

**A TECHNIQUE FOR ASSESSING DUCTILE
FRACTURE INITIATION**

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ABSTRACT

The objectives of this project is to determine the value of J at initiation of crack growth - J_{ic} . J_{ic} is the characteristic of the materials at or near the onset of crack.

Multiple specimen test have been developed for measuring the value of J-Integral for the steel Grade 50D. These are:

- (i) standard size, And
- (ii) oversize with side grooving

The results indicate that the values of J_{ic} using standard size using Instron 8032 machine accordingly to ASTM E813-81 is 12.1 kJ/m^2 , these value is invalid. J_{ic} for oversize specimen can not be obtained because the crack extension cannot growth. That problems causes by the machine.

These technique consumed more time , materials and cost. There fore application of single test specimen method advisable for future research.

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