In this work, alpha induced fission reaction of some heavy nuclei ($^{232}Th$, $^{235}$, $^{238}U$, $^{237}Np$ and $^{238}Pu$) calculated based on both fission barrier models and level density models by using Talys 1.2 code. The calculations are compared with experimental data which are available in EXFOR library. Sierk fission barrier model shows best agreement among the five fission barrier models and also calculations show that there is no any distinguish in the level density models in ($\alpha,f$) reaction of nuclei studied with $A>230$. 