

9. REFERENCES

1. R. F. Hochman and J. H. Burson III, "The Fundamentals of Metal Dusting," *API Division of Refining Proc.* **46**, 331-44 (1966).
2. R. F. Hochman, "Catastrophic Deterioration of High Temperature Alloys in Carbonaceous Atmospheres," pp. 715-32 in *Proc. Electrochem. Soc.* **77-1** (1976).
3. J. C. Nava Paz and H. J. Grabke, "Metal Dusting," *Oxid. Met.* **39**, 437-56 (1993).
4. H. J. Grabke, R. Krajak, and J. C. Nava Paz, "On the Mechanism of Catastrophic Carburization: Metal Dusting," *Corros. Sci.* **35**, 1141-50 (1993).
5. R. A. Perkins, "Carburization of High-Temperature Alloys," pp. 617-47 in *Behaviour of High-Temperature Alloys in Aggressive Environments*, ed. I. Kirman, J. B. Marriott, M. Merz, P. R. Sahm, and D. P. Whittle, The Metals Society, London, 1980.
6. J. K. Stanley, "Carburization of Stainless Steels in Methane-Hydrogen," pp. 143-54 in *High Temp. Gas-Met. React. Mixed Environ.*, ed. S. A. Jansson and Z. A. Foroulis, AIME, New York, 1973.
7. H. J. Grabke and I. Wolf, "Carburization and Oxidation," *Mater. Sci. Eng.* **87**, 23-33 (1987).
8. R. T. K. Baker, D. J. C. Yates, and J. A. Dumesic, "Filamentous Carbon Formation over Iron Surfaces," pp. 1-22 in *Coke Formation on Metal Surfaces*, ed. L. F. Albright and R. T. K. Baker, American Chemical Society, 1982.
9. J. J. Brown, Jr., *Investigation of Carbon Monoxide Disintegration of Refractories in Coal Gasifiers*, Virginia Polytechnic Institute and State University report, VPI/ME-13702-12, July 1984.
10. T. M. Besmann, *SOLGASMIX-PV, A Computer Program To Calculate Equilibrium Relationship in Complex Chemical Systems*, ORNL/TM-5775, Oak Ridge Natl. Lab., April 1977.
11. P. Kofstad, *High Temperature Corrosion*, Elsevier Applied Science, London, 1988, pp. 428-29.
12. P. L. Walker, Jr., J. F. Rakiszawski, and G. R. Imperial, "Carbon Formation Over Iron Catalysts: I. Properties of Iron Formed," *J. Phys. Chem.* **63**, 133-39 (1959).
13. A. Sacco, Jr., and J. C. Caulmare, "Growth and Initiation Mechanism of Filamentous Coke," pp. 177-92 in *Coke Formation on Metal Surfaces*, ed. L. F. Albright and R. T. K. Baker, American Chemical Society, 1982.
14. P. A. Lefrancois and W. B. Hoyt, "Chemical Thermodynamics of High Temperature Reactions in Metal Dusting Corrosion," *Corrosion* **19**, 360t-368t (1963).
15. T. Kalina and J. A. Kivlen, "Process of Reducing Iron Oxide Ores with Gases Containing Carbon Monoxide," U. S. Patent 3,377,156, April 1968.

16. M. J. Bennett, G. H. Chaffey, B. L. Myatt, and D. R. V. Silvester, "Inhibition by Sulfur Poisoning of the Heterogeneous Decomposition of Acetone," pp. 223-38 in *Coke Formation on Metal Surfaces*, ed. L. F. Albright and R. T. K. Baker, American Chemical Society, 1982.
17. H. J. Grabke, C. B. Bracho-Troconis, and E. M. Mueller-Lorenz, "Metal Dusting of Low Alloy Steels," *Werkst. Korros.* **45**, 215-21 (1994).
18. T. F. Berry, R. N. Ames, and R. B. Snow, "Influence of Impurities and Role of Iron Carbides in Deposition of Carbon from Carbon Monoxide," *J. Amer. Ceram. Soc.* **39**, 308-18 (1956).
19. E. Q. Camp, C. Phillips, and L. Gross, "Corrosion of 18-8 Alloy Furnace Tubes in High-Temperature Vapor Phase Cracking Service," *Corrosion* **1**, 149-60 (1945).
20. H. J. Grabke, "Metal Dusting of Low and High Alloy Steels," *Corrosion* **51**, 711-20 (1995).
21. V. Krebs, J. F. Mareche, G. Furdin, and D. Dumay, "Contribution to the Study of Carbon Deposition in Coke Ovens," *Fuel* **73**, 1904-10 (1994).
22. H. J. Grabke, R. Krajak, and E. M. Mueller-Lorenz, "Metal Dusting of High-Temperature Alloys," *Werkst. Korros.* **44**, 89-97 (1993).
23. D. E. Brown, J. T. K. Clark, A. I. Foster, J. J. McCarroll, and M. L. Sims, "Inhibition of Coke Formation in Ethylene Steam Cracking," pp. 23-44 in *Coke Formation on Metal Surfaces*, ed. L. F. Albright and R. T. K. Baker, American Chemical Society, 1982.
24. W. R. Ruston, M. Warzee, J. Hennaut, and J. Waty, "The Solid Reaction Product of the Catalytic Decomposition of Carbon Monoxide on Iron at 550°C," *Carbon* **7**, 47-57 (1969).
25. F. W. A. Geurts, R. G. Cnossen, A. Sacco, Jr., and R. R. Biederman, "Carbon Deposition over Transition Metal Alloys-II. Kinetics of Deposition over <FeNi> and <FeCo> Alloy Foils," *Carbon* **32**, 1151-69 (1994).
26. Y. Inokuti, "Formation of Graphite on the Surface of Cold Rolled Low Carbon Steel Sheet During Annealing," *Trans. ISIJ* **15**, 314-23 (1975).
27. R. A. Perkins, W. C. Coons, and F. J. Radd, "Metal Dusting Corrosion in Coal Gasification Environments," pp. 733-49 in *Proc. Electrochem. Soc.* **77-1** (1976).
28. I. Koszman, "Factors Affecting Catastrophic Carburization Metal Dusting," pp. 155-67 in *High Temp. Gas-Met. React. Mixed Environ.*, ed. S. A. Jansson and Z. A. Foroulis, AIME, New York, 1973.
29. L. H. Wolfe, "Laboratory Investigations of High Temperature Alloy Corrosion and Failures," *Mater. Perform.* **17**, 38-44 (1978).
30. R. F. Hochman, "Metal Deterioration in Carbon Monoxide and Hydrocarbon at Elevated Temperatures," pp. 119-33 in *Proc. Third Int'l. Congress on Metallic Corrosion*, Vol. IV, 1969.

31. G. H. Meier, N. Birks, F. S. Pettit, R. A. Perkins, and H. J. Grabke, "Environmental Behavior of Intermetallic Materials," pp. 861-77 in *Structural Intermetallics*, ed. R. Darolia, J. J. Lewandowski, C. T. Liu, P. L. Martin, D. B. Miracle, and M. V. Nathal, TMS, Warrendale, Pa, 1993.
32. J. Barnes, J. Corish, E. Franck, and J. F. Norton, "Influence of Sulfur on the Nature and Morphology of Carbides Formed on the Surfaces of Fe-Ni-Cr Alloys at High Temperatures," *Oxid. Met.* **24**, 85-97 (1985).
33. J. Barnes, J. Corish, and J. F. Norton, "Sulfur Effects on the Internal Carburization of Fe-Ni-Cr Alloys," *Oxid. Met.* **26**, 333-50 (1986).
34. J. H. DeVan and P. F. Tortorelli, "Oxidation/Sulfidation of Iron-Aluminum Alloys," *Mater. at High Temp.* **11**, 30-35 (1993).
35. D. Monceau, E. M. Müller-Lorenz, and H. J. Grabke, "Metal Dusting of Stainless Steels," to be published in *Mater. Sci. Forum*, 1996.
36. U. Brill, "High-Temperature Corrosion of Ni₃Al Intermetallic Phase Materials," *Werkst. Korros.* **41**, 682-88 (1990).
37. D. B. Roach, Battelle Columbus Laboratories, unpublished results, 1974.
38. D. P. Moon, "Role of Reactive Elements in Alloy Protection," *Mater. Sci. and Technol.* **5**, 754-764 (1989).