

Robert A Ainsworth

List of Publications by Year in descending order

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76
papers

1,320
citations

430874

18
h-index

414414

32
g-index

77
all docs

77
docs citations

77
times ranked

419
citing authors

#	ARTICLE	IF	CITATIONS
1	High Temperature Component Life Assessment. , 1994, , .		229
2	CEGB ASSESSMENT PROCEDURE FOR DEFECTS IN PLANT OPERATING IN THE CREEP RANGE. Fatigue and Fracture of Engineering Materials and Structures, 1987, 10, 115-127.	3.4	88
3	Corrosion-fatigue: a review of damage tolerance models. International Materials Reviews, 2018, 63, 283-308.	19.3	85
4	The effect of constraint on creep fracture assessments. International Journal of Fracture, 1999, 97, 237-247.	2.2	77
5	Constraint in the Failure Assessment Diagram Approach for Fracture Assessment. Journal of Pressure Vessel Technology, Transactions of the ASME, 1995, 117, 260-267.	0.6	74
6	Some observations on creep crack growth. International Journal of Fracture, 1982, 20, 147-159.	2.2	71
7	CRACK TIP FIELDS UNDER NON-STEADY CREEP CONDITIONS?!. ESTIMATES OF THE AMPLITUDE OF THE FIELDS. Fatigue and Fracture of Engineering Materials and Structures, 1990, 13, 263-276.	3.4	69
8	Effects of residual stresses on fracture behaviour—experimental results and assessment methods. Journal of Strain Analysis for Engineering Design, 2000, 35, 307-316.	1.8	61
9	The effect of constraint on creep fracture assessments. International Journal of Fracture, 1997, 87, 139-149.	2.2	56
10	R5 procedures for assessing structural integrity of components under creep and creep-fatigue conditions. International Materials Reviews, 2006, 51, 107-126.	19.3	55
11	SINTAP defect assessment procedure for strength mis-matched structures. Engineering Fracture Mechanics, 2000, 67, 529-546.	4.3	53
12	THE USE OF A FAILURE ASSESSMENT DIAGRAM FOR INITIATION AND PROPAGATION OF DEFECTS AT HIGH TEMPERATURES. Fatigue and Fracture of Engineering Materials and Structures, 1993, 16, 1091-1108.	3.4	40
13	THE EFFECT OF GEOMETRY ON THE DEVELOPMENT OF CREEP SINGULAR FIELDS FOR DEFECTS UNDER STEP-LOAD CONTROLLED LOADING. Fatigue and Fracture of Engineering Materials and Structures, 1992, 15, 229-240.	3.4	28
14	Recommendations for a modification of ASTM E 1457 to include creep-brittle materials. Engineering Fracture Mechanics, 1999, 62, 123-142.	4.3	26
15	Design and assessment of components subjected to creep. Journal of Strain Analysis for Engineering Design, 1994, 29, 201-207.	1.8	23
16	Flaw Assessment Procedure for High-Temperature Reactor Components. Journal of Pressure Vessel Technology, Transactions of the ASME, 1992, 114, 166-170.	0.6	22
17	Approximate creep rupture lifetimes for butt welded ferritic steel pressurised pipes. European Journal of Mechanics, A/Solids, 2000, 19, 223-258.	3.7	21
18	Blunt defect assessment in the framework of the failure assessment diagram. International Journal of Pressure Vessels and Piping, 2016, 146, 39-54.	2.6	19

#	ARTICLE	IF	CITATIONS
19	Effect of thermal ageing on creep and oxidation behaviour of Type 316H stainless steel. Materials at High Temperatures, 2015, 32, 592-606.	1.0	18
20	Defect Assessments at Elevated Temperature. Journal of Pressure Vessel Technology, Transactions of the ASME, 1983, 105, 263-268.	0.6	16
21	Approximate J estimates for circumferential cracked pipes under primary and secondary stresses. Engineering Fracture Mechanics, 2009, 76, 2109-2125.	4.3	16
22	CRACK TIP FIELDS UNDER NON-STEADY CREEP CONDITIONS?II. ESTIMATES OF ASSOCIATED CRACK GROWTH. Fatigue and Fracture of Engineering Materials and Structures, 1990, 13, 277-285.	3.4	15
23	Simplified J-estimations based on the Engineering Treatment Model for homogeneous and mismatched structures. Engineering Fracture Mechanics, 2001, 68, 9-27.	4.3	15
24	Estimation of the transient creep parameter C(t) under combined mechanical and thermal stresses. Engineering Fracture Mechanics, 2010, 77, 685-704.	4.3	15
25	Approximate J estimates for combined primary and secondary stresses with large elastic follow-up. International Journal of Pressure Vessels and Piping, 2013, 111-112, 217-231.	2.6	11
26	A review of a time-dependent fracture life law (or model) based on a proposed multi-scale analysis. Strength, Fracture and Complexity, 2014, 8, 205-218.	0.3	10
27	Biaxial stress effects on estimating J under combined mechanical and thermal stresses. International Journal of Pressure Vessels and Piping, 2011, 88, 365-374.	2.6	9
28	Simplified estimates of the creep crack growth parameter C(t) under primary/secondary stresses using the enhanced reference stress method. International Journal of Pressure Vessels and Piping, 2013, 110, 32-41.	2.6	8
29	The Treatment of Constraint Effects in Integrity Evaluations. , 2005, , 345.		7
30	The relationship between Ct and contour integrals under small-scale transient creep. Engineering Fracture Mechanics, 2010, 77, 565-574.	4.3	7
31	The treatment of secondary strains within a strain-based failure assessment diagram. International Journal of Pressure Vessels and Piping, 2013, 104, 14-20.	2.6	7
32	THE DEVELOPMENT OF CREEP SINGULAR FIELDS FOR DEFECTS IN THERMALLY LOADED STRUCTURES. Fatigue and Fracture of Engineering Materials and Structures, 1992, 15, 685-693.	3.4	6
33	Creep elastic follow-up factors under multi-axial displacement-controlled loading. International Journal of Mechanical Sciences, 2012, 57, 54-62.	6.7	6
34	Fatigue Life Estimation of Pitted Specimens by Means of an Integrated Fracture Mechanics Approach. , 2016, , .		6
35	Defect Assessment Procedure for Low to High Temperature Range. , 2003, , 105.		5
36	Creep elastic follow-up factors under combined primary and secondary stresses. International Journal of Pressure Vessels and Piping, 2013, 101, 12-22.	2.6	5

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37	Developments in Creep Fracture Assessments within the R5 Procedure. Solid Mechanics and Its Applications, 2001, , 321-330.	0.2	5
38	Creep Crack Growth Under Complex Loading. Journal of ASTM International, 2011, 8, 1-22.	0.2	5
39	The effect of material ductility on notch fracture resistance: Numerical study. Theoretical and Applied Fracture Mechanics, 2021, 112, 102874.	4.7	4
40	General timeâ€dependent C(t) and J(t) estimation equations for elasticâ€plasticâ€creep fracture mechanics analysis. Fatigue and Fracture of Engineering Materials and Structures, 2016, 39, 1092-1104.	3.4	3
41	Stress Redistribution Effects on Creep Crack Growth. , 1989, , 13-21.		3
42	Use of R5 in plant defect assessment. Materials at High Temperatures, 1998, 15, 299-302.	1.0	2
43	Analysis methods for the practical application of fracture mechanics. Journal of Physics: Conference Series, 2009, 181, 012003.	0.4	2
44	Ductile Fracture Assessment of Plates Under Biaxial Loading. , 2014, , .		2
45	Characterization of the Effect of Notch Bluntness on Hydrogen Embrittlement and Fracture Behavior Using FE Analyses. , 2015, , .		2
46	A constraint correction method based on use of a single test specimen. Engineering Fracture Mechanics, 2021, 247, 107609.	4.3	2
47	R5 and British Standards defect assessment procedures. Materials at High Temperatures, 1998, 15, 291-297.	1.0	1
48	Assessment of Creep and Creep-Fatigue Crack Growth Following the R5 Procedures. , 2003, , 97.		1
49	Use of advanced creep data for assessment of plant life and safety. Materials at High Temperatures, 2004, 21, 11-15.	1.0	1
50	Estimation of the V-Factor for Circumferentially Cracked Pipes Under Combined Thermal and Mechanical Stresses Using a Strain-Based Failure Assessment Diagram. , 2011, , .		1
51	FE validation of R6 elasticâ€plastic J estimation for circumferentially cracked pipes under mechanical and thermal loadings. Engineering Fracture Mechanics, 2014, 124-125, 64-79.	4.3	1
52	Assessing Fatigue Endurance Limit of Pitted Specimens by Means of an Integrated Fracture Mechanics Approach. , 2015, , .		1
53	Effect of tensile properties on time-dependent C(t) and J(t) integrals in elastic-plastic-creep FE analysis. International Journal of Pressure Vessels and Piping, 2016, 146, 171-178.	2.6	1
54	New Equation for the Plastic Correction Factor \hat{I} for J-Integral Determination from Test Results of Three-Point-Bend Specimens. Materials Performance and Characterization, 2014, 3, 125-143.	0.3	1

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55	A Probabilistic Application of the R6 Detectable Leakage Leak-Before-Break Procedure. , 2002, , 97.		0
56	Developments in the Flaw Assessment Procedures of R6 Revision 4 and BS7910. , 2003, , 19.		0
57	The Application of the Linear Matching Method to the Life Assessment Method R5: A Comparison. , 2005, , 241.		0
58	R5 Procedures for Assessing the High Temperature Response of Structures: Current Status and Future Developments. , 2007, , 403.		0
59	Recent Developments in High Temperature Codes. , 2009, , .		0
60	Estimation of V Factor Under Combined Thermal and Mechanical Stress for Circumferential Cracked Pipes. , 2009, , .		0
61	A Prediction of V-Factor for the Cracked Pipe Under Combined Mechanical and Thermal Stresses With Elastic Follow-Up. , 2010, , .		0
62	Elastic Follow-Up Factors to Estimate C(t) Under Secondary Loading. , 2012, , .		0
63	Elastic-Plastic J-Estimation for Circumferentially Cracked Pipes Under Combined Mechanical and Thermal Loadings. , 2013, , .		0
64	An Overview of IAEA Technical Guidelines on Fluid-Structure Interaction. , 2014, , .		0
65	Constraint Effects in Ductile Fracture on J-Resistance Curve for Full-Scale Cracked Pipes and Fracture Toughness Testing Specimens. , 2014, , .		0
66	Design and Maintenance in an IAEA Technical Guidelines on Fluid-Structure Interaction. , 2014, , .		0
67	Constraint Based Assessments of Large-Scale Cracked Straight Pipes and Elbows. , 2015, , .		0
68	Comparison of R6 and A16 J estimation methods under combined mechanical and thermal loads with FE results. International Journal of Pressure Vessels and Piping, 2015, 135-136, 12-25.	2.6	0
69	Constraint Solutions for Cracked Plates and Cylinders. , 2016, , .		0
70	Dissimilar Metal Analysis and Issues. , 2016, , .		0
71	Design and Assessment for Creep-Fatigue and Creep-Fatigue Crack Growth. , 2016, , .		0
72	UK Technical Advisory Group on the Structural Integrity of High Integrity Plant: Overview of Recent Activities. , 2009, , .		0

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73	Elastic Follow-Up Factor for Cruciform Plate Under Bi-Axial Loading. , 2011, , .		0
74	The Effect of Biaxial Loading on the Limit Load of Cracked Plates. , 2015, , .		0
75	Comparison of Plastic Work Curvature Methods for Assessing the Collapse Load of a Structure. , 2015, , .		0
76	The Influence of Multiaxial Stress Relaxation on Component Creep Damage Accumulation. Journal of Pressure Vessel Technology, Transactions of the ASME, 2021, 143, .	0.6	0