

## ТЕХНІЧНІ НАУКИ

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### **CALCULATION AND DESIGNING USING CADS PACKAGES**

Computer-aided design system – is an automated system, which implements information technology of designing function performing, it is an organizational and technical system that is meant for design process automation; it consists of staff and synergy of technologies software, applications and other computer-aided facilities of its activities. Also for denoting such systems is widely used **CAD** abbreviation.

The primary purpose of using CADS is to improve and automate engineers work quality.

Using such kind of services may allow:

- to create easily and submit a breaking report for court session reviewing;
- to reduce the designing terms;
- to ease and automate plants operation;
- to make possible doing researches without real models involvement;
- to reduce the cost of designing and construction;
- to apply variable methods and optimization;
- to automate decision-making process;
- to decline the percentage of accidents due to technical reasons.

There are also several disadvantages:

- inability to apply all factors related to breakage;
- deploying highly-skilled professionals;
- use of heavy duty equipment;
- imperfect software development;

Computer-aided design systems (CADS) include CAD/CAM/CAE software packages. CAD – computer aided design is a software that incorporates computerized technologies in designing, it was created to simplify designers' life and to automate its work as a whole. CAM – computer aided manufacturing is a preproduction, CAE – computer aided engineering helps to carry out structural calculations and perform various tests. EDA or ECAD – electronic computer-aided design is CADS for electronic devices, circuits, printed circuit boards etc. AEC CAD or CAAD – computer-aided architectural design is CADS used for architecture field and building constructions. CAM – computer aided manufacturing; CAE – computer aided engineering; EDA или ECAD – electronic computer-aided design; AEC CAD или CAAD – computer-aided architectural design.

All-Union State Standard provides the following characteristics for CADS classification:

- the type and complexity of designing;
- designing automation level;
- the nature of issued documents;
- the number of levels in the maintenance support structure;

In order to choose an appropriate software, it is necessary to set specific targets, because nowadays there are huge variety of software programs.

All CADs are divided into three levels:

- easy level. These CADs include AutoCAD, MasterCAM, T-FlexCAD, Compass;
- intermediate level. These are such CADs as Solid Edge, SolidWorks, SolidCAM, Autodesk Inventor, DesignSpace, ArchiCAD etc.;
- hard level. Representatives of this level are ADAMS, ANSYS, CATIA, EUCLID3, Pro/ENGINEER, UniGraphics.

Such level gradation is used for a number of reasons and popularity as well. Basically, software capabilities and the energy of the consumed resources determines degree of complexity. You will not be able to handle difficult calculations fully without an appropriate system, otherwise you will have to split all the plots into separate parts and calculate the whole system afterwards.

To simplify the process, that is, not to draft in one system, do 3D-visualization in another and carry out engineering analysis in the other one, a great many of software combines complex solution of various related design and analysis aspects, which allows to do all things in the same software.

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## **МІСЦЕ АВТОМАТИЗОВАНОЇ СИСТЕМИ АНАЛІЗУ ТА ПРОГНОЗУВАННЯ ФІНАНСОВОГО ЧАСОВОГО РЯДУ В СУЧАСНИХ СИСТЕМАХ ЕКОНОМІЧНОГО ПРОГНОЗУВАННЯ**

Робота автоматизованої системи аналізу та прогнозування фінансового часового ряду ґрунтується на двох основних етапах.

На першому етапі відповідно до категорії користувача (системний адміністратор, користувач або група користувачів) і його персональним даним модуль авторизації користувача повинен визначити його права (за логіном і паролем) і відкрити доступ до відповідного робочого модуля системи [1-3] (модуля управління, модуля контролю результатів обробки фінансових часових рядів, чи модуля введення фінансових норм).

В результаті авторизації до роботи в системі буде допущена лише ідентифікована особа, яка має права доступу до відповідних модулів системи.