

At the 150th anniversary of Martin Knudsen: A pioneer in gas flows

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Martin Knudsen – a pioner in gas flows

This talk is dedicated to the Danish Physicist Martin Knudsen (1871- 1947) on the occasion of his 150th anniversary. He was working as a shepherd during summer time when he grew up, and finished his career as a professor in physics and as president at the University of Copenhagen. In the period from about 1910 to 1920 he was investigating the behavior of the gas flow in vacuum systems, in particular for low-pressure systems, in which mean-free-distance and the dimensions of the vacuum system were comparable. He introduced several concepts, the Knudsen Number, Knudsen gas, (Hertz-)Knudsen equation and Knudsen cells, which are still used today. The influence of Knudsen's work in recent physics will be outlined as well.