkey]; various metal objects from Coventry; Laurion [Greece] slags; and Lunt Roman fort metal objects. 1966–74 (1 vol).

- 111 Notebook recording hardness of various metal objects. 1967–85 (1 vol).

**Research notes**

- 112–9 Notes (mostly MS, with some photocopies and press-cuttings) taken from various printed sources relating to metallurgy and archaeology, with some notes on visits to museums. The notes are numbered in chronological order, and date mainly from the 1960s:

112. Nos 1-150 (1 box).  
 113. Nos 151–400 (1 box).  
 114. Nos 401–675 (1 box).  
 115. Nos 677–797 (1 box).  
 116. Nos 901–60 (1 box).  
 117. 961–1099 (1 box).  
 118. 1100–1299 (1 box).  
 119. 1300–1457 (1 box).

**Lecture notes**

- 120 Typescript and MS notes by Tylecote relating to lectures on ceramic/metal mixtures (cermets). [1950s] (1 file).
- 121 MS notes with press-cuttings and papers relating to lectures on raw material for extraction, and photographs of diagrams. [1950s] (1 file).
- 122–8 Notes (mostly MS) relating to lectures at University of Newcastle on:
- 122 Extraction of metals I. [1960s] (1 file).  
 123 Extraction of metals II. [1960s] (1 file).  
 124 Extraction of metals III. Electrolysis. [1960s] (1 file).  
 125 Properties of metals and science of materials. 1960–77 (1 file).  
 126 Part II, Metallurgy: Casting. [1960s] (1 file).  
 127 Science of materials Part I. [1960s] (1 file).  
 128 Science of materials Part II. [1960s] (1 file).
- 129 MS notes and handouts on laboratory work for lectures at Royal School of Mines. [1960s] (1 file).
- 130 Handouts on experimental work for assaying course for mining engineers. [1960s] (1 file).
- 131 Handouts on welding and casting, mechanical work, corrosion, heat treatment, etc, for naval architects' laboratory classes. 1974–7 (1 file).
- 132 Lecture notes for Part III, Solidification Part A. 1976–7 (1 file).

- 133 Lecture notes for Part III, OD (welding, diffusion bonding, wear, etc). 1977–8 (1 file).
- 134 Notes for lectures at Institute of Industrial Archaeology, University of Birmingham, on extracting of non-ferrous metals. 1981–2 (1 file).
- 135 Typescript notes on background reading for course on ‘History of Metals: Medieval and Renaissance Metalwork’, West Surrey College of Art and Design. 1982 (1 file).
- 136 Prospectus for course at University of London, Institute of Archaeology, on archaeo-metallurgy, with notes by Tylecote relating to his lectures. c1980 (1 file).
- 137 Papers of Tylecote as lecturer and external examiner for course on archaeo-metallurgy at Institute of Archaeology. 1986–90 (1 file).
- 138 Notes for lectures on iron, steel and cast iron at Institute of Archaeology. 1987–8 (1 file).
- 139 Notes for lectures on metallography of ancient metals at Institute of Archaeology. 1989 (1 file).

**Reports**

- 140 Typescript reports on archaeological and other objects. Vol 1: 1968–79. List of contents at front (1 box).
- 141 ‘Letters and reports’ relating to bronze cauldron leg from River Tay near Luncarty, Perthshire; Laxton Hall, etc, Northants; Mons Meg (siege cannon at Edinburgh Castle); furnaces in Hereford; silver punch mark coins from Narhan, India, 600–200 BC; medieval copper trade in Baltic; slag from Gledenholm, Dumfriesshire; bronzes from Todmorden, Yorks. 1974–87 (1 file).
- 142 Typescript reports on metallurgy of various objects from UK and Cyprus; also includes reports on visit to Greek Macedonia (1986); paper by Tylecote on ‘The Historical Metallurgy Society and the history and prehistory of metallurgy in Europe’ (1985); paper on ‘The early history of the iron blast furnace in Europe: a case of east-west contact?’ (Norberg conference, 1985); ‘Early metallurgy in India’ (1984); ‘The evolution of the metallurgy of copper and copper-based alloys’ (1983); ‘The metallurgy of ferrous edge tools’ (1983). 1983–6 (1 file).

**Major publications**

- 143 MS and typescript drafts of *Metallurgy in Archaeology*. [1962] (1 file).
- 144 MS and typescript notes on native metals, including typescript of Chapter I of *Metallurgy in Archaeology*. [1960s] (1 file).
- 145 Typescript draft of Chapter 10 of *Metallurgy in Archaeology*, ‘The charcoal blast furnace and the finery’. [1960s] (1 file).

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- 146 Corrected proofs of *Metallurgy in Archaeology*. [1962] (1 file).
- 147 Indexes to first edition of *Metallurgy in Archaeology*, and papers relating to appendices to second edition. 1962–c1990 (1 file).
- 148 Proofs of figures in *Metallurgy in Archaeology*, with some original photographs for plates. 1962 (1 file).
- 149 Proofs of illustrations from *Metallurgy in Archaeology* and other publications, and original photographs and negatives of items and sites of metallurgical interest. 1960s–1970s (1 file).
- 150 Original artwork by Tylecote for figures in his publications. 1960s–1970s (1 file).
- 151 MS, typescript and proofs of part of *Solid Phase Welding of Metals*, with photographs for plates, and figures. 1968 (1 file).
- 152 Typescript notes by Tylecote relating to his book on welding [*Solid Phase Welding of Metals*]. 1960s (1 file).
- 153 Early typescript draft of *A History of Metallurgy* (from beginning to Chapter 5). 1975 (1 file).
- 154 Typescript drafts of parts of *A History of Metallurgy* (from Chapter 6 to end). [1970s] (1 file).
- 155 Typescript of R F Tylecote and Brian Gilmour, *The Metallography of Early Ferrous Edge Tools and Weapons* (BAR British Series 155 (1980)), with figures and notes relating. 1986 (1 file).
- 156 Typescript of part of Joan Day, *Metals in the Industrial Revolution* – chapter on copper and its alloys, with comments by Tylecote relating. 1989 (1 file).
- 157 Typescript drafts of Tylecote's 'Iron in the Industrial Revolution' [for *The Industrial Revolution in Metals* (1991). c1990 (1 file).
- 158 Typescript drafts of Chapter 11: 'Fuels and their ashes' [for *A History of Metallurgy*, 2nd ed], and section on vitrified building materials, with negatives relating. c1990 (1 file).
- 159 Typescript draft of part of *A History of Metallurgy*, 2nd ed. c1990 (1 file).



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**Conference papers**

- 160 Correspondence and papers of Tylecote concerning attendance at HMS conferences. 1972–89 (1 file).

**General correspondence**

Although predating the formation of the HMS, this correspondence is overwhelmingly concerned with the editing of *Historical Metallurgy*, correspondence with members, society business, etc. The dates of consecutive items frequently overlap.

- 161 Miscellaneous correspondence. 1946–65 (1 file).

162–87 General correspondence:

- 162 1953–4 (1 file).
- 163 1954–6 (1 file).
- 164 1956–9 (1 file).
- 165 1959–60 (1 file).
- 166 1962–5 (1 file).
- 167 1966 May–July (1 file).
- 168 1966–8 (1 file).
- 169 1968 Jan–June (1 file).
- 170 1969 June–Oct (1 file).
- 171–2 1969–70 (2 files).
- 173 1969–71 (1 file).
- 174 1970–1 (1 file).
- 175 1970–3 (1 file).
- 176 1971–3 (1 file).
- 177 1973–4 (1 file).
- 178 1973–4 (1 file).
- 179 1974–5 (1 file).
- 180 1975–6 (1 file).
- 181 1976–7 (1 file).
- 182 1979–86 (1 file).
- 183 1982–3 (1 file).
- 184 1982–4 (1 file).
- 185 1984–5 (1 file).
- 186 1985–6 (1 file).
- 187 1986–90 (1 file).

## SUBJECT FILES

**Metallurgy: general**

- 188 British Non-Ferrous Metals Research Association printed reports on applications of various metals, corrosion, etc. 1928–49 (7 items).
- 189 Paper by J H Andrew, ‘Some causes of breakage of haulage appliances’, printed for meeting of Midland Institute of Mining Engineers. 1934.
- 190 Notes by Tylecote as an undergraduate [at Cambridge] relating to testing of materials, properties of various metals, timber, etc. 1934 (1 vol).
- 191 Equilibrium diagrams for various metals published by the Institute of Metals. 1946–57 (1 file).
- 192 Typescript and MS notes by Tylecote on F Sauerwald, *Physical Chemistry of Sinters*. [1940s].
- 193 Typescript of ‘A note on the plasticity of some oxides’, by Tylecote and C F Wilford. 1959.
- 194 Correspondence and papers of Tylecote concerning edged tools, including reports on many objects, and photograph of Romano-British plough coulter from Newport Pagnell. 1960–86 (1 file).
- 195 Notes for lecture by Tylecote on ‘The archaeology of metal fabrication’, Institute of Welding, North Eastern (Tyneside) branch. 1962 (1 file).
- 196–7 Notes and papers concerning crucibles, including reports by Tylecote and others, and photographs. 1962–76 (1vol, 1 file).
- 198 MS and typed drafts of Tylecote’s ‘Metallurgical crucibles and crucible slags’, with correspondence and papers relating. 1962–80 (1 file).
- 199 Drawings of crucibles, with correspondence and papers relating. 1965–1980s (1 file).
- 200 Typescript and MS notes by Tylecote and others labelled ‘Copper and iron problem lecture’. 1963–76 (1 file).
- 201 Correspondence with the BBC concerning smelting experiments for television. 1964–77 (1 file).
- 202 Notes on metallurgy in time of Tutankhamen, 1361–1352 BC, and lectures on early metals and fabrication techniques, etc. 1967–73 (1 file).
- 203 Copy requests to DOE for approval of archaeological excavations, lists of metal objects and slags, reports by Tylecote and others, maps, plans and drawings, correspondence with excavators, and a few photographs and slides. 1969–77 (1 file).

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- 204 MS notes on solidification of metals. [1960s] (1 file).
- 205 Typescript drafts of various articles by Tylecote and others on iron and copper smelting. 1960s–1970s (1 file).
- 206 Drafts of papers by Tylecote, with correspondence relating to seaborne trade in metals, ingots and other objects found, and conference in Oxford in 1986. 1970–90 (1 file).
- 207 Rough notes on slags from Walsall; Madeley Wood, Blists Hill and Ketley incline sites; objects in Pitt-Rivers Museum; and notes on various printed works. 1971–2 (1 file).
- 208 ‘Pre-Roman file’: reports and papers relating to objects from sites at Winklebury and Huckhoe, Northants. 1973 (1 file).
- 209 ‘Roman file’: typescript reports and correspondence relating to sites at Gestingthorpe, Essex; Brancaster, Norfolk; Chelmsford and Colchester–Sheepen, Essex; Poundbury, Dorset; and Catsgore, Somerset. 1978–80 (1 file).
- 210 ‘Post Roman file’: correspondence and papers relating to sites at Poundbury, Dorset; Thistleton, Rutland; Ware, Herts; West Stow, Suffolk; Holyoak, Leics; and Lymm slitting mill. 1967–82 (1 file).
- 211 Typescript of paper on ‘Some results of the application of metallography to archaeo-metallurgical problems’, for meeting of Royal Microscopical Society. 1978 (1 file).
- 212 Typescript drafts of paper on ‘The casting of metal into moulds’, with papers relating. [1970s] (1 file).
- 213 Small-scale maps of western Europe and British Isles marked with dates of smelting for various metals in prehistory. [1970s] (4 items).
- 214 Plan and section by Tylecote of Filarette’s furnace. [1970s] (1 item).
- 215 Reports and papers, figures and photographs, concerning depictions of bellows, tuyeres and blowpipes in antiquity. 1980, nd (1 file).
- 216 Notes and copies of papers by Tylecote relating to kilns, and corrosion of glass. 1980–5 (1 file).
- 217 Typescript draft of paper by Tylecote on ‘Archaeological finds and their significance’, and correspondence with Nicole Echard (Centre National de la Recherche Scientifique, Paris) relating to their publication. 1982–3 (1 file).
- 218 Papers relating to Third Nordic conference on the Application of Scientific Methods in Archaeology, Mariehamn, Finland, and notes for paper by Tylecote on examination of archaeo-metallurgical material. 1984 (1 file).

- 219 Typescript drafts of paper on archaeo-metallurgical remains for delivery in Finland. 1984–5 (1 file).
- 220–1 Proceedings of symposium on archaeo-metallurgy of copper and iron in western Europe, with notes and papers relating. 1984–5 (1 file).
- 222 Plans, drawings and photographs relating to iron, steel and zinc furnaces and industrial chimneys in Herefordshire, Staffordshire, Sardinia, France and Africa, with figures relating to production, etc. 1980s (1 file).
- 223 Draft of ‘Extraction metallurgy: historical development and evolution of the process’. 1980s (1 file).
- 224 ‘Thoughts on cupolas’: MS notes with photocopies of illustrations from historical works. 1980s (1 file).
- Copper and bronze**
- 225 Correspondence and papers concerning copper smelting at Parys Mountain, Anglesey, Timna, Israel, and Rio Tinto, Spain. 1965–76 (1 file).
- 226 Copper slags and mattes: correspondence with Dr Beno Rothenberg with reports, papers and photographs relating to sites in Israel, Rio Tinto, Spain, and Loughor, Glamorgan. 1973–84 (1 file).
- 227 Typescript of paper by Tylecote and P J Boydell on ‘Experiments on copper smelting based on early furnaces found at Timna’, and papers by Tylecote and others on Rio Tinto. 1975–85 (1 file).
- 228 Photocopy of H A Ghaznavi, ‘Trace element partitioning in early copper smelting’ (MSc dissertation, University of Newcastle, 1976).
- 229–30 Correspondence with Professor H H Coghlan (Newbury Museum) concerning paper on ‘The incidence of arsenical copper in Continental Europe’, with photographs of various bronze objects, and typescript catalogue of prehistoric flat axes, palstaves and socketed axes in museum. 1977–81 (2 files).
- 231 MS of ‘The evolution of the metallurgy of copper and copper-based alloys’, in C Coddet (ed), *Journées de Paléoméallurgie* (University of Compiègne, 1983).
- 232 Typescript of ‘Methods of metal working in the Bronze Age’ [Newcastle Literary & Philosophical Society, 1987].
- 233 Notes for lecture on ‘The production and trade in copper in medieval times’ to Royal Society of Chemistry, Swansea. 1987 (1 file).
- 234 Correspondence and papers relating to lecture on ‘Methods of metal working in the Bronze Age’ to Manchester Literary and Philosophical Society. 1987–8 (1 file).

- 235 Archaeology and Historical Metallurgy of Copper course at Ravello-Massa Marittima: typescript drafts of paper by Tylecote on ‘The prehistory of copper technology’. 1990 (1 file).

**Gold**

- 236 Typescript notes on procedure for assay of gold and silver ores. 1933 (1 file).
- 237 Notes concerning gold, analyses of gold objects, and correspondence and papers relating. 1960s–1978 (1 file).
- 238 Correspondence and papers concerning gold bonding, including article by Tylecote on ‘The solid phase bonding of gold’ for *Gold Bulletin*. 1976–8 (1 file).
- 239 Typescripts of ‘The solid phase bonding of gold’, with correspondence relating. 1986–7 (1 file).

**Iron and steel**

- 240 Typescript report: A Preece, ‘Hydrogenation plant: action of hydrogen and steam on mild steel’ (Gas Research Board, 1944).
- 241 Offprint of A Preece, ‘Sulphide penetration in the carbonization of steel, *Journal of the Iron and Steel Institute*, Nov 1947.
- 242 Notes by Reg Horton on blast furnace theory, etc. 1949, nd (1 vol).
- 243 Typescript of paper by Radomír Pleiner on ‘Experimental smelting of steel in early medieval furnaces’, with photographs and papers relating. 1964–6 (1 file).
- 244 Typescript of ‘Iron smelting in primitive conditions’. 1964 (1 item).
- 245 ‘Early medieval file’: typescript draft of Chapter 8 of *Metallurgy in Archaeology*, and papers on ‘Smelting experiments at Varde, Denmark, 18–20 April 1968’, and on bloomery site at West Runton, Norfolk, with correspondence and papers relating. 1965–8 (1 file).
- 246 Correspondence of G R Morton of Wolverhampton College of Technology concerning his examination of slag samples. 1968–71 (1 file).
- 247 Typescript of ‘original version’ of ‘The mechanism of the bloomery process’ [with J N Austin and A E Wraith]. [1971] (1 file).
- 248 Correspondence and papers concerning paper on ‘The pit-type iron-smelting shaft furnace: its diffusion and parallels’, for symposium at Helga, Stockholm. 1972–3 (1 file).
- 249 Correspondence as examiner of thesis by Judith A Todd on ‘Studies of primitive iron technology’ (University of Cambridge, 1976) (1 file).

- 250 Typescript of paper by Tylecote and J W B Black on 'The effect of hydrogen reduction on the properties of ferrous materials', with correspondence relating. 1978–83 (1 file).
- 251 Drafts of paper on 'Recent British ore analysis and the smelting of pyrite nodules' for symposium on early iron-making in Schleswig-Holstein, with correspondence relating. 1978–80 (1 file).
- 252 Notes for lectures at Oxford and elsewhere on 'The earliest iron'. 1980–5 (1 file).
- 253 Typescript of 'A note on iron-smelting bowl hearths'. [1982] (1 file).
- 254 Typescript of paper on 'The early history of the iron blast furnace in Europe: a case of east-west contact?', for Norberg conference. 1985 (1 file).
- 255 Typescript draft of article by P J Archer and B D Baker on 'Phase changes associated with the hydrogen reduction conservation process for ferrous artefacts', with correspondence relating. 1986 (1 file).
- 256 Photocopy of report by J R L Allen, 'An experimental model for some microscopic iron smelting of residues' (Department of Geology, Reading). [1980s] (1 item).

**Lead**

- 257 Correspondence, notes, and reports by Tylecote and others on the lead industry, and lead working and smelting in Britain from the Roman period to the Industrial Revolution; includes drafts of relevant sections of *Metallurgy in Archaeology*, papers on 'Roman lead working in Britain' and 'Lead smelting and refining in the Industrial Revolution 1700–1850', and MS notes on composition of lead slags. 1961–81 (1 file).
- 258 Dissertation by M C Gill on 'An assessment of lead smelting processes and the use of X-ray fluorescence for the analysis of the resulting slags' (University of Bradford, final year project in Archaeological Sciences). 1985 (1 file).
- 259–60 Notes for lecture on lead in the north of England and Scotland for HMS Cumbria conference, with papers relating. 1984–5 (2 files).
- 261 Correspondence and papers relating to conference at the Grosvenor Museum, Chester, on 'The use of metallurgy in archaeology', and lecture by Tylecote on 'Lead from antiquity to the Industrial Revolution'. 1985 (1 file).

**Tin**

- 262 Correspondence and papers concerning tinning experiments and tin sweat. 1972–3 (1 file).
- 263 Correspondence and papers concerning tin smelting and ingots, including drawings of objects, reports on various tin-working sites, correspondence on tin slags, some photographs, and copy of MS of 1586 relating to tin working. 1989–90 (1 file).

**Welding**

- 264 Papers and photographs relating to research on resistance welding at Joseph Lucas Research Laboratories. 1939–44 (1 file).
- 265 Typescript of paper by Tylecote on ‘The weldability of steels’. [1940s] (1 file).
- 266 Typescript of paper by Tylecote on ‘The copper brazing of steel components’. [1940s] (1 file).
- 267 Typescript of paper by Tylecote on ‘Recent developments in flash and butt welding’, with papers relating. [1940s] (1 file).
- 268 Papers and photographs concerning research on cold pressure welding. 1950–2 (1 file).
- 269 Typescript of paper by Tylecote on ‘New developments in arc welding’. [1950s] (1 file).
- 270 Typescript of paper by Tylecote on ‘The development of aluminium welding’, to be read to Institute of Welding, North Eastern (Tyneside) branch. 1958 (1 file).

**Corrosion**

- 271 Correspondence, papers and photographs concerning corrosion and fakes, including reports on suspect objects. 1960–87 (1 file).
- 272 Paper by Tylecote for British Nuclear Fuels Ltd (BNFL) on ‘The behaviour of lead as a corrosion resistant medium undersea and in soils’, with correspondence relating. 1976–83 (1 file).
- 273 Correspondence and papers concerning study by Tylecote for BNFL on longevity of various metals in sea water, with a view to BNFL designing a package to last several hundred years. 1976–86 (1 file).
- 274 Typescript draft of Tylecote’s paper on ‘The effect of soil conditions on the long-term corrosion of buried tin-bronzes and copper, Part II’, with correspondence and papers relating. 1977–80 (1 file).
- 275 Typescript draft of paper by Tylecote and R E Clough on ‘The corrosion of glass. II The examination of glass and slag from archaeological sites and wrecks’. [1970s] (1 file).
- 276 Copies of papers by Tylecote and others relating to corrosion of objects in sea water. [1970s–1980s] (1 file).
- 277 Drafts of paper by Tylecote on long-term corrosion of steel and cast iron under marine conditions and on land. [1970s] (1 file).
- 278 Typescript of report by Tylecote for BNFL on ‘Elevated temperature corrosion of steel and iron with and without protection by concrete and bentonite’. 1980 (4 items).

- 279 Photocopy of report by Tylecote on ‘The behaviour of lead as a corrosion resistant medium undersea and in soils’ (Department of Archaeology, University of London, 1980).
- 280 Correspondence and papers concerning Central Electricity Generating Board (CEGB) grant for research by Tylecote on long-term survival of metal and glass artefacts, and paper written jointly with Dr J E Harris of CEGB, Berkeley Nuclear Research Laboratories. 1980–4 (1 file).
- 281 Typescripts of various papers by Tylecote on corrosion of steel, cast iron and glass for CEGB, and archaeological sites and finds in UK and overseas. 1980–2 (1 file).
- 282 Typescript drafts of paper for CEGB by Tylecote and R E Clough on ‘The corrosion of glass’, with correspondence and papers relating. 1980–6 (1 file).
- 283 Correspondence and papers concerning proposals for work with CEGB support at University of London, Institute of Archaeology, on deterioration of materials. 1982–4 (1 file).
- 284 Notes for lecture on corrosion of lead and pewter at the Royal Armouries, Tower of London. 1986 (1 file).
- 285 MS notes by Tylecote on research on corrosion for CEGB under marine conditions and on land. [1980s] (1 file).

**Early mining tools**

- 286 Notes, copies of illustrations, and some photographs, concerning stone mauls, hammer stones and mortars. [1970s] (1 file).

**Notable men**

- 287 Gabriel Jars (1732–69): notes by Tylecote on G M Jars and his *Voyages Métallurgiques* (Lyons, 1781), with photographs and photocopies of plates. [1970s] (1 file).
- 288 Henry Cort (1740–1800): correspondence, papers, photographs and diagrams for lecture by Tylecote on ‘the great finer’. 1980–3 (1 file).
- 289 John Percy (1817–89): correspondence and papers concerning reprint of Percy’s *Metallurgy* (1864). 1983–4 (1 file).

**Trade brochures**

- 290 Brochure on Foster Optical and Radiation Pyrometers (Foster Instrument Co, Letchworth, Herts). [1930s].
- 291 Printed reports relating to Gas Research Fellowships of Institution of Gas Engineers. 1934–5, 1936–8 (3 items).
- 292 Brochure on Wilco-Wiggin thermometals (Henry Wiggin & Co Ltd, Birmingham). [1970s].



**Motor car**

- 293 Correspondence and brochures concerning wartime gas producers for cars and other vehicles, with notes by Tylecote relating. 1940–1 (1 file).

**SITE FILES – UK**

**England: Cleveland**

- 294 Ironstone: MS of review [not by Tylecote] of J S Owen, *Cleveland Ironstone Mining* (1986) (1 item).

**Cumberland/Lake District**

- 295 Ironmaking: notes for lecture on early ironmaking in the Lake District, and ‘History of Metallurgy in Cumbria’ for Cumberland and Westmorland Antiquarian and Archaeological Society. 1967–77 (1 file).
- 296 Seaton iron foundry, Whitehaven: copy plans, elevations and sections (from Cumberland Record Office, D/Lons). 1828 (2 items).
- 297 Muncaster Head, Cumberland: report, correspondence, etc relating to 17th-century bloomery, including plan. 1963–8 (1 file).
- 298 Rough plans of excavations at Muncaster Head bloomery. 1967 (1 bdle).

**Derbyshire**

- 299 Melbourne furnace: contoured maps and detailed plans and sections. 1963 (7 items).

**Devon and Cornwall**

- 300–1 Tin: correspondence, papers and photographs concerning tin and tin smelting in Devon and Cornwall. 1964–84 (1 file).
- 302 Calenick furnace: plans and elevations by Tylecote of works, furnace, wheelpit, etc, at Calenick, Cornwall. 1977 (7 items).
- 303 East Cornwall Lead-Silver smelter: drafts of papers by Tylecote and Bryan Earl relating to smelter at Wheal Langford, Callington, Cornwall, with correspondence relating. 1982–8 (1 file).
- 304 Bell and cauldron founding: notes for lecture on bell and cauldron founding in the south west, for HMS Devon conference. 1986 (1 file).
- 305 Tin slags: typescript draft of article by Tylecote, E Photos and Bryan Earl on ‘The composition of tin slags from the south-west of England’, with correspondence relating. 1988–9 (1 file).

**Dorset**

- 306 Gussage All Saints foundry: reports, correspondence and papers relating to Iron Age bronze foundry at Gussage All Saints, Dorset. 1973–5 (1 file).

- 307 'Roman II': papers by Tylecote relating to Roman and medieval ironwork from Poundbury, Dorset. 1979–85 (1 file).

**Durham**

- 308 Iron and steel: typescript paper by Tylecote on 'Weardale iron and steel making, 1876–95'. [1980s] (1 file).
- 309 Gilmonby hoard: paper by Tylecote and D Coggins on 'A hoard of late Bronze Age metalwork from Gilmonby, near Bowes, Co Durham' (Bowes Museum, 1983), with MS and typescript drafts by Tylecote, and photographs. 1982–3 (1 file).

**Essex**

- 310 Rook Hall: typescript report on 'Late Bronze Age ingots from Rook Hall, Little Totham, Essex', with correspondence, papers and photographs relating. 1986–8 (1 file).
- 311 Correspondence and papers relating to Rook Hall site, and bronze lions' heads from Tell 'Ubaid, Mesopotamia. 1986–8 (1 file).

**Gloucestershire**

- 312 Whitecliff blast furnace: drawing (by RJC) of remains of Whitecliff blast furnace, Coleford, Glos. 1965.

**Hampshire**

- 313 Winchester: correspondence and papers concerning reports by Tylecote on metal objects from excavations. 1971–85 (1 file).
- 314–19 Winchester: reports, papers, drawings and photographs relating to excavations. 1972–5 (6 files).

**Kent and the Weald**

- 320 Chingley forge: reports and photographs concerning metal artefacts, with correspondence and papers relating. 1971–4 (1 file).
- 321 Iron smelting: typescript drafts of paper by Tylecote and Roger Adams on 'Recent experiments in iron smelting in the Weald' for a one-day conference at the Tower of London (1988). 1986–8 (1 file).

**Lincolnshire**

- 322 Dragonby: 'Preliminary report on excavations at the Iron Age and Romano-British site at Dragonby, near Scunthorpe, Lincolnshire' (University of Nottingham, 1964).
- 323 Stamford: microfiche from monograph on excavations at Stamford (Society for Medieval Archaeology, Monograph No 9). 1982.

**Norfolk**

- 324 Caistor-by-Norwich: correspondence and papers relating to metallurgical material from Roman site. 1961–9 (1 file).

325–6 West Runton: notes and sketch plan by Tylecote relating to excavation of Roman furnace, with surveying notebook. 1964 (2 vols). [See also 109].

327 Beeston Regis: Ordnance Survey 25-inch sheet Norfolk XI.9 (1928), with pencilled annotations relating to excavation [?of leach pits] at Beeston Regis.

328 Beeston Regis: Ordnance Survey 1:10,560 or 6-inch sheet TG14SE (1957) with pencilled annotations relating to excavations on Beeston Regis Heath, and geology of coast near West Runton.

#### **Northamptonshire**

329 Wakerley furnace: copy plans and sections of Wakerley furnace and kilns by Ancient Monuments Laboratory, Department of the Environment. 1973–5 (6 items).

#### **Northumberland**

330 Ordnance Survey 1:25,000 or 2½-inch sheets NZ08, 09, 18 and 19. 1958–60 (4 items).

331 Iron furnaces: plans and elevations by Tylecote of Birtley, Lemington and Wylam furnaces, with location map showing these and other numbered furnaces. [1960s] (9 items).

#### **Shropshire**

332 Bedlam furnace: plan and elevation by David Beattie. 1973 (3 items).

#### **Surrey**

333 Egham: correspondence and papers relating to bronze hoard from Petter's sportsfield, with typescript papers relating. 1980–3 (1 file).

#### **Sussex**

334 Broadfield furnace: reconstruction plans and elevations of different types of smelting furnaces, Broadfield types A–E (Ashwicken after Tylecote). [1970s] (6 items).

#### **Wiltshire**

335 Wanborough: drawing by Tylecote of knives, sickles, saw, axe, etc. 1982 (1 item).

336 Wanborough: reports and correspondence relating to slags and furnace material. 1969–83 (1 file).

#### **Worcestershire**

337 Tinsplate industry: typescript drafts of paper by P W King relating to Wolverley Lower Mill and the beginnings of the tinsplate industry. [1980s] (1 file).

#### **Wales: general**

338 Bronze Age metalwork: typescript of monograph by Peter Northover on Welsh Bronze Age metalwork, with notes and correspondence of Tylecote relating. 1981 (1 file).

**Glamorgan**

- 339 Loughor: typescript of paper by A P Greenough, 'An examination of Roman iron-making residues from Loughor'. [1970s].

**SUBJECT FILES – OVERSEAS**

**Africa**

- 340 Iron tools: notes, correspondence, drawings for figures, etc, including typed drafts of papers on 'African axes – modern', 'Half-bloom from Uganda', and 'Hoe from West Nile Province, Uganda'. 1964–72 (1 file).
- 341 Early metallurgy: typescript drafts of 'Early metallurgy in West Africa'. [1980s] (1 file).
- 342 Jenne-Jeno, Mali: typescript reports on metallurgical material, with correspondence relating . 1981–2 (1 file).
- 343 Nigeria: road map, geological map, and maps showing industries, domestic trade, and tribal areas. 1949–67 (4 items).
- 344 Nigeria: notes and papers for Newcastle lecture on early ironmaking. 1967–87 (1 file).

**America**

- 345 Copper-smelting experiments: correspondence with Heather Lechtman, Director of the Center for Materials Research in Archaeology and Ethnology, Massachusetts Institute of Technology, concerning smelting experiments, Tylecote's visit to USA, and his paper on 'Some experiments in early Andean metallurgy'. 1980–4 (1 file).
- 346 Copper smelting experiments: correspondence with Heather Lechtman concerning experiments in smelting of copper ores, etc. 1984–5 (1 file).
- 347 Copper ingots: letter from Dr Ronald D Crozier, consulting engineer, of Ridgefield, CT, USA, to Tylecote relating to copper ingots from shipwreck sourced from Chile in 1786. 1988.

**Austria**

- 348 Copper smelting: typescript of paper by Tylecote, with correspondence and papers relating. 1980–4 (1 file).

**China**

- 349 Third International Conference of Chinese Science, Beijing: report by Tylecote. 1984.

**Crete**

- 350 Crete: notes by Tylecote on history of island, analyses of bronzes, etc; refers also to Mesopotamia and Iberia. [1960–1970s] (1 file).

- 351 Kephala: 35mm colour slides of site and objects. [1960s–1970s] (5 items).
- 352 Copper and bronze: corrected proofs of Keith Branigan, *Copper and Bronze Working in Early Bronze Age Crete* (Lund, 1968), with letter from Tylecote to Branigan relating. 1968–9 (1 vol).

**Cyprus**

- 353 Copper smelting: correspondence and papers concerning copper smelting site in Cyprus, visits, and symposium in 1981 on ‘Early metallurgy in Cyprus 4000–500 BC’. 1973–81 (1 file).
- 354 Phaneromini: correspondence and reports by Tylecote on metal objects from Phaneromeni submitted to him by Stuart Swing, and paper by Tylecote on ‘Copper and bronze metallurgy at Enkomi and Kition [Cyprus]’, for 1981 symposium. 1971–81 (1 file).
- 355 Conference on early metallurgy in Cyprus, 4000–500 BC: papers of Tylecote relating, including typescript report on conference. 1981 (1 file).
- 356 Cyprus: correspondence and papers relating to seminar on Chalcolithic Cyprus and Western Asia in the British Museum, with drafts of papers by Tylecote relating. 1979 (1 file).
- 357 Conference on early metallurgy in Cyprus, 4000–500 BC: typescript drafts by Tylecote for symposium. 1988 (1 file).
- 358 Enkomi, Apliki and Ambelikou: drawings and sections of pipes. [1980s] (1 item).

**France**

- 359 Tin ingots: correspondence and publications concerning wreck off Bagoud island carrying tin ingots, and wreck off Brittany at Ploumanac’h. 1987 (1 file).
- 360 Tin ingots: photographs of Ploumanac’h ingots. [1987] (14 items).
- 361 Mines and foundries: papers concerning symposium, ‘Mines et fonderies antiques de la Gaule’, at University of Toulouse–Le Mirail, with correspondence and papers relating. 1980 (1 file).

**Germany**

- 362 International Symposium on Old World Archaeometallurgy, Max Planck Institute, Heidelberg: programme for excursion to Mitterberg. 1987 (1 file).

**Greece**

- 363–4 Agrileza: reports on fieldwork at silver-lead mine site at Agrileza, analysis of slags from Laurium, and correspondence with John Ellis Jones (University College of North Wales, Bangor) and others. 1978–88 (2 files).
- 365 Notes for and summary of Tylecote’s paper on ‘Iron and precious metal extraction in eastern Macedonia’ for International Conference on Old World

Archaeometallurgy, Heidelberg; and typescript of paper by George Rapp Jr on 'Determining the origins of sulphide smelting'. 1987 (1 file).

**India**

- 366 Early metallurgy: notes, papers, photographs and publications relating to visit to India, and MS and typescript drafts of 'Early metallurgy in India'. 1983–4 (1 file).
- 367 Early metallurgy: photocopy of 'Early metallurgy in India', *The Metallurgist and Materials Technologist* (July 1984).

**Israel and Sinai**

- 368 Arabah Expedition: correspondence of Tylecote, mostly with Dr Beno Rothenberg of Tel Aviv University, concerning expedition, Timna mines and early smelting sites in Israel and Sinai. 1963–75 (1 file).
- 369 Early metal-working in Israel and Sinai: correspondence, reports and papers, and lecture on Timna and other mines. 1966–79 (1 file).
- 370 Timna, Israel: correspondence and papers relating to copper smelting, including papers concerning creation of Institute for Archaeo-Metallurgical Studies. 1973–7 (1 file).
- 371 Early copper metallurgy: typescript of papers by Tylecote and others on 'Early copper metallurgy in the Sinai Peninsula'; and by H G Bachmann (in German) on Timna site 30, with photographs relating. 1974–5 (2 items).
- 372 Copper smelting experiments: typescript draft of P J Boydell and Tylecote, 'Experiments on copper smelting based on early furnaces found in southern Palestine'. 1975 (1 file).

**Italy, Sardinia and Sicily**

- 373 Sardinia: photocopy of offprint of 'Ancient copper and bronze in Sardinia: excavation and analysis' [with Miriam S Balmuth], *Journal of Field Archaeology*, 3 (1976).
- 374 Sicily: correspondence and papers of Tylecote with report on examination of nails and nail corrosion from Punic ship excavated at Marsala, Sicily. 1976–80 (1 file).
- 375 Sardinia: typescript reports by Tylecote on copper and bronze metallurgy. 1980 (1 file).
- 376 Italy 1983: correspondence, reports and papers relating to 18th–19th c *ferriera* at Pescia Fiorentina (Capalbio, Tuscany), photographs and negatives of iron slags from Elba, and slag analyses. 1983–6 (1 file).
- 377 Sardinia: notes and papers relating to Sardinian metallurgy, use of stone moulds, etc. 1983–6 (1 file).
- 378 Sardinia 1986: correspondence and papers relating; to International Colloquium on Sardinian Archaeology, and paper by Tylecote. 1986 (1 file).

379 Sardinia: draft typescript of paper by C Atzeni and others, 'Notes on lead metallurgy in Sardinia during the Nuragic period'. c1988 (1 file).

380 Sardinia: typescript of C Atzeni and others (University of Cagliari, Italy), 'Chemical and metallographic study of "Sardo-Phoenician" idols'. [1980s] (1 file).

**Japan**

381 Early metallurgy: papers by Kurao Kubota on Japanese bronze culture, and ancient iron slag in Japan, with correspondence of Tylecote relating. 1980 (1 file).

**Slovakia**

382 Early iron: typescript draft of article by Ludomir Mihok, 'The study of early iron production in Spiš [Slovakia]', with correspondence relating. 1986 (1 file).

**Spain**

383 Rio Tinto: correspondence of Tylecote with Maurice J Cahalan, notes and papers concerning editing of notes of Leonard Salkield on the Rio Tinto mines; includes copy correspondence of John C Allan with H H Coghlan of Newbury Museum relating, 1963. 1963, 1986 (1 file).

384 Rio Tinto: correspondence of Tylecote with John Philip Hunt and Leonard Salkield, reports and papers concerning Tejada and Rio Tinto, and smelting experiments; and photographs of coins, etc. 1972–7 (1 file).

385 Rio Tinto: overhead slides of table relating to analysis of minerals from oxidation zone at Rio Tinto. [1980s] (1 file).

**Sudan**

386 Meroë iron-smelting site: draft paper by Tylecote and correspondence relating to iron site excavated at Meroë, Sudan. 1969–76 (1 file).

387 Meroitic iron furnace: reconstruction drawing, and sketch plan of excavated furnace. [1970s] (1 item).

388 Meroë: correspondence and papers relating to lecture given by Tylecote. 1975–7 (1 file).

389 Meroë: correspondence, papers, plans and drawings relating to prehistoric iron-smelting site. 1975–7 (1 file).

390 Meroë: typescript of paper on 'Metal working at Meroë', by Tylecote, and papers concerning conference in Toronto (1977) on Meroitic iron working, with correspondence and papers relating. 1977–9 (1 file).

391 Meroë and Taruga: plans and sections by Tylecote of furnaces and tuyere sherds. [1970s] (11 items).

**Sweden**

- 392 Steel metallurgy: offprints of articles in Swedish by Sten Modin and Erik Tholander on aspects of steel metallurgy. 1960–7 (3 items).
- 393 Blast furnaces: correspondence and papers of Tylecote relating to blast furnaces in Sweden, and symposium on Medieval Iron in Society in Norberg. 1984–5 (1 file).

**Syria**

- 394 Head of Titus: correspondence and papers concerning metallurgical examination by Tylecote of a head of Titus said to have been found at Ras Shamra (Ugarit), and figure from Drakji, Phoenicia. 1987 (1 file).

**Tunisia (Carthage)**

- 395 Objects from Carthage: report by Henry Unglik, ‘Copper alloy objects, iron objects and slag from Carthage, fifth to seventh centuries AD: a metallurgical study’ (Parks Canada, Ottawa, 1986).

**Turkey**

- 396 National Geographic Society Pyrotechnical Expedition to Afghanistan, Iran and Turkey: reports by Tylecote, Radomír Pleiner and others. 1966–8 (1 file).
- 397–9 Expedition to Turkey: correspondence with Theodore A Wertime (US Embassy, Athens), reports, notes and papers concerning expedition ‘on the metallurgical trail of Homer and Strabo in Turkey’, funded by the National Geographic Society, to which Tylecote acted as advisor on metallurgical problems. 1968–74 (3 files).
- 400 Turkey 1986: correspondence, reports and offprints relating to Tylecote’s visit to lecture and inspect archaeological sites, including correspondence with British Council, papers concerning travel arrangements, and report on slag analyses from Wertime. 1973–86 (1 file).
- 401 Bronze Age mining: notes, papers and copy correspondence relating to research of Dr Aslihan Yener (Metropolitan Museum of Art, New York), on mining for silver and tin in Taurus Mountains of Turkey during Bronze Age. 1985–6 (1 file).

**PHOTOGRAPHS**

Tylecote’s collection of photographs of metallurgical and archaeological interest. Most are not by him, but were sent to him, and many are unidentified and undated.

- 402 Photographs including Ancaster excavations, 1961; Martinhoe ‘with Lady Fox’s compliments’; Bersham furnace, 1988; Melbourne furnace, 1963; Ridsdale engine house; Maryport furnace, 1959; [?Barksdale] furnace; Derwentcote furnace; Coed Ithel furnace; Catterick beam; [?Hugpit] Wood excavation; Glaisdale bloomery; Caerwent Roman hearth and workshops. 1959–88 (1 file).
- 403 Photographs: ‘Oxidation, P[ressure] Weld[ing], Arch[aeology]’; include micro-photographs of welds, and oxidation of various metals; objects from Jos, Nigeria; West Runton slags, 1964; bell-casting site, Winchester, 1964; furnace at



- Withyham, Kent, 1964; Coed Ithel furnace, 1964; Rockley furnace, 1962; Rievaulx ‘probable site’; the iron bridge, Ironbridge; Coalbrookdale, 1962 – Darby blast furnaces; Plas Madoc [Denbs]; Duddon furnace, including sketches ‘ex Morton’; Belfast cauldron, 1963; Gunns Hill furnace, 1947, 1964; coin moulds from Old Sleaford, Lincs; Sutton Walls anvil; Weldon cinders; and typescript reports on steel springs and stripping hooks, with photographs relating, 1971. 1962–71 (1 file).
- 404 Photographs: ‘Archaeology III’; includes Cawthorne furnace, 1962; Whitecliff, Glos; Agrileza; Bury awl; Kempsford axe; head of Titus; Capalbio cast iron; Dunford hook; slag photographs, 1986; Hala Sultan Tekke [Cyprus] copper slag; Rio Tinto; wrought iron and carbon steel bars; Greek objects; Pickworth quarry; Indian ingots and cinders; Beckford; micro-photographs of blooms; Stony Hazel hammer scale; Weston Wood; Carthage nail; Kaminia, Cyprus, knife; Glaisdale; Silchester Roman blade; Melbourne furnace, 1963; Ashwicken-type furnace erected for field trials; experimental castings of rapier; copper-lead alloy ingot from Villanovaforru, Sardinia; Beeston Castle magnetic material, 1981; Harlik dagger. 1962–86 (1 file).
- 405 ‘Photos II: Arch[aeological] only’: photographs and micro-photographs of early metal objects; etc, with some related reports and documents; includes Belfast cauldrons, 1963; Timna site; Bronze Age spearhead from River Tyne at Blaydon; copper ingot from Gillan, Cornwall; Hasmonian coin; Kyrenia nail; iron from Chingley, Kent; experimental furnace for BBC, 1964; M[uncaster] H[ead], 1967–8; Wylam blast furnace. 1963–74 (1 file).
- 406 Photographs (most of them not by Tylecote) of sites and objects, and slag, some unidentified; some are intended for publication, or are from existing publications; include items for *History of Metallurgy*; photographs of plates from historical works; Weardale fake axe; adit and remains of smelting, Porthcothan [Cornwall] beach, 1970; various smelting experiments; and statues in Venice. 1960s–1970s (1 box).
- 407 Photographs as 406 above; includes ‘Hereford [?Sutton Walls] anvil’; Darkhill ironworks site; Rosedale ironworks; Ashwicken ironworks; furnace at Ba-Ushi, Northern Rhodesia [Zambia]; objects from Jos, Nigeria; Stanton Low iron anvil; Roman beams and anvils; Indian bloomery working; Derwentcote furnace; Kenyan iron workers; slag block and tuyeres in Jordan; Netherne forge; Rockley furnace; and Rothbury bloomery. 1960s–1970s (1 file).
- 408 Photographs and photocopies of illustrations from historical works and documents on metallurgy, with sketches and papers relating. 1960s–1970s (1 file).
- 409 Photographs and negatives (some glass) of furnaces, slags and objects, many unidentified; includes Meroë; Hereford furnaces; Sinai; Rosedale West medieval ironworks; Crete; Ponsonby sword; Indonesian bronze figures; Letchworth dagger; Chinese bronze sword; Sardinia; and Winchester. 1960s–1970s (1 box).