The coefficients of new analytical forms for the deuteron wave function (DWF) in coordinate space for NijmI, NijmII, Nijm93, Reid93 and Argonne v18 potentials have been numerically calculated. The obtained wave functions do not contain any superfluous knots. The designed parameters of the deuteron are in good agreement with the experimental and theoretical data. The tensor polarization t20 calculated based on the wave functions is proportionate to the earlier published results.