



Automation of fracture and fatigue assessment procedures (BS 7910) for engineering critical assessment

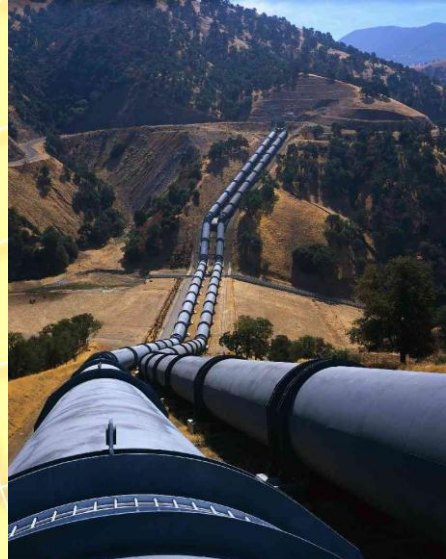
- Decision-support software designed to assist engineers in evaluating the integrity of pipelines, pressure equipment and structures containing flaws
- Rigorous application of the revised BS 7910:2005 fracture assessment procedures
- Leading software adopted by fitness-for-purpose engineers

New features

- ➔ Print assessment reports directly to PDF
- ➔ Export assessment results directly to Microsoft Excel
- ➔ Enhanced user-friendly interface
- ➔ Includes the current edition of BS 7910 in PDF format

Features and benefits

- A wide range of flaw geometries for flat plates, curved shells and bars/bolts including surface, through thickness, embedded and corner flaws
- Calculation of critical flaw dimensions, material properties and applied/residual stresses
- Allows the determination of limiting conditions for design, operation and life extension of the assessed component
- Automatic sensitivity analysis options for most input parameters for fracture calculations allowing the user to assess changes in design, operating conditions and tolerances with regard to their effect on related safety factors
- Input of user-defined reference stresses and K solutions
- Choice of SI and US units
- Charpy toughness correlation and yield strength calculation toolkit
- Substantially expanded software help program via the electronic user manual
- Technical and software support available from TWI experts



CRACKWISE® is a TWI software product

Applications

The engineering critical assessment (ECA) concept is an accepted practice and the BS 7910 procedures are routinely applied in a range of industries including:

- Pressure vessels
- Pipelines – on and offshore
- Offshore structures
- Storage tanks
- Buildings
- Bridges
- Ships
- Aircraft
- Other structural components

Minimum specification

- Pentium PIII, 512MB RAM, screen resolution 800 x 600, 50MB free disk space

Recommended specification

- Pentium 4, 1024MB RAM, screen resolution 1024 x 768, 50MB free disk space

Training

- CRACKWISE® Training Workshop – 1 day training workshop intended for engineering staff involved in fitness-for-purpose assessment
- Practical application of BS 7910 procedures for the assessment of flaws in structures – 2 ½ day course intended for structural, civil, design, maintenance, welding and inspection engineers and those responsible for optimising asset performance or risk management.

Free demonstration software

Free demonstration software is available for download from www.twisoftware.com/crackwise

TWI Software

TWI Ltd

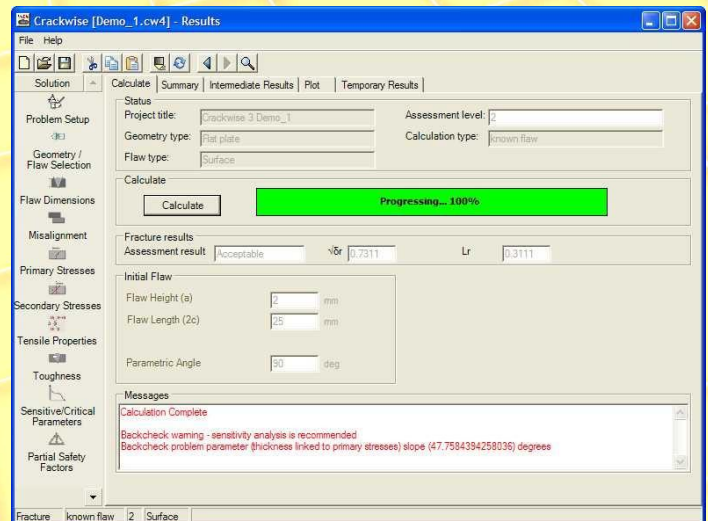
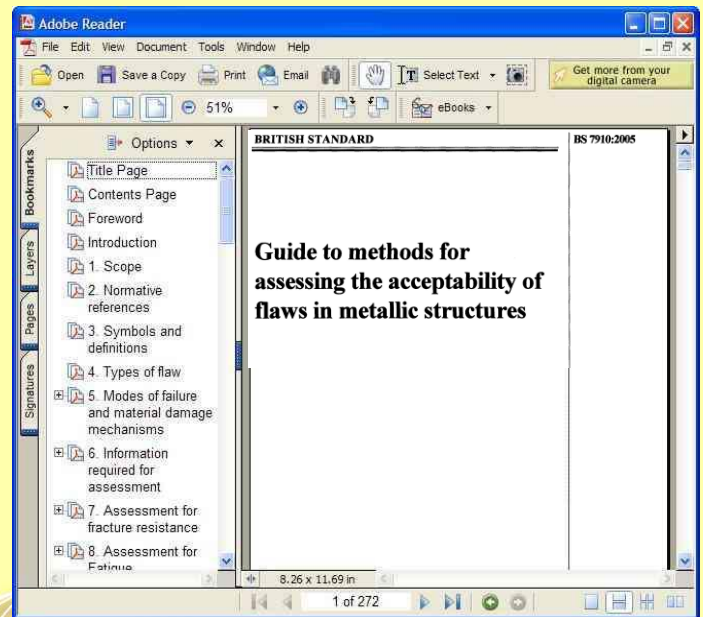
**Granta Park, Great Abington
Cambridge CB21 6AL, UK**

Tel: + 44 (0) 1223 899000

Fax: + 44 (0) 1223 892588

E-mail: crackwise@twi.co.uk

Website: www.twisoftware.com/crackwise



id	toughnessID	sr	rho	lr	rdr	kr	deltaA	gm	qb	condition	theta	Errors
1	1	0.0000	0.1117	0.3111	Infinity	0.0000	0.0000	450.0000	0.0000	Unacceptable	90.0000	✓
2	1	0.0000	0.0000	1.1252	0.6307	0.0000	0.0000	196.0122	0.0000	Critical	90.0000	
3	1	0.0000	0.0000	1.1652	0.4442	0.0000	0.0000	180.5625	0.0000	Acceptable	90.0000	
4	1	0.0000	0.0000	1.1656	0.3627	0.0000	0.0000	180.0249	0.0000	Acceptable	90.0000	
5	1	0.0000	0.0000	1.1667	0.3141	0.0000	0.0000	180.0029	0.0000	Critical	90.0000	
6	1	0.0000	0.0000	1.1667	0.2809	0.0000	0.0000	180.0029	0.0000	Critical	90.0000	
7	1	0.0000	0.0000	1.1667	0.2565	0.0000	0.0000	180.0029	0.0000	Critical	90.0000	
8	1	0.0000	0.0000	1.1667	0.2374	0.0000	0.0000	180.0029	0.0000	Critical	90.0000	
9	1	0.0000	0.0000	1.1667	0.2221	0.0000	0.0000	180.0029	0.0000	Critical	90.0000	
10	1	0.0000	0.0000	1.1667	0.2094	0.0000	0.0000	180.0029	0.0000	Critical	90.0000	
11	1	0.0000	0.0000	1.1667	0.1986	0.0000	0.0000	180.0029	0.0000	Critical	90.0000	

