

9/06/2006

Thesis: The effect of long chain branching on processability of polymer melts.

By Jan Musil

I have examined this thesis and conclude that the Jan has produced an excellent piece of work. Given that Jans' native language is not English I was particularly impressed by the standard and command of written English used. Sentences were well structured, concise and clear. This was most evident in the introduction section of the thesis where any reader can easily comprehend the technical aspects presented.

The technical content of the work was equally impressive. From experience I have found that most undergraduate students present good accounts of experimental details and cover the results without much analysis. Jan not only covers both these aspects in detail but also analyses the data and presents well-argued explanations for the behaviour of the polymers often cross-referencing reasoning with collected data.

Given the complexity of the subject, depth the of the analysis and quality of the work I recommend the following award for the submitted thesis.

Award: A grade, excellent

I do have two questions that I would like to pose to the students based on the content of the thesis:

1. The value of the mLLDPE low α presented in Table 2 looks very low compared to the other polymers. Is this significant?

2. Jan presents extensional information for Lupolen 1840H from combining data from a Binding + Cogswell model in Figure 31. There is no explanation about how this data is constructed – is it averaged data from each of the Binding + Cogswell models, or is some threshold strain rate used, or another method?

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