Overcoming Sheet Metal Fabrication Challenges with CAD Drawings

Sheet Metal Fabrication Challenges



Varying thickness of metal sheets



Different fabrication approach to create desired products



Need for multiple visualizations and design detailing

4 Factors That Dictate Sheet Metal Fabrication Trends

Fabrication process and technology

CAD software available today can resolve several issues plaguing the sheet metal fabrication domain. Design in 3D, convert to sheet metal parts, unfold a part or assembly into 2D for production, leverage 3D visualization capabilities to communicate better, and do much more.

But even CAD designing has its own set of challenges...

Top Five CAD Design Challenges





/orking withSystem performanceCAD datawith large assemblies



Finding/reusing existing design data



Dealing with complex geometry



Accurate design creation

Effects on Fabrication due to Poor Sheet Metal Detailing



Stakeholders Involved in Sheet Metal Manufacturing



Need for Sheet Metal CAD Drawings



Capture Customer Intent

- Use of sheet metal capabilities and functionalities
- Parametric and quick to modify for concept and final product
- Optimized product development with visualization and reusability

Detailed Manufacturing

- Highly accurate metal drawings in GD&Ts
- Better visualization with data tables and detailed annotations
- Optimized nesting, lower scraping, aligned notes & standards with revision track





Improved Workflow & Collaboration

- Collaborative and real-time in controlled workflows
- Accurate documents for quoting, scheduling, process mapping, inventory etc.
- Aligned, productive, and efficient value chain

Tangible Benefits for using CAD Drawing for

Sheet Metal Fabrication

Reduced Design Cycle

Reduced design cycle from days to hours using 3D CAD modelling & detailed drawings

Reduced Turnaround Time

Reduced TAT from weeks to days (customer order to dispatch)

Accurate Dimensions

100% accurate viewing, dimensioning & tolerances for precision manufacturing

Maximum Material Use

>90% sheet material usage with optimized nesting due to 100% accurate BOMs and documentation

Accurate Costing

100% accurate costing with length, thickness, breadth, weight, manufacturing operation needs, etc.

Reduced Scrap and Waste

80-100% reduction in scrap due to right manufacturing processes and tooling

USPs of Our Sheet Metal Drawings and Fabrication services

Adhere to international standards like TEMA, ANSI etc.

Convert PDF, TIFF, .dwg, and more to CAD files Deploy high performance systems with licensed Autodesk systems

Create neutral CAD files for seamless data exchange Delivered by experienced & expert team of CAD drafters & designers

About Hitech CADD Services

Hitech CADD Services is propelled by its team of 30+ SolidWorks engineers to deliver accurate sheet metal fabrication drawings that capture customer intent, optimize workflows, reduce design cycle and turnaround time efficiently. We deliver custom drawings as per tooling capabilities, reduce engineering change orders, and enable direct delivery of drawing to the CNC shops consistently.



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