Memories about our distinguish compatriot Henri Coanda

Anniversary Session “Celebrating 100 year of the first jet aircraft invented by Henri Coanda”, organized by INCAS, COMOTI and Henri Coanda Association, 14 December 2010, Bucharest, Romania

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DOI: 10.13111/2066-8201.2010.2.4.2

In 1966, when The Romanian Academy decided to celebrate our famous compatriot Henri Coanda’s 80th anniversary, I participated with great joy at this event as a Senior researcher and Head of the District of viscous fluids from the Hydro-mechanical Department led by Acad. Prof. Dr. Eng. Math. Dumitru Dumitrescu, department belonging to the Institute of Fluid Mechanics of the Romanian Academy led by Acad. Prof. Dr. Eng. Elie Carafoli. The speakers were prominent guests such as LG H. Schlichting from Germany, Loiţianski from the former Soviet Union and, of course, Henri Coanda whose speech I still remember with great pleasure.

On this occasion, Henri Coanda told us how he managed to build his jet airplane in Paris and tried to fly for the first time, meaning that any pilot to learn the commands needed to do a few laps on the ground before the plane taking off, which he tried to do, but his attention being drawn by the engine fumes entering the cockpit because of so-called Coanda effect, when he looked out he was suprised to notice that he was at considerable height from the ground. Therefore his first concern was to land as quickly as possible.

In this respect he was very lucky, because by the sudden contact of the plane with the ground he had been thrown outside the cockpit, but got on a stack of hay and escaped unharmend.

Fear felt at that moment made him to decide not to fly aircraft, long after that.

Professor Schlichting told us about Henri Coanda's effect during the landing of an aircraft, when by the deflection of flap shutters and speed reduction, in order not to further reduce the wing lift due to the flow detachment on the upper side wing, the Germans had left a circular groove between the flap and the wing, and the passage of air from a higher pressure under the wing and the flow acceleration to the upper wing allowed to increase lift even at lower speeds.

Professor Loiţianski aged of about 60, has requested permission to speak in French (the official language of the former tsarist Russia), of which he said that when he was younger he spoke better. Henri Coanda who 80 was years immediately rebuked “Mais Monsieur, vous etes encore jeune!”

Then Loiţianski said that if Henri Coanda effect is practically “presque claire”, theoretically speaking it does not appear in any paper, so we allowed the aerodynamic department to present some theoretical aspects of Henri Coanda’s effect, by introducing attraction molecular forces of cohesion and adhesion into flow equations and also to present an experimental research of a Coanda effect profile with respect to the flow separation on the wing upper side for an attack angle higher than 27° and then the slow lift variation. Related to this issue I’d also like to mention that in 2008, I patented three types of profiles with Coanda effect.
REFERENCES


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