

2012

D FINITE ELEMENT ANALYSIS OF THE EFFECT OF PORE SIZE AND FORM ON STRESS CONCENTRATION FACTOR IN SPOT WELDS

Hamida Fekirini, Boualem Serier, Farida Bouafia et Sidi Ahmed Bouafia

Abstract : The work presented in this paper utilises a numerical analysis for the computation of stress concentration factor generated by the presence in the weld nugget of a pore formed during the welding process. Welded structure containing porosity is subjected to uniaxial tensile stress. The effects of geometrical parameters of the pore and the interaction pore-defect on the stress concentration factor variation have been analysed

Keywords : Finite Element Method, Stress Concentration Factor, Defect, Porosity, Spot weld, steel