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Structural Detailing is one of the most complex phases of a construction process. Defining Structural Detailing may seem simple but performing it is extremely complex. This basically involves detailing of structural element for Fabricators who in turn estimate the cost for the construction process pertaining to steel used to build any structure. These detail drawings include structural plans, part drawings, assembly drawings, member list, beam and columns, erection layout and plans, miscellaneous details like handrails and stairs. These are just some elements, in a nutshell this detailing would contain all the elements that are required to build the structure efficiently.

Structural Detailing is predominantly used in the field of construction of high end machinery and plants apart from buildings. It is more expedient to use steel detailing in areas where steel elements are more rampant. Structures like heavy machinery, Industrial Structure, Cooling Towers, Tanks, Ware house etc. needs to be constructed or built using structural steel. Apart from steel detailing this also requires further co-ordination from Fabricators, Architects and Engineers. Structural Engineers perform designing keeping in mind the standard structural codes for a particular country or state, demographics, load and usage. After completion of designing, Structural Detailing starts. It is very vital that during the steel detailing process Structural Engineers constantly evaluate the detailing that is in progress to avoid complexities later.

It is very crucial that Structural detailing is performed with high precision. Structural Detailing needs to be done in tandem with steel standards pertaining to a particular location. There are various standards applicable for different location based on demographics and other conditions. AISC, BS, Australian Standards are some standards which are rampantly followed. These drawings should show specifications like dimensions, material specifications, quantity (tonnage of steel), no of members and it's sizes.

Fabrication Drawings and Erection Drawings are two drawing sets based on which the entire structural detailing process works. These drawings gives an idea of member placement and specifics of the members or materials used. Anchor bolt plans, connection details etc. some aspects which are construed in this set of drawings.

Fabrication Drawings basically elaborates and explains the requirement of each steel element used in the process by fabricators. Previously, Structural Detailing like any construction process was done manually. This was the most time consuming and complex, due to which error index was much higher as compared to today. Then this was done in AutoCAD. Performing this exercise in AutoCAD did minimize the time consumption to some extent but did not bring error index down.

However, this situation did not last long and TEKLA came into existence. Tekla software is specifically developed to fulfill structural detailing demands. This has made structural detailing less complicated compared to manual detailing. Steel Detailers can create 3D Models in Tekla and extract Drawings, Plans and member list as required.

Usage of software is important however knowledge of structural standards, speed and accuracy is very important to successfully detail any structure. Thorough knowledge of steel detailing standards and fabrication is essential to work on structural detailing projects.

There are several tutorials to help a structural detailer master the software along with online help available to coach a detailer on the software. Very few companies offer structural detailing services owing to its complexities. This is one of the reasons why structural detailing continues to be one of

the most niche services.

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