

CONTENTS

	Page
1. General.....	1
2. Methods of sampling, analyzing, and testing.....	3
A. Solid.....	3
C. Gaseous.....	4
3. Occurrence, origin, microstructure, classification, proximate and ultimate analyses, calorific values, and fusing temperatures of ash.....	4
4. Physical and chemical properties of coal.....	6
5. Gases and dusts.....	6
A. Absorption, evolution, and composition.....	6
B. Inflammability and explosibility, including testing methods.....	7
C. Physiological effects, protective devices, and treatment.....	9
6. Mining.....	9
A. Ventilation.....	11
B. Explosions, mine fires, and their control.....	11
C. Explosives.....	12
D. Electricity, safety lamps, communication, and transportation.....	14
7. Mine water and corrosion.....	16
8. Preparation: Sizing, cleaning, and briquetting, including testing methods.....	16
9. Storage, spontaneous heating, and oxidation of coal.....	17
10. Carbonization, including testing methods.....	18
A. High-temperature.....	20
B. Low-temperature.....	20
11. Complete gasification: Water-gas, producer-gas, and mixed-gas production.....	21
12. Hydrogenation and synthetic products.....	21
13. Coke.....	24
14. Gas.....	24
15. Tar, light oils, and other byproducts.....	24
16. Combustion.....	24
A. Industrial.....	24
B. Domestic.....	25
D. Boiler-water conditioning.....	28
17. Smoke abatement.....	26
18. Economics and statistics.....	27
19. Motion-picture films.....	32
Index of subjects.....	35
Index of authors.....	45