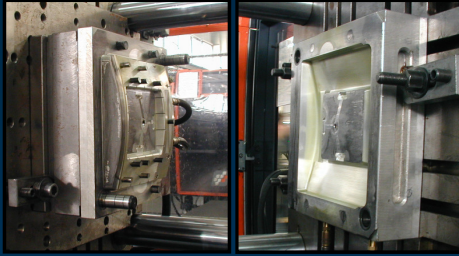


# Comparing Mould Manufacturing options: A Life Cycle approach



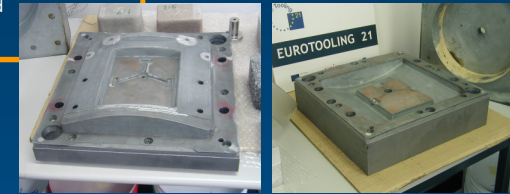
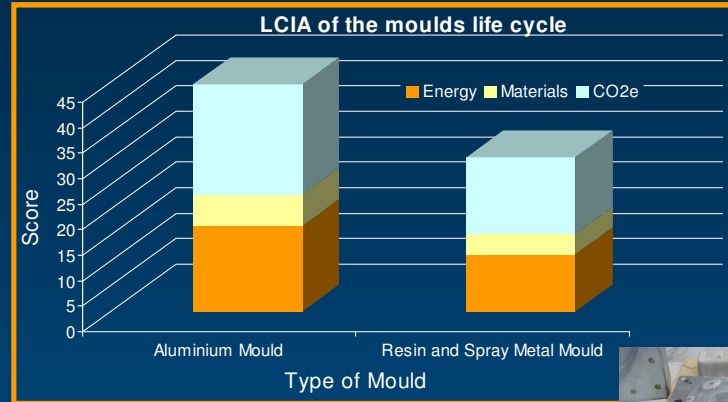
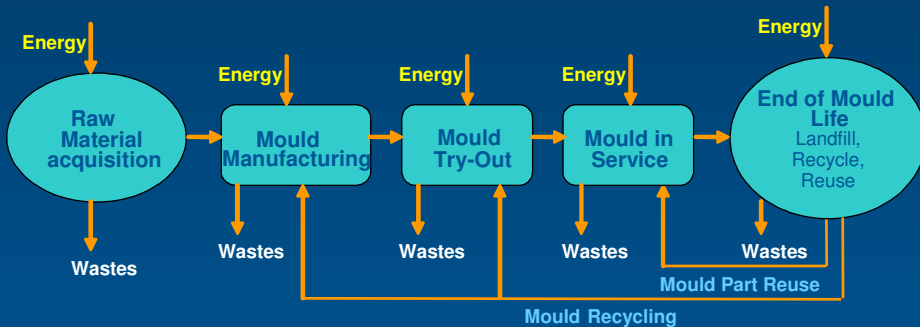
Raquel Maria Raimundo Folgado

Dissertação para a obtenção do Grau de Mestre em Engenharia Mecânica (2007)

Orientadores: Prof. Paulo Peças e Prof<sup>a</sup> Elsa Henriques

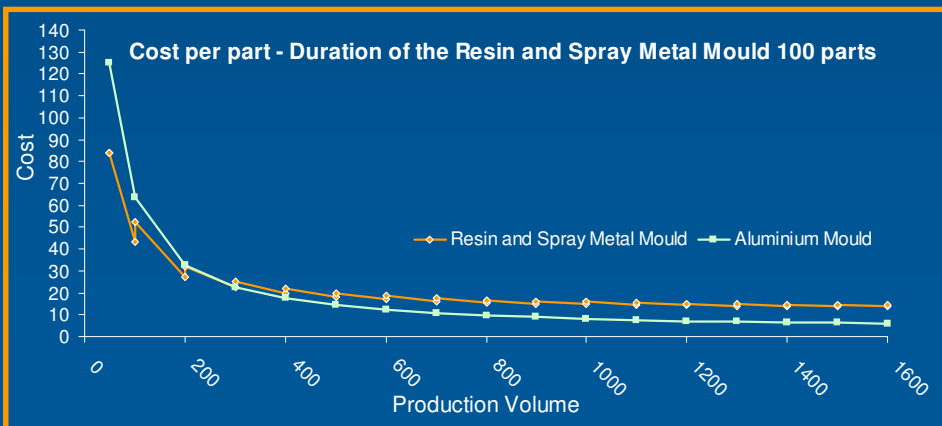
## Objectives:

- Compare low series injection moulds on a Life Cycle perspective (aluminium and spray metal mould)
- Identify and characterize the moulds life cycle phases
- Develop models based on Life Cycle Cost and a Life Cycle Impact Assessment that allow sensitivity analysis



## Results:

- Characterisation of mould life cycle stages: Materials Manufacturing, Production of the Mould, Use of the Mould and End of Life
- The LCC and the LCE models were developed and used to compare the Spray Metal Tooling relatively the Conventional Manufacturing
- For low series production, the Spray Metal mould has advantages both economic and environmental
- The LCC and LCIA models allowed comparing the moulds in three different scenarios, varying the production volume, the moulds duration and the components (re)use



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