

PhD THESIS - ALI MOHAMMAD MESHKOD - DEPARTMENT OF MATERIALS,
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The thesis describes work carried out to prepare commercially - valuable Fe-Si-B alloys by the reduction of boron oxide (B_2O_3) with various reductants viz SiC, ferro-silicon and - alum. inium. These reductants were added as powders by both submersion and injection. It is obvious that a considerable number of experimental problems had to be overcome before a successful method could be established. Thus much of the candidate's time was devoted to the establishment of the optimum conditions for the experiments. I consider that the experimental work was carried out in a logical and efficient manner and that he has successfully established a technique which should allow amorphous-metal ribbons of Fe-Si-B alloys to be produced at considerably lower cost. The candidate has also studied the reaction mechanisms and the reaction kinetics of the various processes. The experiments were carried out in a logical manner and I found that the interpretation of the results obtained to be convincing.

Consequently, I am satisfied that both the quantity and the quality of the work fully meets the standards required for the award of the Degree of Doctor of Philosophy.

K C MILLS

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