Jayanta Chattopadhyay

List of Publications by Year
in descending order

#	Article	IF	Citations
1	Proposing an improved cyclic plasticity material model for assessment of multiaxial response of low C-Mn steel. International Journal of Fatigue, 2021, 142, 105888.	5.7	15
2	A study of hydride precipitation in zirconium. Mechanics of Materials, 2021, 155, 103773.	3.2	4
3	Fracture toughness behavior of dissimilar metal (SA508 Gr.3 Class 1 and SA312 Type 304LN) weld joint: With and without stress relieving treatment. Fatigue and Fracture of Engineering Materials and Structures, 2021, 44, 2462-2474.	3.4	2
4	New J-CTOD empirical correlations for p-SPT specimens. Engineering Fracture Mechanics, 2021, 254, 107934.	4.3	2
5	Review of Various Hypotheses Used to Correct Notch Elastic Stress/Strain for Local Plasticity. Lecture Notes in Mechanical Engineering, 2021, , 121-134.	0.4	1
6	Assessment of Cyclic Plasticity Behaviour of Primary Piping Material of Indian PHWRs Under Multiaxial Loading Scenario. Lecture Notes in Mechanical Engineering, 2021, , 227-247.	0.4	2
7	Experimental evaluation of orientation and temperature dependent material stress-strain curves of Zr2.5%Nb Indian pressure tube material and development of a suitable anisotropic material model. Journal of Nuclear Materials, 2020, 530, 151970.	2.7	4
8	Fracture toughness evaluation of axially-cracked tubular thin-walled specimens of Zircaloy-4 and its implications for integrity analysis of nuclear fuel clad. Theoretical and Applied Fracture Mechanics, 2020, 106, 102449.	4.7	3
9	Stress triaxiality based transferability of cohesive zone parameters. Engineering Fracture Mechanics, 2020, 224, 106789.	4.3	6
10	Analysis of p-SPT specimens using Gurson parameters ascertained by Artificial Neural Network. Engineering Fracture Mechanics, 2020, 240, 107324.	4.3	12
11	Validating generality of recently developed critical plane model for fatigue life assessments using multiaxial test database on seventeen different materials. Fatigue and Fracture of Engineering Materials and Structures, 2020, 43, 1327-1352.	3.4	13
12	Phenomenological modelling of flow behaviour of 20MnMoNi55 reactor pressure vessel steel at cryogenic temperature with different strain rates. Defence Technology, 2019, 15, 326-337.	4.2	8
13	Development of new critical plane model for assessment of fatigue life under multi-axial loading conditions. International Journal of Fatigue, 2019, 129, 105209.	5.7	24
14	Master Curve of 20MnMoNi55 Steel From Miniature CT Specimens. Procedia Structural Integrity, 2019, 14, 403-409.	0.8	0
15	Determination and verification of triaxiality dependent cohesive zone parameters of SA333 Grade 6 steel. Procedia Structural Integrity, 2019, 14, 521-528.	0.8	0
16	Determination of J-initiation toughness using pre-cracked small punch test specimens. Procedia Structural Integrity, 2019, 14, 529-536.	0.8	5
17	Material modelling for dynamic strain ageing phenomenon of alloy 20MnMoNi55. Materials Science and Technology, 2019, 35, 2200-2210.	1.6	0
18	New CMOD based Î·-factor equations considering R-O strain hardening for circumferential through-wall cracked pipe under bending moment. Theoretical and Applied Fracture Mechanics, 2019, 103, 102264.	4.7	3

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19	Detection of embrittlement in low alloy steels due to thermal aging by small punch test. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 759, 181-194.	5.6	8
20	Hybrid approach for calculation of J-R curve using R6. Engineering Fracture Mechanics, 2019, 215, 16-35.	4.3	0
21	Plastic eta factor and blunting line for characterization of fracture toughness of dissimilar metal weld. Fatigue and Fracture of Engineering Materials and Structures, 2019, 42, 1191-1202.	3.4	1
22	Development of new Î· pl , Î² and limit load equations to evaluate fracture parameters of pre-cracked small punch test specimens. Engineering Fracture Mechanics, 2018, 195, 80-91.	4.3	1
23	Displacement based calculation of fracture toughness for cracked pipes using R6 method. Theoretical and Applied Fracture Mechanics, 2018, 93, 211-221.	4.7	3
24	To Study the Effect of Loss of Constraint on Reference Temperature (T) With the Help of Q-Stress, Triaxiality Ratio and T-Stress. Materials Today: Proceedings, 2018, 5, 27260-27268.	1.8	1
25	Effect of Dynamic Strain Aging on Tensile Deformation of 20MnMoNi55 Alloy. Journal of Materials Engineering and Performance, 2018, 27, 6468-6478.	2.5	2
26	Assessment of fracture resistance data using p-SPT specimens. Theoretical and Applied Fracture Mechanics, 2018, 98, 167-177.	4.7	6
27	New Î·-factor equation for evaluation of J-integral of shallow cracked CT specimen considering R-O material strain hardening. Theoretical and Applied Fracture Mechanics, 2018, 97, 98-107.	4.7	7
28	Implementation of Theory of Plasticity for Parametric Study on the Relation Between Thickness Change and Central Deflection and Fracture Point Location During Small Punch Test. Procedia Engineering, 2017, 173, 1101-1107.	1.2	2
29	Numerical development of a new correlation between biaxial fracture strain and material fracture toughness for small punch test. Journal of Nuclear Materials, 2017, 486, 332-338.	2.7	11
30	New load-line-displacement based Î· factor equation to evaluate J -integral for SE(B) specimen considering material strain hardening and no-crack displacement effect. Engineering Fracture Mechanics, 2017, 179, 165-176.	4.3	6
31	Effect of deuterium content on fracture toughness of Zr-2.5Nb pressure tube material in the temperature range of ambient to 300ÂÂ°C. Journal of Nuclear Materials, 2017, 496, 182-192.	2.7	10
32	Fracture toughness prediction of reactor grade materials using pre-notched small punch test specimens. Journal of Nuclear Materials, 2017, 495, 351-362.	2.7	11
33	On the correlation between minimum thickness and central deflection during small punch test. Journal of Nuclear Materials, 2016, 475, 37-45.	2.7	18
34	Determination of Fatigue Properties Using Miniaturized Specimens. Transactions of the Indian Institute of Metals, 2016, 69, 609-615.	1.5	5
35	Numerical evaluation of J-R curve using small punch test data. Theoretical and Applied Fracture Mechanics, 2016, 86, 292-300.	4.7	11
36	Application of failure assessment diagram methods to cracked straight pipes and elbows. International Journal of Pressure Vessels and Piping, 2016, 148, 26-35.	2.6	9

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37	Limit Load Equations for Miniature Single Edge Notched Tensile Specimens. Transactions of the Indian Institute of Metals, 2016, 69, 641-646.	1.5	6
38	Fracture studies on carbon steel elbows having part-through notch with and without internal pressure. International Journal of Pressure Vessels and Piping, 2016, 138, 19-30.	2.6	1
39	Application of R6 failure assessment method to obtain fracture toughness. Theoretical and Applied Fracture Mechanics, 2016, 81, 67-75.	4.7	4
40	Size independent fracture energy evaluation for plain cement concrete. Fatigue and Fracture of Engineering Materials and Structures, 2015, 38, 789-798.	3.4	7
41	Characterization of concrete specimen fracture response: 2D numerical study. Structures, 2015, 1, 39-50.	3.6	1
42	Determination of reference transition temperature of In-RAFMS in ductile brittle transition regime using numerically corrected Master Curve approach. Engineering Fracture Mechanics, 2015, 142, 79-92.	4.3	13
43	Evaluation and effect of loss of constraint on master curve reference temperature of 20MnMoNi55 steel. Engineering Fracture Mechanics, 2015, 136, 142-157.	4.3	16
44	A comparative study on three approaches to investigate the size independent fracture energy of concrete. Engineering Fracture Mechanics, 2015, 138, 49-62.	4.3	17
45	Fracture studies of straight pipes subjected to internal pressure andÂbending moment. International Journal of Pressure Vessels and Piping, 2015, 134, 56-71.	2.6	8
46	Investigation on fracture parameters of concrete through optical crack profile and size effect studies. Engineering Fracture Mechanics, 2015, 147, 119-139.	4.3	28
47	Unloading compliance correlations for throughwall circumferentially cracked elbow to measure crack growth during fracture tests. Engineering Fracture Mechanics, 2015, 147, 1-12.	4.3	1
48	New unloading compliance correlation for throughwall circumferentially cracked pipe to measure crack growth during fracture tests. Fatigue and Fracture of Engineering Materials and Structures, 2014, 37, 928-936.	3.4	2
49	An insight of the structure of stress fields for stationary crack in strength mismatch weld under plane strain mode-I loading â€" Part II: Compact tension and middle tension specimens. International Journal of Mechanical Sciences, 2014, 87, 281-296.	6.7	5
50	Development of new correlations for improved integrity assessment of pipes and pipe bends. Nuclear Engineering and Design, 2014, 269, 108-115.	1.7	13
51	A proposal on cyclic tearing based stability assurance for LBB demonstration of nuclear piping. International Journal of Pressure Vessels and Piping, 2014, 119, 69-86.	2.6	8
52	An insight of the structure of stress fields for stationary crack in strength mismatch weld under plane strain mode-I loadingâ€"Part I: Pure bending specimen. International Journal of Mechanical Sciences, 2012, 62, 89-102.	6.7	5
53	Transferability of specimen J-R curve to straight pipe with circumferential surface flaw. Fatigue and Fracture of Engineering Materials and Structures, 2012, 35, 476-487.	3.4	5
54	Estimation of fracture toughness of 20MnMoNi55 steel in the ductile to brittle transition region using master curve method. Nuclear Engineering and Design, 2011, 241, 2831-2838.	1.7	20

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55	Characterisation of crack tip stresses in elastic-perfectly plastic material under mode-I loading. International Journal of Mechanical Sciences, 2011, 53, 207-216.	6.7	1
56	Effect of constraint on fracture parameters of piping materials. Transactions of the Indian Institute of Metals, 2010, 63, 541-545.	1.5	3
57	Improved integrity assessment equations of pipe bends. International Journal of Pressure Vessels and Piping, 2009, 86, 454-473.	2.6	26
58	Plastic collapse moment equations of throughwall axially cracked elbows subjected to combined internal pressure and in-plane bending moment. Engineering Fracture Mechanics, 2009, 76, 1380-1385.	4.3	4
59	On the equivalence of slip-line fields and work principles for rigidâ€"plastic body in plane strain. International Journal of Solids and Structures, 2008, 45, 6416-6435.	2.7	9
60	Evaluation of critical fracture energy parameter Gfr and assessment of its transferrability. Engineering Fracture Mechanics, 2008, 75, 253-274.	4.3	7
61	Plastic collapse moment equations of throughwall axially cracked elbows subjected to in-plane bending moment. Engineering Fracture Mechanics, 2008, 75, 2260-2275.	4.3	17
62	Elasticâ€"plastic J and COD estimation schemes for 90Â° elbow with throughwall circumferential crack at intrados under in-plane opening moment. International Journal of Fracture, 2007, 144, 227-245.	2.2	6
63	Improved J and COD estimation by GE/EPRI method in elastic to fully plastic transition zone. Engineering Fracture Mechanics, 2006, 73, 1959-1979.	4.3	31
64	Some recent developments on integrity assessment of pipes and elbows. Part I: Theoretical investigations. International Journal of Solids and Structures, 2006, 43, 2904-2931.	2.7	24
65	Some recent developments on integrity assessment of pipes and elbows. Part II: Experimental investigations. International Journal of Solids and Structures, 2006, 43, 2932-2958.	2.7	27
66	New plastic collapse moment equations of defect-free and throughwall circumferentially cracked elbows subjected to combined internal pressure and in-plane bending moment. Engineering Fracture Mechanics, 2006, 73, 829-854.	4.3	58
67	Transferability of fracture parameters from specimens to component level. International Journal of Pressure Vessels and Piping, 2005, 82, 386-399.	2.6	33
68	Elasticâ€"plastic J and COD estimation schemes for throughwall circumferentially cracked elbow under in-plane closing moment. Engineering Fracture Mechanics, 2005, 72, 2186-2217.	4.3	25
69	On the transfer of specimen J-R curve to piping components with throughwall circumferential flaw. Fatigue and Fracture of Engineering Materials and Structures, 2005, 28, 779-794.	3.4	5
70	Fracture experiments on through wall cracked elbows under in-plane bending moment: Test results and theoretical/numerical analyses. Engineering Fracture Mechanics, 2005, 72, 1461-1497.	4.3	47
71	Closed-Form Collapse Moment Equations of Throughwall Circumferentially Cracked Elbows Subjected to In-Plane Bending Moment. Journal of Pressure Vessel Technology, Transactions of the ASME, 2004, 126, 307-317.	0.6	54
72	Limit load of throughwall cracked elbows: comparison of test results with theoretical predictions. Fatigue and Fracture of Engineering Materials and Structures, 2004, 27, 1091-1103.	3.4	25

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73	The effect of non-crack component on critical fracture energy of ductile material. International Journal of Pressure Vessels and Piping, 2004, 81, 345-353.	2.6	3
74	Load bearing capacity of flawed piping components-comparison of experiment with calculation. International Journal of Pressure Vessels and Piping, 2004, 81, 599-608.	2.6	9
75	New `Î·pl' and `Î³' functions to evaluate Jâ€“R curve from cracked pipes and elbows. Part II: experimental and numerical validation. Engineering Fracture Mechanics, 2004, 71, 2661-2675.	4.3	11
76	New `Î·pl' and `Î³' functions to evaluate Jâ€“R curve from cracked pipes and elbows. Part I: theoretical derivation. Engineering Fracture Mechanics, 2004, 71, 2635-2660.	4.3	18
77	J-R Curves From Through-Wall Cracked Elbow Subjected to In-Plane Bending Moment. Journal of Pressure Vessel Technology, Transactions of the ASME, 2003, 125, 36-45.	0.6	9
78	Transferability of specimen Jâ€“R curve to straight pipes with throughwall circumferential flaws. International Journal of Pressure Vessels and Piping, 2002, 79, 127-134.	2.6	44
79	The effect of internal pressure on in-plane collapse moment of elbows. Nuclear Engineering and Design, 2002, 212, 133-144.	1.7	28
80	Derivation of â€˜Î³â€™ parameter from limit load expression of cracked component to evaluate Jâ€“R curve. International Journal of Pressure Vessels and Piping, 2001, 78, 401-427.	2.6	32
81	Numerical investigations of crack-tip constraint parameters in two-dimensional geometries. International Journal of Pressure Vessels and Piping, 2000, 77, 345-355.	2.6	17
82	Experimental and analytical study of three point bend specimen and throughwall circumferentially cracked straight pipe. International Journal of Pressure Vessels and Piping, 2000, 77, 455-471.	2.6	67
83	Closed-Form Collapse Moment Equations of Elbows Under Combined Internal Pressure and In-Plane Bending Moment. Journal of Pressure Vessel Technology, Transactions of the ASME, 2000, 122, 431-436.	0.6	92
84	Leak-before-break qualification of primary heat transport piping of 500MWe Tarapur atomic power plant. International Journal of Pressure Vessels and Piping, 1999, 76, 221-243.	2.6	35
85	Tensile and fracture properties evaluation of PHT system piping material of PHWR. International Journal of Pressure Vessels and Piping, 1998, 75, 271-280.	2.6	39
86	Deterministic assessment of reactor pressure vessel integrity under pressurised thermal shock. International Journal of Pressure Vessels and Piping, 1998, 75, 1055-1064.	2.6	8
87	Limit load analysis and safety assessment of an elbow with a circumferential crack under a bending moment. International Journal of Pressure Vessels and Piping, 1995, 62, 109-116.	2.6	16
88	A database to evaluate stress intensity factors of elbows with throughwall flaws under combined internal pressure and bending moment. International Journal of Pressure Vessels and Piping, 1994, 60, 71-83.	2.6	24
89	Validation of notch stress estimation schemes for low Câ€“Mn steel. Fatigue and Fracture of Engineering Materials and Structures, 0, , .	3.4	1
90	Eta plastic correlation to evaluate crack tip opening displacement of preâ€cracked small punch test specimen using experimental data. Fatigue and Fracture of Engineering Materials and Structures, 0, , .	3.4	0