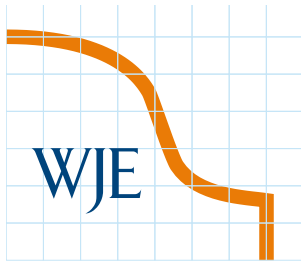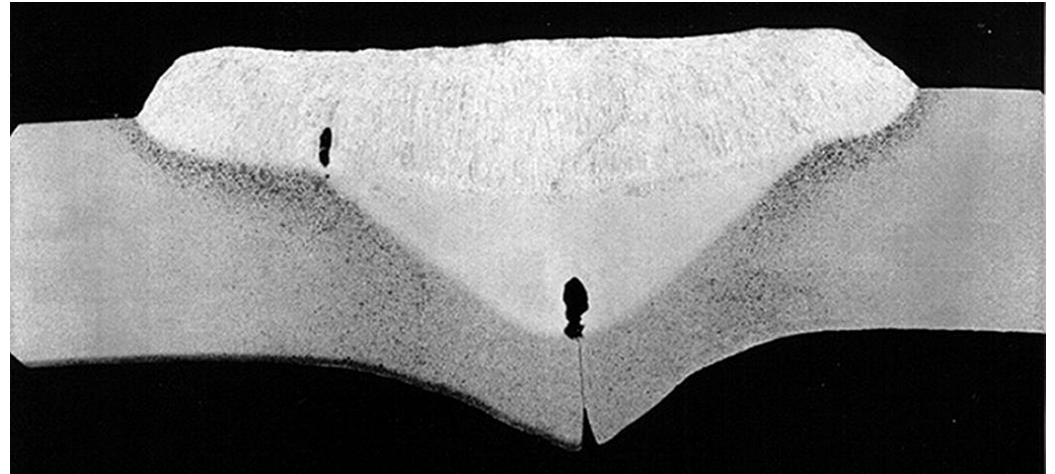# WJE CrackCalc™

API 579 Fracture Mechanics Software

Developed in-house, WJE CrackCalc™ is a software package that provides users the ability to perform fracture mechanics calculations using the methods described in API 579 / ASME FFS-1 Part 9 at much higher speeds and with more customizable options than previously available.

CrackCalc v1.0 supports basic FAD assessments, critical flaw size curves, and cyclic crack growth. Additional functionality is planned for v2.0.

DEVELOPER
Wiss, Janney, Elstner Associates (WJE)

OUTPUTS
Calculated Crack-Tip Parameter Tables

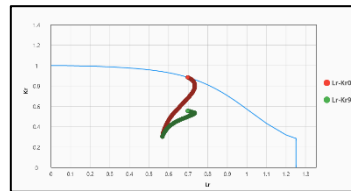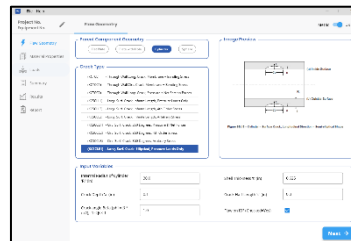Crack-Tip Stress Intensity, FAD Pass/Fail Evaluation

Microsoft Word (*.docx) Reports

REQUIREMENTS
Windows 10 or later (v1.0)

WJE CONTACT
CrackCalc@wje.com

AN INDEPENDENT SOLUTION

WJE developed the solution engine supporting CrackCalc with two major goals in mind: 1) To support powerful evaluation modes requiring repetitive or iterative solutions and 2) to provide our consulting practice with independently developed software to reduce WJE's dependence on third-party software packages.

WJE CrackCalc runs as a local instance on the user's machine, foregoing cloud computing for clients or use cases that require confidentiality.

AS AN API FOR MONTE-CARLO SIMULATIONS

The development technique used in building CrackCalc enables extraordinarily fast evaluation speeds (more than 2,000,000 FAD checks per minute) for users needing to run significant numbers of crack evaluations.

API access to the solution engine may be procured alongside basic software licenses when needed.

COMMERCIALLY AVAILABLE

WJE knows how important access to Fracture Mechanics software can be, and we will not revoke access to the software for accounts in good standing, increase per-year price for a given version, or refuse licensure–even for our competitors. WJE offers CrackCalc in both supported and unsupported license formats.

Minor updates and errata are supported.

WJE | ENGINEERS ARCHITECTS MATERIALS SCIENTISTS