

## GETTING READY FOR AS9100 C

Revision C Helps Aerospace OEMs Qualify Aviation, Space and Defense Suppliers

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Manufacturers in the aerospace industry have undoubtedly marked July 1, 2012 on their calendars. That's the last day they must complete the process of obtaining their accreditation to the AS9100 Revision C standard, which was released in Jan. 2009.

Until then, audits can still be conducted for meeting the AS9100 B standard. But after July 1, 2012, the B standard will be cancelled.

The difference between AS9100 Revision B and AS9100 Revision C is significant.

Basically, AS9100 contains the same ISO 9001 quality management systems standards as the base set of requirements. ISO9001:2008 represents approximately 70 percent of the new revision's content. The remaining 30 percent relates to requirements specific to the aerospace and defense industry. Good examples are AS9110, which pertains to standards for maintenance of aerospace vehicles, and AS9120, which offers requirements for distributors.

The purpose of Revision C was to address the aerospace industry's goal of expanding its scope.

"The goals and objective of the revision were to add emphasis on product and process improvement and expand the scope to include aviation, space and defense," explains Shakeel Shaique, senior business consultant for TechSolve in Cincinnati, OH. "It also provides additional focus on the IAQG objective of on-time and on-quality deliveries."

AS9100 C also includes eight new requirements. Consider ISO 10006, which refers to project management. He says every product that's manufactured must now be managed as a project. ISO 10007 relates to configuration management. From product design to production to delivery, any changes that occur must now be documented, which leads to better control. Then there's ARP 9134, or risk management.

Shaique says companies must now take into account all of the risks within their processes that would make a product not perform up to customer requirements.

"Manufacturers need to sit down as part of production pre-planning and determine the risk level or possibility within any process step that could lead to a product not being in conformance," he says.

"When the supplier knows that there is a possibility of failure, that the risk of failure is high and the product will not meet requirements, then in pre-panning, they must put steps in place that would decrease or prevent failures to acceptable levels. They need to preplan production in a way that will consider all the risks of failure and have actions in place to prevent them from happening."

In this industry, he says the consequences of just one part not performing up to par can be severe, damaging and costly. If a key part fails on a space shuttle that's orbiting the Earth or on an airplane that's flying at an altitude of 30,000 feet and carrying 250 passengers, the impact can be deadly. Not to mention the high cost of aircraft and loss of precious lives. He points to a single fighter jet, whose price tag can easily reach \$30 million.

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Shaique says these new standards for risk management will also instill confidence in suppliers. They can now observe a check and balance system that relies on measurements and uses hard data to drive critical decisions.

Other changes focus on new standards for work transfers. Take a manufacturer that sends a part out to another company to complete a process. Whether that part returns to the manufacturer or is sent directly to the customer, it is now a controlled process. Everyone involved must follow the new requirement that also helps mitigate any possible risks associated with that product.

But the biggest change, which he calls “phenomenal”, involves the purchasing process. He says more information about the product or service must be provided to suppliers. Buyers must also know the processes sub-suppliers use and the skill level and experiences of all employees who will be responsible for the quality aspect of the product.

He says the changes are all encompassing. While there’s a lot of emphasis on preplanning - AS9002 C even includes new standards for engineering design - he believes these revisions are needed to keep up with the advancements in manufacturing technologies and applications. They provide autonomy to manufacturers and service providers, enable them to continually improve their processes and become profitable.

## Approaching Deadline

For aerospace and defense suppliers, upgrading their quality management system to AS9100 C will require careful consideration. Shaique points to companies that may have recently received recertification to the “B” revision of the standard. He says that it may make sense to wait until their next annual surveillance audit to upgrade to the “C” standard.

Still, he says there are three key reasons not to wait too long:

Take a number: Since there is a limited number of both training oversight auditors and accreditation auditors, your company may need to wait in line. Likewise, certification bodies won’t be able to upgrade all of their auditors for some time, perhaps until next year. This will also impact your company’s ability to upgrade on its desired timeline.

Forced choice: Remember that if you don’t register to “C” before July 1, 2012, your “B” certification will be null and void.

Rapid response: During the certification process, if your auditor issues findings for corrective actions, your company will need enough time to close those out before the July 1, 2012 deadline. “There’s a small supply of auditors who are getting booked up,” says Shaique. “If you delay, you may not get your revision certification in time for you to continue your current qualification for doing business with current or new aerospace industry customers. So the earlier you do this, the better.”

Shakeel Shaique contributed the content for this white paper. He earned a bachelors of science degree in mechanical engineering and received diplomas for completing university courses that include quality management, business management and financial accounting. Since June, he has worked exclusively with TechSolve as a senior business consultant in the aerospace sector.

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