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Building Information Modelling Platform to Carry Out Structural Modelling

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Introduction

Based on the characteristics of information sharing platform in building information modelling, the structure analysis software of building information modelling platform must be able to undertake the structure information model of building information modelling core modelling software. According to the structural analysis software, the adjustment of the structure model can also be successfully fed back to the core modelling software. At present, there is little building information modelling core modelling software to achieve software structure geometry model, load model and boundary constraint interaction [1-5]. To achieve information geometric model, load model and boundary constraint conditions the trans-conductance of the software is based on the same series of software. Such as Autodesk revit structure software and Autodesk Company dedicated to the structural finite element analysis software Autodesk Robot Structural Analysis in the geometric model between the load model and the boundary constraints of the data exchange between the basic no more errors. In the domestic, Robot in structural analysis and design of Shanghai Lupu Bridge, Lu Yang bridge, Shenzhen Yantian terminal engineering, Shanghai Metro, Guangzhou Metro multiple each country large-scale construction projects are analysed. Shanghai ocean aquarium, bank building, Shenzhen City Plaza, Nanning International Convention and Exhibition Centre, such as the quality of curtain wall structural analysis also has the outstanding performance of Robot Structural .But because of Robot lack of the corresponding Chinese structural design code, it is difficult to popularize in the field of civil building structure analysis. Other common software can also realize the exchange of structural data information at different depths such as Sup2000, Midas and the general structure analysis software Practical Structural Design and Construction Software and so on. The Structure construction drawing deepen design software is mainly on the node of steel structure and the complex space structure parts in specially made construction details. Began in 1990s Tekla company product Tekla structure software began to quickly apply to the design of steel structure. The software for steel structure construction and hoisting process in the detailed design part automatically generate construction details, material statistics and so on. At present, in some large domestic public facilities construction, has successfully realized the successful application of 3D design, the architectural design industry promote the development of technology. Building Information Modelling will be the second time since the last century, the off board project in 90s, the reform of architectural design. Compared with the traditional architectural design method based on building information modelling, it's characterized by the professional engineers do not need to go to a pile of simple and a variety of two plan to imagine the construction of a three-dimensional map. It is also no need to repeatedly compare and calculate the architectural design information, but the computer software technology in the virtual three-dimensional space in the layout of components and design information. In many building information modelling core modelling software, Autodesk Revit series software is the most widely used, and its modelling method for civil building is supported by many users. Revit series software not only supports the building information model, but also can automatically generate the design drawings, detail tables and engineering quantity calculation. The Revit model can provide information about the project plan, scope, quantity and stage of the project participants, as the structure module of Revit platform. Revit Structure software modelling can be set through the working set of the project work completed each set break up the whole into parts, the modelling work of the project. Revit platform in each work set to work independently, using the common centre file of the project and coordinate system. The rights of each work set are owned by each work set, and need to be obtained from each other when the other party needs to modify the content of the other work. For a model that has been saved to the central file, the system will be updated to the corresponding working set when a design change occurs [6-10].

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Conflict of Interest

None

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