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What to Consider When Seeking Nadcap Accreditation



Nadcap (National Aerospace and Defense Contractors Accreditation Program) is the gold standard for special processes across a number of industries, including heat treating. Obtaining Nadcap approval can be the difference between a thriving business and a failing business, so getting accredited is a priority for many providers.

Nadcap allows suppliers to have tight control over their special processes, provides clear specification requirements and gives providers who earn accreditation valuable market recognition.

In this document, we'll share some of the top considerations a company new to Nadcap should consider when seeking that coveted accreditation.

HOW THE AUDIT WORKS

The Performance Review Institute (PRI) administers Nadcap and schedules the audit, which is conducted by an approved auditor who carefully follows an industry-specific checklist. The audit typically takes between two days and one business week based on scope; the auditor who schedules it will usually select times that are as nondisruptive as possible. Any nonconformity issues uncovered during the audit are presented to PRI in a report. PRI then administers the closeout of the issues and presents a completed audit package to its special process task group for review.

The Nadcap task group is typically composed of prime contractors, government representatives and suppliers who share relevant expertise in the exact product, process or service for which you're seeking accreditation. The task group votes on approval and accreditation is granted—but only after all nonconforming issues are closed. Closing a response requires a five-part corrective action that includes:

- **Root cause determination**
- **Immediate corrective actions**
- **Action taken to prevent recurrence**
- **Product impact evaluation (if applicable)**
- **Submittal of objective evidence of implementation to Nadcap for all findings, both major and minor**

Prior to the audit, Nadcap will share the applicable audit checklists with the supplier. PRI strongly recommends using those checklists to perform a thorough self-audit prior to scheduling the Nadcap audit (we cover internal audits later in this document).

PREPARATION IS KEY

For many businesses that have aced an ISO or customer audit, a Nadcap audit can come as a shock. Whereas other audits are high-level looks at processes and equipment, Nadcap auditors are very granular, and take a deep look at every aspect of your operations. They may uncover issues you didn't even know existed. It can feel like nitpicking, but Nadcap is the highest standard in heat treating, and approval means access to the world's most sophisticated end-users.

It's best to prepare for such an audit as thoroughly as possible. If you're looking to get Nadcap accreditation for the first time, or trying to address prior findings, working with a Nadcap expert can really pay off.

PYROMETRY SPECIFICATIONS

The current pyrometric requirements outlined by AMS2750E are a good starting point because Nadcap is part of the Performance Review Institute (PRI), which is affiliated with SAE/AMS (Society of Automotive Engineers/Aerospace Material Specification), the institution responsible for AMS2750E.

Nadcap, however, goes beyond AMS2750E and outlines its pyrometry specs in a document called the Pyrometry Guide. This guide is the Nadcap Heat Treat Task Group's effort to fill in the gaps in AMS2750E. You can download the Pyrometry Guide, for free at eAudit.net. The FAQs explain the further requirements of Nadcap.

Understanding Nadcap's separate requirements from AMS2750E is vital when preparing for a Nadcap audit, which will base findings against the requirements in the Pyrometry Guide.

HELP IS AVAILABLE

Ensuring a smoother audit is sometimes as simple as getting the right consulting help. Choose a provider that has facilitated Nadcap prime audits and has a track record of helping customers prepare for and pass Nadcap audits the first time.

Most poor audit results come from a misunderstanding or improper execution of Nadcap's specific pyrometry requirements. Pyrometry requirements typically make up 70% of all Nadcap heat treat findings, so it's important to work with an engineer who understands Nadcap.

Qualified consultants will walk you through the process and can even complete a thorough, unbiased internal audit. This will not only better prepare a company for Nadcap auditors, it will also improve special processes, address issues before they become significant problems and uncover potential areas of improvement.



LEARNING THE ROPES

If you're newer to pyrometry, developing a full understanding of various specifications and how to meet them is critical preparation for a Nadcap audit. A good training program will show you some pyrometric fundamentals that will be the basis for audit success and allow you to smoothly run your operations. These services include demonstrating or providing instructions on:

- **The fundamental requirements of AMS2750E pyrometry standards**
- **How to properly calibrate an instrument**
- **Performing a system accuracy test (SAT)**
- **Wiring up a rack to perform a Temperature Uniformity Study (TUS)**

The PRI-sponsored [eQuaLearn® Introduction to Pyrometry course](#) is a good starting point. It's essentially a two-day comprehensive overview of AMS2750E. Other training courses can be tailored to your needs, covering not just AMS2750E, but also the PRI Pyrometry Guide or other standards. Interactive instruction featuring a lot of Q&A helps bring these programs to life and allows for the sharing of best practices. By the end of any course, participants should score at least a five on the AMS270E comprehension scale, which is a good foundation for building an understanding of Nadcap requirements.

CHECKING YOUR WORK

Nothing better prepares a heat treating company for a Nadcap audit than a robust and comprehensive internal audit. For newer providers, designing and building an excellent internal auditing program can be challenging. Using an outside consultant who understands Nadcap is a good choice even if you ultimately want to be able to run your own audit program.

Great internal audits ensure that your organization, system and processes have the proper checks and balances. The best systems follow the specific Nadcap checklists within a supplier's scope. It's

best to complete the Nadcap checklists provided by PRI that apply to your scope and to write on the checklist itself—don't transfer the content of the applicable checklist into an internal company document, where content can be lost or mistyped.

Even a complete checklist can be sloppy. Simply circling "YES" to questions can reflect a lack of attention to detail. Some Nadcap sections specifically require that the procedure page and paragraph be present on the internal audit for each question, which is something that many newer suppliers miss. Being detailed on the internal audit form conveys a sense of seriousness to the auditor. It shows that you not only understand AMS2750E, but take the internal audit process seriously and know your own systems well.

During internal audits, document the procedure, procedure revision, page and paragraph that applies to the question. Remember that some questions have more than one requirement within them, so you may need to list several procedures, revisions, pages and paragraphs. If you miss items within a question, it will likely cause a finding against it in an audit.

Use the internal audit process as an opportunity to generate improvement within your organization. Issue yourself findings wherever applicable and take

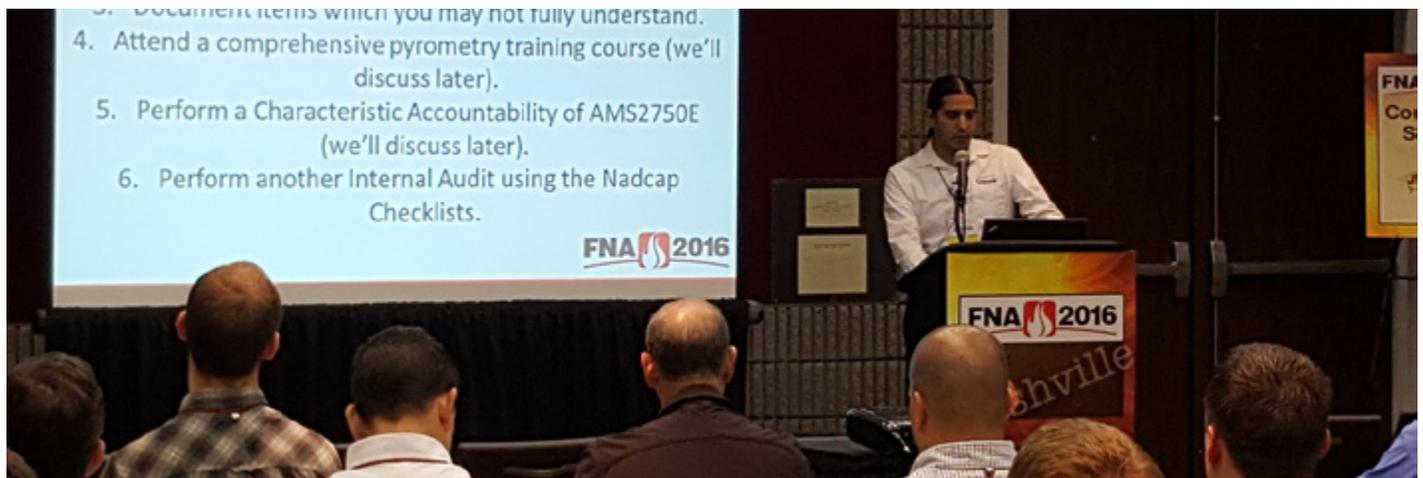
the corrective action required to address them. It's easier and more cost-effective to do it yourself rather than wait for an actual Nadcap audit to deliver unpleasant surprises.

SUCCESS CAN REALLY PAY OFF

We've established that receiving Nadcap accreditation is critical for doing business for a wide range of end-users, so flawless preparation and execution on a Nadcap audit is great for any company working in pyrometry.

That said, consistent and truly superior Nadcap auditing results can pay off in other ways. Adhering to Nadcap standards means you've got tighter controls in your special processes and are better able to serve a wider variety of end users.

Finally, passing a Nadcap audit with flying colors can lead to less frequent audits—even half as many through Nadcap's Supplier Merit Program, which recognizes past success for reaccreditation. Given the costs associated with an audit—which include the hours dedicated to accommodating the auditors and actual fees (which range from \$4,850 to \$7,150) and costs—reducing the frequency of audits is a compelling outcome.



To learn more about Nadcap audit requirements or to prepare for your own audit,

CONTACT THE EXPERTS AT CONRAD KACSIK.