Leonardo da Vinci: Artist, Engineer or Scientist? A vision of Deniol Tanaka

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Leonardo di ser Piero da Vinci (1452-1519) is a famous renaissancist with numbers of biographies published, the first by Vasari in the 16th century. Furthermore, many uncertainties and myths regarding to ***da Vinci*** exist, including the absence of records about his mother, which were only recently discovered, on April 2008, suggesting being an Arab slave.

The presentation is a short ***"biography"*** of ***Leonardo da Vinci***, under the ***vision*** of the author, after the reading of his works in Arts and Engineering, especially those relative to tribology. This thought also derives from the reading of numbers of his biographies and the myths regarding to his life and works. It presents some personal reflections to understand the mind of ***da Vinci*** and the reason why, even though he succeeded in so many diverse fields of knowledge, such as the art, engineering and science, ***why he did not complete*** any single creation, disagreeing with the beliefs of Freud and Vasari.

This vision, regarding to the Italian renaissancist, points out his works in the field of ***"FRICTION"*** *(quoted)*, showing that he has already documented the ***LAWS OF THE "FRICTION"***, rediscovered centuries later by Amontons (1663-1705) and Coulomb (1736-1806). The author intends to demonstrate that ***da Vinci*** already had tacit or conscientiously recognized the systemic nature of tribology and that this virtuoso Italian was concerned with the conceptual confusions and misuse of the word ***friction*** as synonymous of relative movement and not as an event of energy loss. In fact, this perception of energy was first conceived by ***da Vinci***.

Finally, specific aspects of the tribological studies of ***da Vinci*** are presented, such as the effects of surface finishing, the presence of lubricant and solid particles at the interface, the development of tribological experiment devices and the design of tribological components, such as the ball bearing to reduce or eliminate ***"friction"***.