Treball de Fi de Grau

Study of Alternative Geometries for Fluidic Oscillators by means of Computational Fluid Mechanics

Budget

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ETSEIAT - UPC

June, 12th of 2015

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Chapter 1

Budget

The project budget includes all the economical expenses to consider during its realization. The different expenses have been separated in the following tables so that each cost item is clearly identified. In table 1.1, the human resources needed to complete the study are detailed:

	Time dedication [hours]	€/h	Cost [€]
Planning and software learning	80	15	1200
Numerical analysis	200	15	3000
Draft preparation	100	15	1500
Total	**380**		**5700**

Table 1.1: Human resources cost.

Table 1.2 shows the computational costs dedicated to the present work. Note that the cost of the energy used by the computer has not been considered in the budget, as it is three orders of magnitude lower than the total cost.

	Units	Anual license [€]	€/h	Cost [€]
MATLAB Licence	380h	2000	1.11	422.22
ANSYS Licence	380h	24903.36	13.84	5257.38
Total				**5679.6**

Table 1.2: Computational resources cost.

Finally, the total cost of the study is **11379.60 €**.

In this work, the integration of fluidic oscillators in real applications and the manufacturing process are not studied. However, the major disadvantage of fluidic oscillators lies in the technical aspects of their integration into other systems, such as a wing, not in the economical aspects. As soon as applications are feasible, it will become a very useful device that is very likely to play an important role in transportation systems. Therefore, investing on fluidic oscillators seems an interesting option.