

OPTIMISING INVOLUTES ASYMMETRICAL TEETH GEARS SOFTWARE

CHIRA, F.; BANICA, M. & LOBONTIU, M.

Abstract: *The paper contains a short presentation of the algorithms used by the authors for developing a packet of computer applications that can be used by any design engineer for modelling, analysing and improving the functional parameters and final for manufacturing gears with involutes asymmetric teeth, called asymmetric gears. For optimal design of these special gears have been developed Matlab applications to obtain geometrical parameters, Auto Lisp applications to carry out the gears models, used for finite elements method analysis and application for the comparison between different possible solutions. Some results obtained with the original software are given to emphasize the advantages and the facilities of using the methods. This direction research is justified by the necessity of improving the performances of the gear transmissions, using asymmetric gears being one of the modern solutions to reach this aim.*

Key words: *asymmetric, involutes, gears, design, optimisation*



Authors' data: Univ. Lecturer Dipl.-Ing. Dr. **Chira**, F[lavia]; Univ. Assoc. Prof. Dipl.-Ing. Dr. **Banica**, M[ihai]; Univ. Prof. Dipl.-Ing. Dr. **Lobontiu**, M[ircea], North University of Baia Mare, Dr. Victor Babes 62A, 430083, Baia Mare, Romania, Flavia.Chira@ubm.ro, Mihai.Banica@ubm.ro, Mircea.Lobontiu@ubm.ro

This Publication has to be referred to as: Chira, F[lavia]; Banica, M[ihai] & Lobontiu, M[ircea] (2009). Optimising Involuter Asymmetrical Teeth Gears Software, Chapter 38 in DAAAM International Scientific Book 2009, pp. 363-376, B. Katalinic (Ed.), Published by DAAAM International, ISBN 978-3-901509-69-8, ISSN 1726-9687, Vienna, Austria
DOI: 10.2507/daaam.scibook.2009.38