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

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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