

## PROJECT REPORT SHEET

**Project:** Stefan problems (Project 2)

**Student name:** Jerry Kiely

**Total mark = 92**

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**Content and Understanding (maximum 40 marks):**

|   |      |
|---|------|
| Description of a moving boundary problem, examples:     | good |
| The Stefan boundary condition, physical interpretation: | done |
| Similarity solutions for the heat equation:             | yes  |

*The freezing problem*

|  |      |
|--|------|
| The one-phase Stefan problem: solution and graphs:                                 | good |
| The pseudo-steady state approximation method; asymptotic analysis and comparisons: | done |
| The two-phase Stefan problem:  | good |

*The continuous casting problem*

|  |      |
|--|------|
| Description of the industrial problem: | yes  |
| Solution:                              | good |
| Graphs and interpretation of results:  | done |

**Comments:** All assigned tasks completed succesfully. Asymptotic justification not included

**Mark for this section: 38**

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**Project layout (maximum 40 marks):**

|                               |                           |
|-------------------------------|---------------------------|
| Project structure & sections: | good                      |
| Use of Latex:                 | good                      |
| Typos, errors etc:            | none                      |
| Figures/graphics:             | axes labels are too small |

**Comments:**

Once again, the axes labels are very small and hard to read. Need punctuation marks after equations. Conclusions are a bit short.

**Mark for this section: 36**

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**Independent work, new ideas and contributions (maximum 20 marks):**

Originality: very good

Discussions: good

New ideas:

Some lab work on the errors associated with the problem in 2.2 (not included in the project).

**Mark for this section: 18**

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**Other comments and suggestions:**

Excellent work!