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Nonstationary waves in an inelastic disk under impulsive radial loading

Andrushko N.F.[a]; Senchenkov I.K.[a]; Boichuk E.V.[b]
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Nonstationary axisymetric waves in a disk excited by an impulsive radial load are analyzed numerically. The nonlinear deformation of the material is described by the Bodner-Partom model. The model parameters are derived from experimental data for samples subjected to tension followed by compression over a wide range of strain rates. The temporal and spatial characteristics of the wave process are studied. The influence of hardening on wave focusing and residual strain distribution is examined. © 2005 Springer Science+Business Media, Inc.

Ключевые слова автора

Disk; Finite-element method; Impulsive loading; Nonstationary waves; Physically nonlinear material

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Prentice-Hall, Englewood Cliffs, New Jersey

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Analysis of uniaxial tension/compression diagrams for copper and AMg-6 alloy
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(1971) *The Finite-element Method in Engineering Science*. Цитировано 3827 раз.
McGraw-Hill, New York

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(1987) *Explosion Welding [in Russian]*. Цитировано 12 раз.
Mashinostroenie, Moscow

☐ 6 Kuz'minov, S.A.
(1974) *Weld-induced Deformation in Ship Hull Structures [in Russian]*
Sudostroenie, Leningrad

☐ 7 Mehta, P.K., Davids, N.
A direct numerical analysis method for cylindrical and spherical elastic waves
(1966) *AIAA Journal*, 4 (1), pp. 112-117. Цитировано 16 раз.
doi: 10.2514/3.3393
View at Publisher

☐ 8 Motovilovets, I.A., Kozlov, V.I.
(1987) *Mechanics of Coupled Fields in Structural Members [in Russian]*, 1.
Thermoelasticity, of the five-volume series, Naukova Dumka, Kiev

☐ 9 Rajendran, A.M., Bless, S.J., Dawicke, D.S.
Evaluation of bodner-partom model parameters at high strain rate
(1986) *Journal of Engineering Materials and Technology, Transactions of the ASME*, 108 (1), pp. 75-80. Цитировано 19 раз.
doi: 10.1115/1.3225845
View at Publisher

☐ 10 (1992) *Development of Welded Metal Structures [in Russian]*
M. M. Zherbin (ed.), Naukova Dumka, Kiev

☐ 11 Talypov, G.B.
(1968) *Plasticity and Strength of Steel under Complex Loading [in Russian]*. Цитировано 30 раз.
Izd. Leningr. Univ., Leningrad

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(1987) *Solving Ordinary Differential Equations I - Nonstiff Problems*. Цитировано 1767 раз.
Springer Verlag, Berlin

☐ 13 Kharchenko, V.V.
(1999) *Simulation of the Fast Viscoplastic Deformation of Materials [in Russian]*
Logos, Kiev

☐ 14 Shevchenko, Yu.N., Piskun, V.V.
Axisymmetric thermoelastoplastic stress state of isotropic solids of revolution under impulsive loading
(2003) *International Applied Mechanics*, 39 (5), pp. 546-555. Цитировано 6 раз.
doi: 10.1023/A:1025135524982
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☐ 15 Brar, N.S., Hopkins, A., Laber, N.W.
Laser shock peening oftitanium 6-4 alloy
(1999) *Proc. Conf. American Physical Society on Shock Compression of Condensed Matter, Part 1*, pp. 435-438. Цитировано 8 раз.
Merville, New York

☐ 16 Bodner, S.
(2000) *Unified Plasticity - An Engineering Approach (Final Report)*. Цитировано 26 раз.
Faculty of Mechanical Engineering, Technion (Israel Institute of Technology), Haifa, Israel

☐ 17 Bodner, S.R., Symonds, P.S.
Experiments on viscoplastic response of circular plates to impulsive loading
(1979) *Journal of the Mechanics and Physics of Solids*, 27 (2), pp. 91-113. Цитировано 66 раз.
doi: 10.1016/0022-5096(79)90013-9
View at Publisher

☐ 18 Espinosa, H.D., Zavattieri, P.D.
Modelling of ceramic microstructures: Dynamic damage initiation and evolution
Proc. Conf. American Physical Society on Shock Compression of Condensed Matter, pp. 333-338. Цитировано 13 раз.
Merville, New York, Part 1 1999, pp.

☐ 19 Gilat, A., Tsai, J.
Application of bodner viscoplastic theory to pressure-shear plate impact experiment
(1990) *Journal of Engineering Materials and Technology, Transactions of the ASME*, 112 (1), pp. 52-55.
doi: 10.1115/1.2903186
View at Publisher

☐ 20 (1999) *Proc. Conf. American Physical Society on Shock Compression of Condensed Matter*
(Snowbird, Utah, June 27-July 2), Part 1, AIP Conf. Proc., Merville, New York

☐ 21 (1999) *Proc. Conf. American Physical Society on Shock Compression of Condensed Matter*, pp. 645-1294.
(Snowbird, Utah, June 27-July 2), Part 2, AIP Conf. Proc., Merville, New York

☐ 22 Senchenkov, I.K., Tabieva, G.A.
Modeling the reconditioning of worn-out hollow cylindrical machine parts by thermomechanical deformation
(2003) *International Applied Mechanics*, 39 (1), pp. 110-115. Цитировано 4 раз.
doi: 10.1023/A:1023680403578
View at Publisher

☐ 23 Senchenkov, I.K., Zhuk, Y.A., Karnaukhov, V.G.
Modeling the thermomechanical behavior of physically nonlinear materials under monoharmonic loading
(2004) *International Applied Mechanics*, 40 (9), art. no. 1, pp. 943-969. Цитировано 43 раз.
doi: 10.1007/s10778-005-0001-z
View at Publisher

☐ 24 Smith, I.M., Griffiths, D.V.
(1997) *Programming the Finite Element Method*. Цитировано 1129 раз.
John Wiley & Sons, Chichester, New York

☐ 25 Stoffel, M., Schmidt, R., Weichert, D.
Shock wave-loaded plates
(2001) *International Journal of Solids and Structures*, 38 (42-43), pp. 7659-7680. Цитировано 62 раз.
doi: 10.1016/S0020-7683(01)00038-5
View at Publisher

☐ 26 Rubin, M.B.
Efficient time integration of a viscoplastic model for shock waves
(1990) *Journal of Applied Physics*, 68 (3), pp. 1356-1358. Цитировано 3 раз.
doi: 10.1063/1.346682
View at Publisher

☐ 27 Zhuk, Ya.A., Senchenkov, I.K.
Modelling the stationary vibrations and dissipative heating of thin-walled inelastic elements with piezoactive layers
(2004) *International Applied Mechanics*, 40 (5), pp. 546-556. Цитировано 29 раз.
doi: 10.1023/B:INAM.0000037302.96867.2c
View at Publisher

☐ 28 Yano, K., Harie, Y.
Discrete element modeling of shock-induced phase transition in iron
(1999) *Proc. Conf. American Physical Society on Shock Compression of Condensed Matter, Part 1*, pp. 287-290. Цитировано 3 раз.
Merville, New York

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