

ACMA - Shop Detailing Deliverables Summary

Industry norms and expectations regarding the checking status and quality assurance responsibilities of machine data files - NC, DXF, and IFC.

Company members of the Australian Construction Modeller's Association use industry best practice when it comes to Shop Detailing QA processes.

Current 3D modelling software caters for many of the needs of the Steel Processing machinery. File formats such as NC, DXF, Step and the like, are standard industrial data files which translate the 3D model part information into a language for the cutting and drilling of material.

Traditionally, the Shop Detail workshop assembly drawings, marking plans and fitting sheets are the formally controlled contract documents. The data files are additional information provided to industry to assist with fabrication efficiency. These data files are generated via a tool, or tools in the modelling software package that translate the 3D model into a language accepted by steel processing machinery. This interpretation occurs at a software level and without the influence of the Steel Detailer.

The proprietary tools in the 3D modelling Software package are the creation of the software developer, such as Tekla, Bocad, Advance Steel etc, and is generally not within the field of expertise of the Construction Modeller. The Construction Modeller expects these tools to have been developed, tested, and proven fit for purpose in the industry in which the data files are intended. It is also expected that the resultant data files are indeed an accurate representation of the 3D model and fabrication shop drawings prepared by the Construction Modeller.

Our members work to ensure that the 3D modelling approach will ultimately result in accurate and correct data files, however, there are numerous factors which can affect the outcome of these data files, whether it be a software setting at the Shop Detailer's side, a setting at the Steel processor's side, or a software translation issue in between. These factors are not always evident when viewing data files in 3rd party software.

Therefore, it is the ACMA's recommendation to industry, that the party using these data files also check them against the controlled contract drawings to ensure that the data file is acceptable for their machinery, is accurate and uncorrupted.

This is a similar industry norm and expectation for the design documents provided to Construction Modeller. Typically, where a design 3D model is available in addition to the 2D design drawings, it's the drawings that remain the primary controlled document.