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In-situ particulate-reinforcement of titanium matrix composites with borides

Jimoh, Abdulfatai

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ULATE-REINFORCEMENT OF TITANIUM COMPOSITES WITH BORIDES *(TITLE OF PhD THESIS)*

BY
ABDULFATAI JIMOH

RESPONSE TO THE SECOND REVIEWER'S COMMENTS-(S2010/1335)

1. The reviewer reported that as a useful comment to the candidate, ñwhen some estrange results are observed, an explanation must be proposed. The presence of Ni (Page 75), remarked by the candidate.

Response of the candidate: The presence of insignificant trace amount of Ni as observed by the examiner in Page 75 has been explained in line 11 of page 74 (under ñCharacterization of the starting powdersò) as an impurity that present in the commercially obtained titanium hydride powder, which was discovered after the XRF test, although the manufacturer failed to mention it in their certificate of analysis, probably because it is very insignificant. The trace amount of Ni observed did not affect the properties of the final product.

2. The examiner also commented that when porosity is calculated in comparison with the theoretical density, it is necessary to confirm that the expected composition has been obtained (Page 118).

Response of the candidate: Table 4.11 (page 113) already confirmed that the expected composition has been obtained. The explanation proffered on page 118 only shows that some of the dark spots (as shown in the optical microstructure in figure 4.35-page 120) do not necessarily represent porosity because the EDS analysis of such spots reflects unreacted B_6O aggregate.