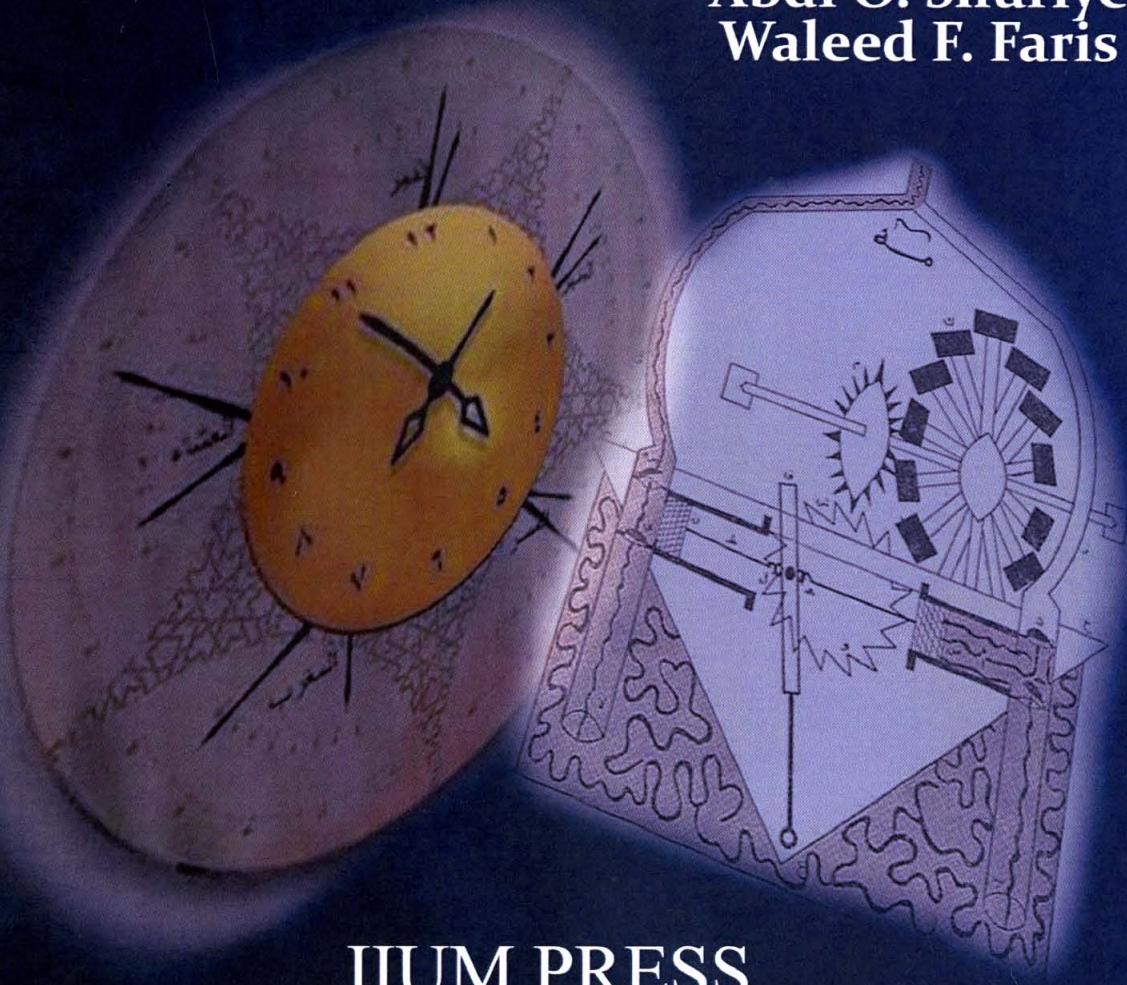


Contributions of Early Muslim Scientists to Engineering Studies and Related Sciences

Abdi O. Shuriye
Waleed F. Faris



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Editors

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CHAPTER TWENTY SEVEN

CONTRIBUTION OF TIPU SULTAN TO ROCKET TECHNOLOGY

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27.1 INTRODUCTION

The objective of this chapter is to highlight the contribution of Sultan Fateh Ali Tipu (1750-1799 A.D), the Sultan of Mysore, who was the pioneer of iron-cased rocket artillery technology. Tipu ruled Mysore for 17 years (1782-1799). The history of rockets or 'fire-errors' invention started from 1232 by Chinese and then followed by Europeans in the 14th and 15th centuries. Rocket bodies in this period were built using light materials such as bamboo, wood or paper since these materials can be easily obtained. However, towards the beginning of 16th century, the military scientists put more concentration to the development of canon. Thus, rockets was neglected due to invention and large improvement of canon. In the 18th century, rocket application reemerged during the Mysore time under the rule of Hyder Ali, (Tipu's father) and Tipu with totally improved version which was more superior than canon and existing rockets in China and Europe. The reemergence of the rockets created significant history in Indo-British technology.

Throughout Tipu's ruling time, there were many wars waged by the British colonial armies, this created the need to develop high technological weapons such as rocket. Tipu effectively used rocket as military weapon for disordering British soldier by launch the rocket in front and behind British lines and followed by mass attract targeted directly to British troops (Kawaja, 2011) .The significance of this innovation helped the Mysore army to achieve the legendary victory over the British in 1780 and paved the ways for research in rocket technology for other purpose during modern world.

The method used in this chapter is based on review of the historical project document, rocket expert view such as Dr. Abdul Kalam sources and various electronics sources. The research framework based on (Narasimha, 1985), the project document of National Aeronautical Laboratory and Indian Institute of Science which describe about the contribution of tipu sultan as the pioneer of iron cylinder combustion type military rocket .The main focus of the chapter is to show Tipu Sultan contribution to innovation of iron-cased rocket artillery technology. The research explores on engineering aspect of iron-cased rocket artillery technology pioneered by Tipu Sultan and it influences to the world modern technology. The significance of this research will acknowledge contribution of Muslim scientist, Tipu Sultan to engineering technology.