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**Effect of Vibratory and Planetary Ball Milling on Combustion Synthesis of NbAl<sub>3</sub>**

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It was seen before that combustion synthesis could be very affected by previous ball milling. In this work, vibratory and planetary ball milling of the Nb75Al mixtures were compared in terms of powder characteristics, ignition and combustion temperature, final density and microstructure of reacted pellets. Milling time and ball to powder weight ratio were fixed in both mills. Milled mixture was uniaxially compacted (cylindrical pellets) and reacted under vacuum. SEM and diffraction analysis were conducted on powder particles and reacted pellets. A stronger influence of vibratory mill action was verified. The results are shown and discussed.

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