

This work presents a study of microstructure and mechanical properties of the brass casting (big bell and small bell brass) that were casted by loss-wax casting process, the brass casting of Pa-Ao village Ubon Ratchathani, in order to improve process. Tested by spectrometer, chemical composition of the raw materials that have 41 HRB hardness were Cu 61.6%, Zn 33.37%, Pb 2.42%, Sn 0.42%, Ni 1.67% Fe 0.33% and Al 0.035% and of the big bell that have 58.17 HRB hardness were Cu 71.84%, Zn 17.10%, Pb 1.81%, Sn 8.27%, Ni 0.27% Fe 0.57% and Al 0.023% and of the small bell that have 52.33 HRB hardness were Cu 69.79%, Zn 23%, Pb 2.58%, Sn 2.48%, Ni 0.2% Fe 0.42% and Al 1.43%. The big bell and small bell were similar to same dendritic structure, consisting of α , β and ϵ phase. The ϵ phase and voice quality of the bell were found to be greatly affected by amount of Sn in composition.