Fig. S1. (Color online) The distribution of effective stress in the shaft (EK79) and disk (EP741NP) during pressure welding with a shear according to Scheme 1 (a) and Scheme 2 (b).

Fig. S2. (Color online) The distribution of effective stress in the shaft (EK79) and disk (EP975) during pressure welding with a shear according to Scheme 1 (a) and Scheme 2 (b).