The Die Design Change Management System of Symmetry Axial Products

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ABSTRACT

Now a day, product life cycle towards short development time for rapid marketing. The need of integration change management of product design and its related tooling becomes more important than before. In this paper, the axial symmetric parts formed by deep drawing are illustrated by using parametrically feature-based notion. It study probing into part main, can divide for, 1. Application of SolidWorks API procedure function. 2. Set up the attribute database of the products; use in order to design the change. 3. Set up rule database, constrained terms, and geometry change of design change. 4. Geometry among the characteristic is verified constrainedly and relatedly.

Keywords : feature, press die components, design change, geometry variation

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REFERENCES

[1] T. Kandikjan, J.J.Shah, J.K.Davidson," A mechanism for validating dimensioning and tolerancing schemes in CAD systems", Computer-Aided Design, 2001.

[2] O. W.Salomons, F.J.Haalboom, H.J.Jonge Poerink, F.van Slooten, F.J.A.M.van Houten , H.J.J. Kals , "A computer aided tolerancing tool I: Tolerance specification", Computers in Industry, 31, pp.161 - 174, 1996.

[3] O. W.Salomons, F.J.Haalboom, H.J.Jonge Poerink, F.van Slooten, F.J.A.M.van Houten, H.J.J. Kals , " A computer aided tolerancing toolII : Tolerance analysis " , Computers in Industry, 31, pp.175- 186, 1996.

[4] Henderson, M.R. and Mutsi, S., " Automated Group Technology part coding from Three-Dimensional CAD databases", Transactions of ASME journal of Engg, for Industry. Vol. 110, pp.278-287,1988.

[5] Shah, J. and Bhatnagar, A., " Group Technology Classification from Feature-Based Geometric Models", ASME, Manufacturing Review, Vol.2, No.3,pp.204-213, 1989.

[6] Warren DeVries and Michael J. Pratt " Feature Attributes And Their Role In Product Modeling",ACM95, 1995,P115-123.

[7] Guddanti Srinivas , Ernest D. Fasse and Michael M. Marefat, " Retrieval Of Similarly Shaped Parts From A CAD Database " IEEE,pp.2809-2814.

[8] Lin, Chih-Young; Huang, Wei-Hsin; Jeng, Ming-Chang and Doo-ng, Ji-Liang,Study of an assembly tolerance allocation model bas-ed on Monte Carlo simulation,J of materials Processing Technology, v70, pp.9-16, 1997.

[9] Shinji Mukai   Susmu Furkawa and Mitsuru Kuroda   " An Algorithm for Deciding Similarities of 3-D Objects" ACM 2002.

[10] Liu, Chia - Hwa and Chen Zen, " CAD - Based Automated Machinable Feature Extraction" IEEE 1993.

[11] Zhang, H., and Alting. L. " Computerized Manufacturing Process Planning Systems, Chapman & Hall, pp.81-101,1994.

[12] Grabowski, H., Anderl, R., Geiger, K. and Schmitt, M. " Vision Based On-Line Inspection of Manufactured parts, Human Aspects in Computer Integrated Manufacturing, Olling, G.J. and kimura, F., Elsevier Science Pub., pp.593-607,1992.

[13] Shum, H.Y., Hebert, M. and Ikeuchi, K." On 3D Shape Similarity, Proc. IEEE Conf. Computer Vision and Pattern Recognition, pp.526-531,1996.

[14] Lee Jae-Yeol and Kim Kwangsoo, " A feature-based approach to extracting machining features" Computer-Aided Design, Vol.30 No.13, pp.1019-1035, 1998.

[15] Mortensen K.S. and Belnap B.K., " A rule-based approach employing feature recognition for engineering graphics characterization " Computer-Aided Engineering. 1989.

[16] Xu X. and Hinduja S., " Recognition of rough machining features in 2.5-D components" Computer-Aided Design, Vol.30, No.7,pp. 503-516, 1998.

[17] K. Jha, B. Gurumoorthy, " Automatic propagation of featuremo -dification across domain", Computer-Aided Design 32, P691-706, 2000.

[18] S.C. Liu, M. Gonzalez, J.G. Chen, " Developmentof anautomatic part feature extraction and classification systemtaking CAD data as input " , Computer in Industry 29, P137-150, 1996.

[19] Alex Noort and Willem F.Bronsvoort, " Automatic Adjustmentof Invalid Feature Models" , in D.C. Anderson and K. Lee, eds,Proceedings of Solid Modeling 01,Sixth ACM Symposiumon Solid Modeling and Applications', 6-8 June, Ann Arbor, USA, P267- 277, 2001.

[20] Keim, D.A. " Efficient Geometry-Based Similarity Search of 3D Spatial Databases, Proc. ACM SIGMOD Int. Conf. On Management of Data, Philadelphia, PA, pp. 419-430 , 1999.

[21]   "   "   2004

[22]   "   "   1995

[23]   "   "   2000

[24]   "   "   2004

[25]   "   "   2000

[26] A. A. Requicha , " Toward A Theory of Geometric Tolerancing" , International Journal of Robotics Research Vol.No. 4, pp.45-60, 1983.

[27] D. C. Gossard, R. P. Zuffante and H.Sakurai , " Representing Dimensions, Tolerances, and Features in MACE Systems" , IEEE Computer Graphics and Applications. pp. 51-59, 1988.

[28] N. S. Bernstein and K.Preiss, " Representation of Tolerance Infor-mation in Solid Models" ,Proceedings of ASME Design Tec-hnical Conference,Advances in Design Automation, Vol.I,DE-Vol.19-1.pp.37-48.

[29] Jean-Claude Lafon, " Solid Modeling with Constraints and Parameterised Features" , IEEE, P102-107.

[30] SolidWorks 2003   2003

[31] SolidWorks 2001   2001
[32]   ”   ”   1997