

Figure 1. The hardness HV of joints versus the distribution: (a) Al-Al RFSSW joint, and (b) Al-steel RFSSW joint, and the high cycle fatigue performance at R=0: (c) fatigue life versus stress amplitude ($\Delta\sigma$) and (d) fatigue life versus $\Delta\sigma/\sigma_b$.

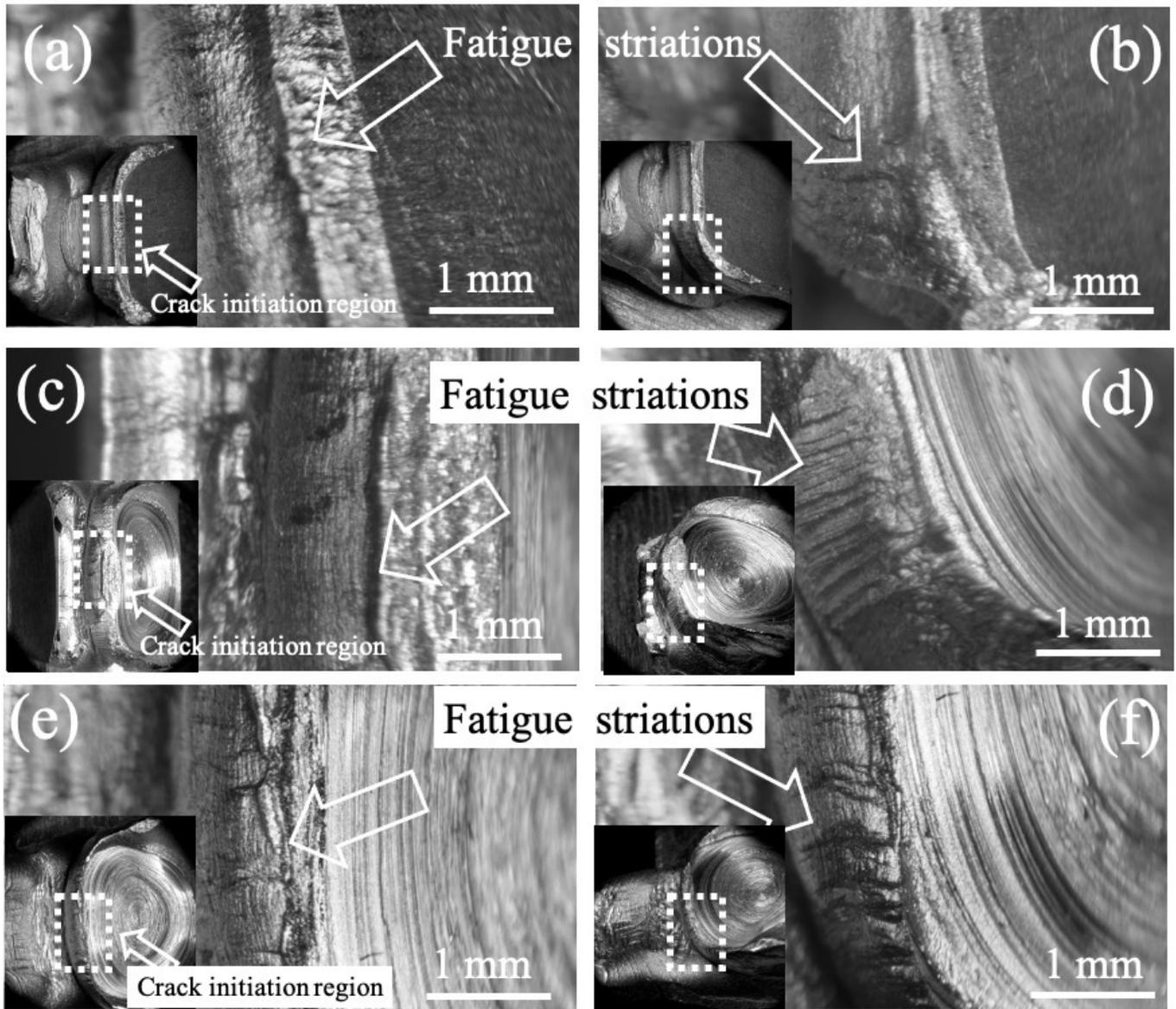


Figure 2. The detailed observation of Al-Al RFSSW joint fatigue fracture with $\Delta\sigma/\sigma_b=0.2$ (a&b), $\Delta\sigma/\sigma_b=0.3$ (c&d), $\Delta\sigma/\sigma_b=0.4$ (e&f). The macro image of the fractured joint is inserted in each figure, respectively.

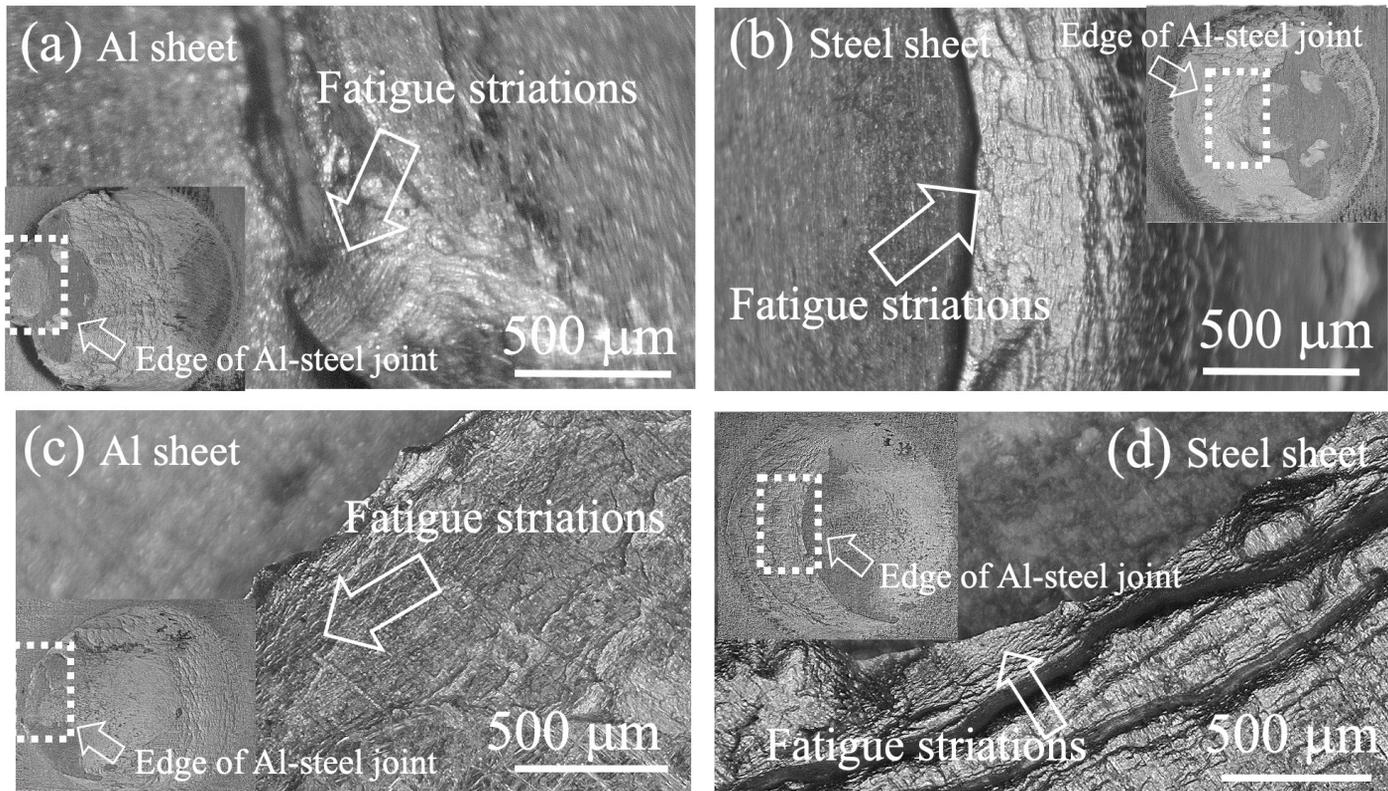


Figure 3. The detailed observation of Al-steel RFSSW joint fatigue fracture with $\Delta\sigma/\sigma_b=0.3$ (a&b) and $\Delta\sigma/\sigma_b=0.4$ (c&d). The macro image of the fractured joint and the crack initiation region (white dotted box) are inserted in each figure, respectively.