Bibliography

Alonso, G., Stefanescu, D. M., Suárez, R., Loizaga, A., & Zarrabeitia, G. (2014). Kinetics of graphite expansion during eutectic solidification of cast iron. *International Journal of Cast Metals Research, 27*(2), 87–100.

Alonso, G., Stefanescu, D. M., Larrañaga, P., & Suárez, R. (2016). Understanding compacted graphite iron solidification through interrupted solidification experiments. *International Journal of Cast Metals Research, 29*(1–2), 2–11.

Andersson, J. O. (1988). A thermodynamic evaluation of the Fe-Cr-C system. *Metallurgical Transactions A, 19*(3), 627–636.

Angus, H. T. (1976). *Cast iron*. London: Butterworths.

Apraiz, J. (1971). *Fundiciones*. Madrid: Dossat.

Arias-Paz, M. (1965). *Manual de Automóviles* (33 edición). Madrid: Editorial Dossat S. A.

Asensio, J., Álvarez, J. F., & Vander Voort, G. F. (2008). Microstructural control of FeB-inoculated mottled low-alloy White iron by a design of experiments approach. *International Journal of Materials Research, 99*(11), 1237–1247 (formerly Z. Metallkd.).

Askeland, D. R. (1999). *Ciencia e Ingeniería de los Materiales* (3rd ed.). México: S. A. Ediciones Paraninfo.

ASM (1978). *ASM metals handbook* (9th ed., Vol. 1). Ohio: American Society for Metals.

ASTM, *Annual Book of ASTM Standards*, Parts 2 and 3, American Society for Testing Materials.

Ballester, A., Verdeja, L. F., & Sancho, J. (2000). *Metalurgia Extractiva. Fundamentos,* Volumen 1, Madrid: Síntesis.

Barr, R. Q. (Ed.). (1974). *Materials for mining industry*. Greenwich, CT: Climax Molybdenum Co.

Basak, A., Penning, J., & Dilewijns, J. (1989). Effect of heat treatment on wear resistance and impact strength of high chromium white cast iron. *Cast Metals, 2*(1), 20–22.

Basdogan, M. F., Kondic, V., & Bennet, G. H. J. (1982). Graphite morphologies in cast iron. *Transactions of the American Foundrymen's Society, 90,* 263–273.

Bates, C. E. (1986). Alloy elements effects on gray iron properties. *Transactions of the American Foundrymen's Society, 94,* 889–905.

Birchenall, C. E., & Mead, H. W. (1956). Growth of graphite in cast iron. *JOM, 8*(8), 1004–1008.

Blackmore, P. A., & Harding, R. A. (1984). The effects of metallurgical process variables on the properties of austempered ductile irons. *Journal of Heat Treating, 3*(4), 310–325.

Boeri, R., & Sikora, J. (2001). Solidification macrostructure of spheroidal graphite cast iron. *International Journal of Cast Metals Research, 13*(5), 307–313.

Bradley, W. L., & Srinivasan, M. N. (1990). Fracture and fracture toughness of cast irons. *International Materials Reviews, 35*(1), 129–161.

Brady, G. S., & Clauser, H. R. (1986). *Materials handbook* (12th ed.). New York: McGraw Hill.

J. A. Pero-Sanz Elorz et al., *Physical Metallurgy of Cast Irons*,
https://doi.org/10.1007/978-3-319-97313-5

Butts, A. (1943). *Metallurgical problems* (2nd ed.). New York: McGraw-Hill Book Company Inc.
Caine, J. B. (1949). Risering castings. *Transactions of the American Foundrymen's Society, 57,* 66–75.
Callister, W. D. (1995). *Introducción a la Ciencia e Ingeniería de los Materiales* (Vols. 1 and 2). Barcelona: Reverté.
Charles, J., & Crane, F. (1989). *Selection and use of engineering materials*. London: Butterworths.
Chisamera, M., Riposan, I., Stan, S., White, D., & Grasmo, G. (2008). Graphite nucleation control in grey cast iron. *International Journal of Cast Metals Research, 21*(1–4), 39–44.
Cox, G. J. (1992). Controlled cooling transformation diagrams for Ni-Hard alloy white cast irons. *Cast Metals, 5*(1), 35–38.
De Sy, A., & Vidts, J. (1968). *Traité Métallurgie Structurale Theorique et Appliquée*. Paris: Dunod.
Dieter, G. E. (1981). *Mechanical metallurgy* (2nd ed.). Tokyo: McGraw Hill International Book Company.
Duart-Blay, J. M., Pero-Sanz, J. A., & Verdeja, L. F. (2004). Aceros aluminotérmicos. Nuevas aplicaciones*, Revista de Metalurgia de Madrid, 40,* 56–64.
Elmquist, L., Salera, S., & Diószegi, A. (2010). Inoculation and its effect on primary solidification structure of hypoeutectic grey cast iron. *International Journal of Cast Metals Research, 23*(2), 124–129.
Elmquist, L., & Diószegi, A. (2010). Shrinkage porosity and its relation to solidification structure of grey cast iron parts. *International Journal of Cast Metals Research, 23*(1), 44–50.
Flemings, M. C. (1974). *Solidification processing*. New York: McGraw-Hill.
Flinn, R. A., & Kraft, R. W. (1951). Importance of slag control in basic cupola operation. *Transactions of the American Foundrymen's Society, 59,* 323–329.
Flinn, R. A. (1963). *Fundamentals of metal casting*. Reading, MA: Addison-Wesley Publishing Company Inc.
Forgeng, W. D., & Forgeng, Jr. W. D. (1973). C-Cr-Fe (carbon-chromium-iron). In T. Lyman (Ed.), *Metals Handbook* (Vol. 8, pp. 402–404). Ohio: American Society for Metals.
Fundyser S. A. (2017). Gijón/Xixón, Asturias, España: Private Communication.
Gagné, M., & Fallon, P. A. (1986). Microstructural characteristics of bainitic ductile irons. *Canadian Metallurgical Quarterly: The Canadian Journal of Metallurgy and Materials Science, 25*(1), 79–90.
George Laird, I., & Dogan, O. N. (1996). Solidification structure versus hardness and impact toughness in high-chromium white cast irons. *International Journal of Cast Metals Research, 9* (2), 83–102.
Greene, R. J., & Sefing, F. G. (1955). Cast irons in high temperature service. *Corrosion, 11*(7), 43–49.
Gruszczyk, A. (2013). New possibilities for welding and surfacing of grey iron. *Welding International, 27*(12), 915–919.
Habibohall Zadeh, A., & Campbell, J. (2004). Fluidity of eutectic grey iron in thin sections. *International Journal of Cast Metals Research, 17*(4), 201–205.
Hosford, W. F. (2005). *Physical metallurgy* (1st ed.). Boca Raton, FL: CRC Press, Taylor and Francis Group.
Iranor (1980). *Manual de Normas UNE sobre Siderurgia,* Madrid.
Janowak, J. F., & Gundlach, R. B. (1985). Approaching austempered ductile iron properties by controlled cooling in the foundry. *Journal of Heat Treating, 4*(1), 25–31.
Jenkins, L. (1984). Ductile iron—An engineering asset*. Proceedings of the First International Conference on Austempered Ductile Iron: Your Means to Improved Performance, Productivity, and Cost, American Society for Metals*.
Jenkins, L. R., & Forrest, R. D. (1990). *Ductile iron*, *properties and selection: Irons, steels, and high-performance alloys.* ASM Handbook (10th ed., Vol. 1). ASM International.
Karantzalis, E., Lekatou, A., & Mavros, H. (2009). Microstructure and properties of high chromium cast irons: Effect of heat treatments and alloying additions. *International Journal of Cast Metals Research, 22*(6), 448–456.

Kubaschewski, O. (1982). *Iron-binary phase diagrams*. Berlin: Springer.
Labrecque, C., & Gagné, M. (1998). Ductile iron: Fifty years of continuous development. *Canadian Metallurgical Quarterly: The Canadian Journal of Metallurgy and Materials Science, 37*(5), 343–378.
Lacaze, J., & Sertucha, J. (2016). Effect of Cu, Mn and Sn on pearlite growth kinetics in as-cast ductile irons. *International Journal of Cast Metals Research, 29*(1–2), 74–78.
Lacombe, P., Baroux, B., & Béranger, G. (1990). *Les Aciers Inoxydables*. Paris: EDP Sciences.
Laplanche, H. (1975). *Les Fontes et leurs Traitements Thermiques*. Paris: PYC-Edition-Desforges.
Loper, C. R., & Heine, R. W. (1962). Graphite formation during solidification of cast iron. *Transactions of the American Foundrymen's Society, 70,* 583–600.
Maco Robles, A. L. (1995). *La austenita retenida como función de las condiciones de austemperizado de una fundición ADI*, Postgraduate Research Project. University of Oviedo, Department of Materials Science and Metallurgical Engineering. Director: Gonzalo Fernández Cabal.
Mallia, J., & Grech, M. (1997). Effect of silicon content on impact properties of austempered ductile iron. *Materials Science and Technology, 13*(5), 408–414.
Manso de las Moras. (1987). *Fundiciones*. ONUDI: Private Communication.
Maratray, F., & Usseglio-Nanot, R. (1970). *Atlas, transformation characteristics of chromium and chromium-molybdenum white irons.* Paris: Climax Molybdenum S. A.
Massalski, T. (1986). *Binary alloy phase diagrams* (Vols. 1 and 2). American Society for Metals.
McArdle, G. D. (1980). *Continuous cooling transformation diagrams for ductile irons*. Greenwich, CT: Climax Molybdenum Co.
McSwain, R. H., Bates, C. E., & Scott, W. D. (1974). Iron-graphite surface phenomena and their effects on iron solidification. *Transactions of the American Foundrymen's Society, 82,* 85–94.
Metals Handbook (1990). *1st volume: Properties and selection—Irons, steels, and high-performance alloys* (10th ed.). ASM International.
Metals Handbook (1988). *15th volume: Casting* (9th ed.). ASM International (Stefanescu).
Murr, L. (1984). *Industrial materials science and engineering*. New York: Marcel Dekker Inc.
Ohnaka, I., Sato, A., Sugiyama, A., & Kinoshita, F. (2008). Mechanism and estimation of porosity defects in ductile cast iron. *International Journal of Cast Metals Research, 21*(1–4), 11–16.
Owen, W. S., & Street, B. G. (1951). The crystal structure of graphite in cast iron. *Journal of the Iron and Steel Institute, 167,* 113.
Pariente, I. F., Belzunce, F. J., Rodríguez, C., & Riba, J. (2008). Mechanical strength and fracture toughness of high chromium white cast irons. *Materials Science and Technology, 24*(8), 981–985.
Pehlke, R. D. (1975). *Unit processes of extractive metallurgy.* 2nd printing, New York: American Elsevier Publishing Company Inc.
Pero-Sanz, J. A. (1969). *Fundiciones Grises. Metalurgia Física.* San Sebastián: CITG.
Pero-Sanz, J. A. (1991). *El Sistema Fe-C-Cr*. Oviedo: University of Oviedo.
Pero-Sanz, J. A. (1992). *Fundiciones Férreas*. Llanera (Asturias): FICYT.
Pero-Sanz, J. A., & Verdeja, J. I. (1994). Solidificación y transformaciones en el sistema Fe-C-Cr. Bases para el diseño por propiedades de sus aceros y fundiciones ternarias*, Revista de Minas, 9–10,* 81–92.
Pero-Sanz, J. A., Verdeja, J. I., & Asensio, J. (1996). Materials selection chart of high chromium cast irons, en advances and applications in the metallography and characterization of materials and microelectronic components. In D. W. Stevens, E. A. Clark, D. C. Zipperian & E. D. Albrecht (Eds.), *Proceedings of the 28th Annual Meeting of the International Metallographic Society* (pp. 131–134). The International Metallographic Society y ASM International.
Pero-Sanz, J. A. (2004). *Aceros. Metalurgia Física, Selección y Diseño* (1st ed.). Madrid: CIE Dossat 2000.
Pero-Sanz, J. A. (2006) *Ciencia e Ingeniería de Materiales. Estructura, Propiedades y Selección* (5th ed.). Madrid: CIE Dossat 2000.

Pero-Sanz, J. A., Hernández, M. A., & Verdeja, L. F. (2017). *Solidification and solid-state transformations of metals and alloys* (1st ed.). Oxford: Elsevier.

Pero-Sanz, J. A., Fernández-González, D., & Verdeja, L. F. (2018). *Materiales para Ingeniería. Fundiciones Férreas* (1st ed.). Madrid: Pedeca Press Publicaciones S. L. U.

Peterson, R. E. (1974). *Stress concentration factors*. New York, NY: John Wiley.

Pickering, F. B. (1983). *Physical metallurgy and the design of steels.* London: Ed. Applied Science Publishers.

Plaza, D., Pero-Sanz, J. A., Verdeja, J. I., & Cabeza, M. M. (1997). Rail aluminothermic welding: Microstructure and mechanical properties, en The role of characterization in understanding environmental degradation of materials. In D. E. Alman, J. A. Hawk & J. W. Simmons (Eds.), *Proceedings of the Thirtieth Annual Technical Meeting of the International Metallographic Society* (pp. 405–411). The International Metallographic Society and ASM International.

Porter, D. A., & Easterling, K. E. (1992). *Phase transformations in metals and alloys*, 2nd edition, Berkshire: Springer-Science+Business Media, B. V.

Raghavan, V. (1986). The carbon-iron-silicon system. *Journal of Alloy Phase Diagrams, 2*(2), 97–107.

Ragone, D., Adams, D. M., & Taylor, H. F. (1956). A new method for determining the effect of solidification range on fluidity. *Transactions of the American Foundrymen's Society, 64,* 653–657.

Ramadan, M., Nomura, H., & Takita, M. (2008). Wear resistance and damping capacity of semisolid processed hypoeutectic grey cast iron. *Materials Science and Technology, 24*(4), 467–473.

Rivera, G., Boeri, R., & Sikora, J. (2002). Revealing and characterizing solidification structure of ductile cast iron. *Materials Science and Technology, 18*(6), 691–697.

Rivlin, V. G. (1984). Critical review of constitution of carbon-chromium-iron and carbon-iron-manganese systems. *International Metals Reviews, 29*(1), 299–328.

Saeger, C. M., & Krynitsky, A. I. (1931). A practical method for studying the running quality of a metal cast into foundry molds. *Transactions of the American Foundrymen's Society, 39,* 513–540.

Sancho, J., Verdeja, L. F., & Ballester, A. (2000). *Metalurgia Extractiva. Procesos de Obtención* (Vol. 2). Madrid: Síntesis.

Sare, I. R. (1979). Abrasion resistance and fracture toughness of white cast irons. *Metals Technology, 6*(1), 412–419.

Sinatora, A., Albertin, E., & Matsubara, Y. (1996). An investigation of the transition from M7C3 to M3C carbides in white cast irons. *International Journal of Cast Metals Research, 9*(1), 9–15.

Sivasankaran, V., Krishnamurthy, R., & Roshan, H. (1987). Gray iron machining with ceramics. *International Journal of Production Research, 25*(2), 207–219.

Smith, L. W. L., Palmer, K. B. & Gilbert, G. N. J. (1986). *Properties of modern malleable irons.* BCIRA International Center for Cast Metals Technology.

Sommerfeld, A., & Tonn, B. (2008). Nucleation of graphite in cast iron melts depending on manganese, sulphur and oxygen. *International Journal of Cast Metals Research, 21*(1–4), 23–26.

Tadesse, A., & Fredriksson, H. (2017). Volume change during the solidification of grey cast iron: Its relation with the microstructural variation, comparison between experimental and theoretical analysis. *International Journal of Cast Metals Research, 30*(3), 159–170.

Taylor, H. F., Flemings, M. C., & Wulff, J. (1959). *Foundry engineering* (1st ed.). New York: Wiley.

The Japan Society for the Promotion of Science. The 19th Committee on Steelmaking. (1988). *Steelmaking data sourcebook*. New York: Gordon and Breach Science Publishers.

Theuwissen, K., Laffont, L., Véron, M., & Lacaze, J. (2016). Crystallography of graphite spheroids in cast iron. *International Journal of Cast Metals Research, 29*(1–2), 12–16.

Thorpe, W. R., & Chicco, B. (1985). The Fe-rich corner of the metastable C-Cr-Fe liquidus surface. *Metallurgical Transactions A, 16A*(9), 1541–1549.

Tiedje, N. S. (2010). Solidification, processing and properties of ductile cast iron. *Materials Science and Technology, 26*(5), 505–514.

Vadiraj, A., Balachandran, G., Kamaraj, M., Gopalakrishna, B., & Rao, D. V. (2010). Mechanical and wear behaviour of alloyed hypereutectic grey cast iron. *Materials Science and Technology, 26*(7), 842–848.

Vander Voort, G. F. (1991). *Atlas of time-temperature diagrams for irons and steels*. Materials Park, OH: ASM International.

Vander Voort, G. F. (1999). *Metallography. Principles and practice* (1st ed.). New York: McGraw-Hill (ASM International, Materials Park, OH).

Verdeja, L. F., Alfonso, A., & Huerta, M. A. (1995). Aplicación del diagrama Fe-C estable al cálculo de parámetros termodinámicos de aceros y fundiciones. *Revista de Minas, 11–12,* 109–114.

Verdeja, L. F., Sancho, J., Ballester, A., & González, R. (2014). *Refractory and ceramic materials.* Madrid: Síntesis.

Walton, C., & Opar, T. (1981). *Iron castings handbook: Covering data on gray, malleable, ductile, white, alloy and compacted graphite irons.* Iron Casting Society Inc.

Waterman, N., & Ashby, M. (1991). *CRC-Elsevier materials selector* (Vols. 1 and 2). London: CRC-Elsevier.

Winegard, W. C. (1964). *An introduction to the solidification of metals*., Institute of Metals Monograph and Report Series No. 29 London: The Institute of Metals.

Winte, H. C. (1946). Gray iron castings section sensivity. *Transactions of the American Foundrymen's Society, 54,* 436–443.

Woldman, N. E. (1990). *Engineering alloys* (7th ed.). Ohio: ASM International.

Zakhartchenko, E. V., Akimov, E. P., & Loper, C. R. (1983). Kish graphite in gray cast iron. *Transactions of the American Foundrymen's Society, 87,* 471–476.

Ziadi, A., Belzunce, F. J., Rodríguez, C., & Riba, J. (2005). Wear and oxidation behaviour of multicomponent white cast irons. *Materials Science and Technology, 21*(10), 1181–1186.

Index

J. A. Pero-Sanz Elorz et al., *Physical Metallurgy of Cast Irons*,
https://doi.org/10.1007/978-3-319-97313-5