

This is a review submitted to Mathematical Reviews/MathSciNet.

Reviewer Name: de Paz, María

Mathematical Reviews/MathSciNet Reviewer Number: 127139

Address:

Dep. de Filo., Log. y Filo. de la Cien.
Fac. de Filosofía, Univ. of Sevilla
C/Camilo José Cela S/N
41018 Seville
SPAIN
maria.depaz@hotmail.com

Author:

Title: Distinguished figures in mechanism and machine science—their contributions and legacies. Part 2.

MR Number: MR3523855

Primary classification: 01A05

Secondary classification(s): 01A70

Review text:

This is the second volume of a series that aims at understanding the significance of Mechanism and Machine Science over time. It is a kind of encyclopaedic work in which the emphasis is placed on figures who have contributed to the technical development of mechanics understood as machine science. It is a work that can be of interest for both engineers and historians of science and it is useful because it focuses on figures that are missing in the big histories of mathematics and science. Seeing the history of science through the lenses of engineers and machine scientists gives a hint on the technical developments of a certain period of time.

The figures analyzed in this book range from 12th century Arab scientist and inventor Al Jazari, to 20th century Polish engineer Adam Morecki, going through the mysterious figure of Wang Zheng, a 17th century Chinese official who committed suicide because of the fall of the Ming Dynasty. The figures are not only from different historical periods, but from very different nationalities, something worth remarking, because we are used to know about the work of British engineers, but probably not so much about Serbian, Mexican or even an Irish who contributed to the mechanization of agriculture.

Every chapter starts with a biographical note which permits a closer approach to the character and lets us know some curiosities, such as the interest of 19th century German engineer Ludwig Burmester for the mechanical engineering of cinematography at the time in which this art was giving its first steps.

From the viewpoint of the history of mathematics, the most interesting input

is the relationship between mathematicians and engineers, and how the science of machines becomes autonomous from mechanics in most countries along the 19th century. This gives us a general idea of the specialization of sciences and how educational programs change (for example with the reduction in teaching hours of abstract mathematics for engineers and the focus on more practical issues) according to the transformation of machine science.

One drawback of the book is that all of the illustrations are black and white, and some of them would be worth seeing in colour, particularly those which have diagrams in which the colour would make them much more explicative. Also there are many typos and some of the texts would have profited from a careful English revision, since some passages become difficult to read.

This book fits very well with the scope of the Springer series in which it is published, "History of Mechanism and Machine Science", and certainly, Marco Ceccarelli has made a great effort by bringing people from very different nationalities to contribute to this book.