

## Master of Science in Computational Mechanics/ Master on Numerical Methods in Engineering SUPERVISOR REPORT OF INTERNSHIP WORK

| Name of the student    | Reinaldo Wiener Rocca   |
|------------------------|-------------------------|
| Company/Institution    | CIMNE                   |
| Name of the supervisor | Prof. Michele Chiumenti |
| Start and end dates    | 15/10/2015 - 15/12/2015 |
| Total number of hours  | 180                     |

The aim of this report is to formalize the culmination of the internship work performed by the student and also to let know the opinion of the supervisor. The work has been supervised by arranging frequent meetings and guidance was offered during the internship. That way was possible to obtain updated results and be on schedule for the presented derivable in the department. The work performed not only fulfilled the main tasks (specified next) but also help to test the code and make improvements to the previous implementations. In general, the results of the work are satisfactory, was done on time and it represent a base for further works.

## Main tasks:

- Analyze the given experimental data to understand the cooling/heating behavior.

  Perform a simulation of the heating/cooling process using a thermal module of
- ✓ the software Comet®.
- Compare results with the experimental data, taking into account the second change of phase in the cast, the change of phase of the water in the mold and the variation of the mold conductivity due to water evaporation.

Supervisor's signature

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