The deformable aluminum alloys through heat treatment are subjected to quenching operation followed by natural or artificial ageing. In the paper is proposed one singular operation of heating for both operations of quenching plus ageing respectively. The tested alloy is based on aluminum and contains 4 % Cu, 1.5 % Mg and until 1.5 % Mn. These elements are making soluble compounds like: Al2Cu and AlCuMg which gives the possibility of hardness. The heating was made at the normal temperature for quenching - followed by a rapid cooling till to artificial ageing temperature and in the same time under the solubility curve in the solid state. It is considered that the isothermal maintaining gives the same processes like in the case of the common artificial ageing. After that, the samples are natural cooled till to the environmental temperature without structural changes. Based on experimental researches there were obtained structures and hardness of samples increased like there compared with the common treatment, made with two heating processes for quenching and ageing, with remarkable economy of time and increased properties.