

## THE USE OF DATABASES IN THE PLANNING OF ASSEMBLY WORKPLACES AND SYSTEMS

### Authors:

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### Abstract:

*In view of the developing innovations and modernisation of industrial production, it is important to focus on and push forward not only the field of production technology, but also the field of assembly, which together form an inseparable entity. Therefore, the aim of the article is to construct a conceptual design of a solution methodology for the rationalisation of assembly workplaces, namely the development of an integrated methodological procedure and tools. The theoretical part of the article is devoted to the current state of assembly workplaces, systems and their planning. On the basis of the theoretical knowledge, an analysis of the assembly workplaces and systems is carried out according to the pre-selected criteria. It follows that it is necessary to develop a classification of assembly systems and workplaces in terms of the input parameters of the assembled product. The practical part of the article is devoted to the conceptual design of a methodology for the rationalisation of assembly workplaces and systems. The conceptual design of the methodology uses the potential of databases, algorithms and simulation. The practical part includes a partial solution in the form of an electronic database, the first important part of the proposed methodology. This database is designed for the needs of rationalisation of assembly workplaces and systems, not only in the case of designing new production systems, but also in the design and evaluation of existing assembly workplaces and systems.*

### Keywords:

Assembly; Rationalisation of assembly workplaces and systems; Database; Assembly planning