

Title (en)
METHOD AND DEVICE FOR DETERMINING OPTIMUM BATCH SIZES

Title (de)
VERFAHREN UND VORRICHTUNG ZUM BESTIMMEN VON OPTIMALEN LOSGRÖSSEN

Title (fr)
PROCÉDÉ ET DISPOSITIF DE DÉTERMINATION DE TAILLES DE LOTS OPTIMALES

Publication
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Application
EP 16758139 A 20160824

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Abstract (en)
[origin: WO2018036622A1] The invention claims a method for determining optimum batch sizes for the placing of components (155) on circuit boards (120) within an assembly line, wherein a set of circuit board types (122) to be produced on the assembly line (110) within a specified planning period is specified; a number of circuit boards to be produced is specified for each circuit board type; the number of circuit boards per circuit board type forms a set that is to be divided into equal-sized subsets, also referred to as batches, which are production orders that are produced at regular intervals during the planning period; the batch size of a circuit board type is equal to the number of circuit boards in a subset; the specified circuit board types are divided into a set of clusters, wherein a cluster (210, 215) and its associated set-up (165, 170) comprises a set of circuit board types which can be produced with the associated set-up, and wherein the method includes the following steps: recording set-up costs that are incurred in setting up the associated set-up of a cluster; determining the time intervals between the production orders per circuit board type as a function of the batch size; determining the set-up costs per cluster during the planning period as a function of the batch sizes of the circuit board types and taking into account the recorded set-up costs; determining the total set-up costs from the sum of the set-up costs per cluster; determining the total storage costs of the circuit boards produced in a time interval within the planning period from the sum of the storage costs per circuit board type as a function of the batch sizes, and optimizing the batch sizes in such a way that the sum of the total set-up costs and the total storage costs is minimized.

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