

Studies for the Development of a Simulation Basis for Numerically Controlled Driving of Sheet Metal

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Abstract. The manufacturing technique of driving is one of the oldest procedures for sheet metal forming and has been used in the ancient world for the production of copper pots and vases. This technique is still utilized for niche applications but today has lost its importance. The process of driving is almost completely carried out manually and thus is only appropriate for very small quantities or in case of failure of other production processes. Since individualization of products is strongly gaining in significance, forming processes have to be found, which are independent from expensive tools and equipment. Using driving as the process of choice to form sheet metal, the grade of automation of the forming process has to be increased. Numerically controlled driving, i.e. automated positioning and handling of the work piece during the production process, will need a conclusive simulation base. This paper provides results of the analysis of sheet steel angles formed by the driving sub groups of shrinking and stretching.