

Contents

Architecture Technology	1
Xinian Fu	
1 Lecture 1 Overview of Architectural Development in Ancient China.	1
2 Lecture 2 Capital Palaces in Ancient China.	43
3 Lecture 3 Defensive Structure in Ancient China—the Great Wall	84
4 Lecture 4 Ceremonial Buildings in Ancient China	97
5 Lecture 5 Religious Buildings in Ancient China	107
6 Lecture 6 Folk Residences in Ancient China.	144
7 Lecture 7 Ancient Chinese Gardens	175
Mining and Metallurgical Technology	195
Jueming Hua	
1 Foreword	195
2 Historical Stages of Mining and Metallurgy in China.	196
3 Lecture 1 Copper Metallurgy.	198
4 Lecture 2 Iron Metallurgy	239
Mechanical Technology	277
Baichun Zhang	
1 Lecture 1 Introduction to Ancient Chinese Machinery	277
2 Lecture 2 Typical Chinese Machinery	286
3 Lecture 3 Armillary Spheres, Celestial Globes, and Timers	315
References.	345
Water Conservancy Technology	349
Kuiyi Zhou	
1 Lecture 1 An Introduction to Chinese Ancient Water Conservancy Science	349
2 Lecture 2 Holistic, Comprehensive, and Dialectical Scientific Thinking of Ancient China and Its Modern Advantages	380

Communication Technology	405
Wusan Dai	
1 Lecture 1 Ancient Roads and Bridges	405
2 Lecture 2 Boat Culture in China	431
3 Lecture 3 Vehicles for Land Transportation in Ancient China	496
References	510
Military Technology	515
Shaoyi Zhong	
1 Cold Weapon Era (Ancient—Sui, Tang and the Five Dynasties)	515
2 Military Technology in the Era of Coexisting Fire Arms and Cold Weapons	544
References	602
Conclusion	605
Dun Liu	
1 Some Theoretical Problems About the History of Science	605



<http://www.springer.com/978-3-662-44162-6>

A History of Chinese Science and Technology

Volume 3

Lu, Y. (Ed.)

2015, XV, 624 p. 420 illus., Hardcover

ISBN: 978-3-662-44162-6