

Functional tolerancing optimised by dispersions method

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Abstract :

This paper presents the optimization of functional tolerancing by dispersions method, this later has made this evidence in manufacturing dimensions optimization. In this work the dispersions method on the basis of unknown variables is combined with the minimal transfer method for automatically the modelling of the functional requirements of a mechanical assembly. The simulation is constructed around two procedures. The first procedure executes the extraction of the functional requirements, the second procedure results in the optimization of the dispersions. The functional dimensions are synthesized by uses of the optimised values of the dispersions to compute the mean values and tolerances of the functional dimensions in the chains. They are in adequacy with the writing within the meaning of the ISO standard of the functional dimensions.

Keywords : Dispersions method; optimization; dimension chains; functional tolerances ; synthesis ; ISO.

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