

Title (en)

METHOD FOR CREATING A VIRTUAL THREE-DIMENSIONAL STRUCTURAL MODEL

Title (de)

VERFAHREN ZUM ERSTELLEN EINES VIRTUELLEN DREIDIMENSIONALEN STRUKTUR-MODELLS

Title (fr)

PROCÉDÉ DE CRÉATION D'UN MODÈLE DE STRUCTURE 3D VIRTUEL

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Application

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Abstract (en)

[origin: WO2021099451A1] The invention relates to a method for creating a virtual three-dimensional structural model (19) of a body (5), said method comprising the following steps: determining an envelope geometry (25) and a basic volume (26) from a geometric model (16) of the body (5); creating at least one numerical model (18) of the body (5) taking into account the envelope geometry (25) and/or the basic volume (26); applying at least one variable (27) to the numerical model (18) and defining a target property (30) of the body (5) using the numerical model (18) to which the at least one variable (27) has been applied; creating a structural model (19) which defines an actual property (32) of the body (5); and iteratively optimising the structural model (19) to make the actual properties (32) equal to the target properties (30). According to the invention, during the iterative optimisation of the structural model (19), a mechanical, thermal and/or aerodynamic actual property (32) of the body (5) is adjusted to a mechanical, thermal and/or aerodynamic target property (30) of the body (5) by changing at least one parameter (11, 12, 13) of the structural model (19). The invention also relates to a production method and to a device which operates using this method.

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