

VIRTUAL TEST COMPLEX SOFTWARE

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The use of personal computers and modern software allows you to create virtual test complexes, in which processes are modulated with accuracy that is sufficient for realization of real research experiment. At the same time it is possible to ensure some changes in wide bounds of any parameters and modes of object's operation that is subjected to analyze. It means that in perspective virtual test complexes will be not just complement, but also in some cases even completely replace real test stands.

One of the most perspective methods of solving research and scientific tasks at manufactures and testing labs is using of different types of software, that allows you to realize computer modeling of complex technological processes more effective. That approach permits you to improve accuracy of analyze tasks and conduct virtual experiments, which realizing in life is difficult.

The aim of this work is to identify requirements to software of virtual test complexes. Virtual test complex software is the basis of virtual drive creating. Exactly the software determines the function of a drive, its appointment and main characteristics, degree of automation etc.

In development of software you need to take into consideration such principles as:

1 Control complex program should be visible to the limit.

2 The program must provide comfort in a work with whole experiment data bases; that is why the results of measurements are given into the form of mnemonic diagram, graphs and tables, wherein the switches between display modes is possible even during calculation process.

3 Complexes are composed of several modules. There is a consecutive interrogation of modules during the process of one computing cycle. In this connection, controlling facilities of their state are necessary. For this purpose, we need to place the indicators of work load and the row of system status in the lower part of window program, which displays concrete operations, that are being done by it.

4 The program can work in information display mode or data recording mode. Besides, you can review the received data again in the form of tables or graphs.

5 Results of testing must be in the form of a standard report, but time of the testing of concrete object is not regulated, so opportunity of thinning data is provided, that are deduced during the print of a report, in addition to this, the program conducts the final processing of testing data.

6 In the process of a work, the program performs sufficient complex sequence of repeating actions; it means that creating of integrated algorithms of diagnostic and setting is necessary. In every session of a work, at the disk log file is creating, in which writing service information about processes processing. Moreover, it is possible to view a stream of character of information, which is transmitted by database.

Coming out of it we can note that: despite of that program turned out complex and volume, using of it allows improving productivity and authentic tests.