Patent claims

1. A method for generating a simulation-model (12,22,321,322) corresponding to an actual produced part made of sheet material, comprising

- based on a target Computer Aided Design (CAD)-model, producing an actual produced part (300),
- providing a target simulation-model (10,20,30) corresponding to the target Computer Aided Design (CAD)-model,
- based on a white light scan, blue light scan, laser scan or tactile measurement, generating a three-dimensional point cloud (11,21,31) of the actual produced part, wherein the way the actual produced part is mounted during the measurement is taken into account,
- providing a numerical representation (11,21,31) of the actual part (300), wherein the numerical representation is the three-dimensional point cloud or a three-dimensional model based on the point cloud,
- generating an actual simulation-model (12,22,321,322) by modifying the target simulation-model (10,20,30) such that the shape of the target simulation-model adapts to the numerical representation (11,21,31) of the actual produced part (300), and

  using the actual simulation-model (12,22,321,322) in and carrying out a numerical simulation of a defined forming process, wherein the simulation of the defined forming process comprises validating whether a tool has a correct design required for forming a work piece into a target formed part corresponding to the target CAD-model,

wherein the target simulation-model (10,20,30) is a Finite Element (FE)-mesh comprising a set of vertices, and

wherein generating the actual simulation-model (12,22,321,322) comprises

- fitting the vertices of the target simulation-model such that every vertex lays within the numerical representation (11,21,31) of the actual produced part (300),