Top 10 Aerospace Manufacturing Solution Providers - 2019

Across the globe, the aerospace manufacturing business landscape is experiencing significant disruptions, which are highly driven by the digital innovation and transformation.

While the future of the industry is expected to remain uncertain on many levels of operations, the manufacturing aspect is likely to see a surge in demand owing to customer and buyers requirements. Be it for designing or building or testing aircraft parts such as missiles, rockets, or avionics, many nations are pushing a considerable amount of funds and resources in the aerospace manufacturing.

As the equipment and avionics being utilized in the aerospace sector are drastically getting complex with time, manual manufacturing no longer serves the purpose. On the contrary, digital manufacturing is emerging as the likely alternative owing to its ability to design and develop intricate aerospace parts that are fuel-efficient and light-weight. Electrical Discharge Machining (EDM Machining) is one such digital manufacturing process; not only does it provide high-precision equipment but also ensure less designing time.

But none of the designing and developing process would work wonders in the aerospace sector if not for work instructions software that provide structured information about new parts and its designing and managing process to manufacturing engineers. Today, the market is brimming with plethora of such work instruction software, which functions as the repository of manufacturing processes.

Besides, many aerospace manufacturing solution providers are integrating assembly line with factory automation to improve the entire business operations. Aware of these current trends making waves in the aerospace manufacturing industry, a distinguished panel comprising of CEOs, CIOs, VCs, and analysts along with the editorial panel of Manufacturing Technology Insights have indexed Top 10 Aerospace Manufacturing Solution Providers - 2019.

We present to you Manufacturing Technology Insight's 'Top 10 Aerospace Manufacturing Solution Providers - 2019'.

Sequence Software (FFD, Inc): A Step Ahead with Electronic Work Instructions

Manufacturers in aerospace and defense sectors are making significant changes to how work instructions are created, managed, and deployed. Higher demands on profitability and efficiency and adherence to an ever-growing number of compliance requirements, including AS9100, are driving the move. Shop floor management must provide detailed documentation of each step of the manufacturing process or face significant penalties for non-compliance.

Unfortunately, far too often aerospace assembly and manufacturing procedures rely on the tribal knowledge of an aging workforce exhibiting low employee turnover. And if the knowledge is captured, it is often typed into documents using conventional PDFs or other Microsoft Office© products. As a result, compliance is often difficult and, worse yet, product quality may suffer.

Since 2004, FFD, Knoxville, Tennessee, has helped aerospace companies, suppliers and other industries meet stringent standard and compliance requirements and surpass customer quality expectations with Sequence Enterprise Work Instruction Software.

Developed for Windows® using Microsoft's .Net Framework, Sequence was created by FFD based on extensive market research and close working relationships with aerospace and other high-tech manufacturing organizations. Sequence allows companies doing complex manual assembly to easily author, review, approve, deploy, and validate the work instructions required to build their products.

Jack Hay, FFD president, says these relationships have given FFD a unique understanding of the needs of its aerospace industry and other customers. Over the years, this insight has helped FFD develop a wide range of unique, easy to use, and affordable digital features that have set it apart from other electronic work instruction suppliers.

"We have honed our ability to clearly understand our customers' needs, deliver a quality product, and provide the ongoing support and development necessary for long-term value," Hay says.

> *"Sequence software is more than simply an enterprise software product. It gives technical writers and engineers the right tools to create precise, traceable work instructions with ease."*

Recently, a well-known aerospace supplier put Sequence to the test. Faced with a skills gap caused by baby boomer retirements, the company's manufacturing engineer was tasked with developing a detailed plan to systematically transition the plant to digital work instructions, complete with photos and videos.

The team's assignment was to work closely with the plant floor technicians to capture their production knowledge and input it into Sequence. Now fully integrated into the plant's Oracle ERP system, the software simplified complex manual assemblies.

"We may not work on something for three to five years or longer before we get an order," the engineering manager says. "In the past, we had to struggle with this each day. If three operators did an assembly, they would all do it differently. Now the electronic instructions ensure that only the current approved instructions are available, and there is no fumbling in production to find them. The software is so much faster than Microsoft Office©. Hands down it is not even comparable."

Hay says typical paper or PDF work instructions present floor managers with a number of other challenges as well, including being very labor intensive and costly to maintain. In addition, version and approval controls are often nonexistent with no standard format.

"The aerospace industry is moving to Sequence for all its benefits," Hay says. "With every installation, we incorporate the knowledge to make Sequence better and better. In the end, the customer gets the best return on investment possible, not just once, but every time they need to change a procedure or a process. Once a target area has been deployed, those measurable improvements fund the next expansion."

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