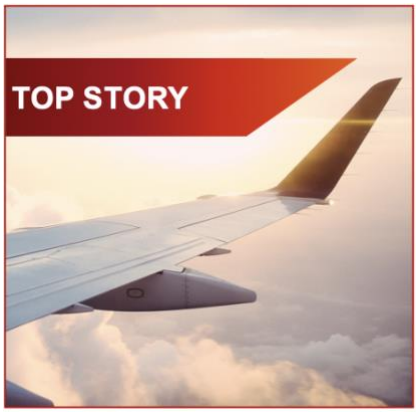
CERTIFIED NEWS

Intelligence for Independent Aircraft Modifiers

IAMA CERTIFIED NEWS – DECEMBER 2020

What's in it?



PROTECTING THE IAMA STANDARD WITH A NEW AUDITING PROCEDURE

"There is little point to creating an STC standard without defending it through a method of assessing compliance; you can't have one without the other," said Dimitrios Tsirangelos, technical affairs manager at IAMA, the Independent Aircraft Modifier Alliance. "Having established our benchmark with the IAMA Rulebook, we have made significant steps forward in the development of our audit process." Driven by the Rulebook's content, the auditing process initiative is designed to ensure that members performing upgrades through Supplemental Type Certificate (STC) projects, maintain the highest quality operational standards possible.

The aim is to develop a concrete STC standard. The expected result is trustworthy, superior quality Supplemental Type Certificates. Developing this program in the time of a global pandemic wasn't easy, but in a workshop this past October, the Standard Working Group defined pass and fail criteria for each rule. This was a critical step in their preparation to start contacting independent auditing companies.

"The approach we have taken is to use the most important elements from existing standards into IAMA Standard, to design a less cumbersome audit process," Tsirangelos expanded. "Adopting a SMART—specific, measurable, achievable, relevant and time-bound—method to develop the IAMA Rulebook, provides an excellent foundation for the audit program. Fundamental structures and rules are important. This is why we also aim to help members introduce widely-accepted, standards-based approaches in their operations. Our strategy towards this end is through templates and tools such as action items lists and risk analysis documents."

Member modifiers who successfully pass an audit will have the right to use an IAMA endorsement label on their modifications. Initial, corrective, renewal and delta audits will be used to assess a member's compliance with the IAMA standard, and their ability to operate in a stable and controlled manner during their STC projects. Each of

these audit types is designed to protect the integrity of the IAMA endorsement, and develop consistency across IAMA modifier members. Member modifiers who successfully pass an audit will have the right to use an IAMA endorsement label on their aircraft modifications.

“Through IAMA endorsed aircraft modifications, we are aiming to maintain the quality of STCs and ensure their trustworthiness” said Nicole Noack, managing director of IAMA. “Our audits will be performed by independent audit organizations and we will look first at IATA’s auditing partners, though other options will also be investigated. Initially, our audits will be evidence-based, and in the future, we may move to a process-based approach. IOSA, the IATA Operational Safety Audit program is an internationally recognized and accepted evaluation system designed to assess the operational management and control systems of an airline. This rigor is a pivotal element in the IAMA audit process.”

The alliance is on track to finalize the process by mid-2021 and to start implementing the auditing procedure shortly thereafter on organizations who have Full membership status. Furthermore, basic members could choose to be audited. Providing them with IAMA endorsed STCs as a result of a successfully passed audit represents a valuable service to members and the aviation industry as a whole. Within IAMA Standard, as with any standard, consistent audit timing is critical. In recognition of the pandemic’s effect on the aviation industry, IAMA has set the audit cycle at 24-months.

To become an IAMA member and learn how to achieve IAMA endorsed STCs, visit our website.

CHAIRMAN’S MESSAGE

Welcome to the last edition of IAMA Certified News for the 2020 season. To say it’s been a challenging year is an understatement. Despite lock-downs, grounded aircraft and the virtual halt to all-things aviation-related, IAMA continued to forge relationships with aircraft modifiers, gather needs from airlines and lessors, while also initiating contact with various aviation authorities through our purposeful outreach programs.

Just a couple of weeks ago on 10 November, we held our second General Assembly. It was an excellent opportunity for IAMA executive and members to prepare for a full agenda next year. Along with networking sessions, we reviewed the past year’s operations and our budget, as well as discussing 2021 COVID measures.

Looking to the new year, IAMA will continue to invest in the key initiatives successfully started in 2020. We also voted in favour of exploring new topics. We will be opening-up our programs, including our Rulebook and educational campaigns, to the business aviation community who are sure to see immediate value. In addition, the General Assembly voted to offer flexible Full and Advisory memberships for the year 2021. This is part of our ongoing efforts to support member-success in the current crisis.

Our working groups met to start formulating plans for 2021. They started setting goals, refining approaches, defining and prioritising the topics they will tackle beginning in January. Here are some of the activities they will pursue:

With Romain Mbwang Seppoh leading our Standards Working Group, focused on Supplemental Type Certificate (STC) standardisation, they will continue to move IAMA’s auditing procedure forward. Plus, they will carry on developing and refining our Rulebook. In conjunction with our Certification and Authority Affairs Working group, Orphaned and Surrendered STCs will be examined, and means to support and resolve these situations will be proposed. Our Community and Aligned Information Campaign Working Group, under the leadership of Thomas Frercksen, has been gathering new pain points through a survey of airlines. The outcomes of this survey help us to define the topics that must be addressed next year, such as de-modification or modification maintainability, and the compatibility of STCs versus future OEM Service Bulletins. Our IP and OEM Affairs Working Group, led by Jeff Behlendorf, plans to further reflect on and discuss the inefficiencies in current IP handling processes. Their goal? To develop future common practices between IAMA members and stakeholders. Our Certification & Authority Affairs Working Group, in the capable hands of Dilek Senay Yazici just finalized their upcoming paper on “Reciprocal Acceptance of Minor Design Change Approvals,” that has been shared with the FAA and EASA.

Additionally, this team will focus on parallel FAA/EASA STC project approvals, reviewing a validation improvement roadmap to understand how they can support this activity.

Nicole Noack, our managing director, and the IAMA team can point to many accomplishments and successes this year. The release of the second edition of the IAMA Rulebook, was a major milestone for our organization, one that took the diligent efforts of our Standard Working Group members.

With the momentum of our first year as a not-for-profit entity behind us, we've put many vital activities on our agenda. A white paper on de-modification best practices for airlines and lessors is planned, and RFP transparency will also be important topics for us. We will also continue our popular IAMA Virtual Think Tank (IVTT) sessions in a slightly different format for 2021, hosting five sessions. The first, in February, will focus on orphaned STCs.

By the end of this year, we will have published several educational white papers covering a range of important topics. "Structural Modifications and the effects to Aging Aircraft through the Supplemental Type Certificate Process"investigates aircraft life limits and retrofit modifications. "Aircraft Modifications: STC After-Sales Considerations for Airlines" addresses after-sales support processes and offers best practices for airlines to get support they need. And "Considerations About the Prototyping Phase of an of an STC" provides an in-depth discussion of prototyping and key practices for success. These white papers are a valuable resource, and I encourage you to read them. Of course, members have full access to all of our resources. Airlines and lessors can gain access with a free subscription, and we'd like to get your feedback and ideas for new white papers.

As the IAMA team and I look ahead to 2021, we want to recognize and thank the numerous people who have helped us, providing invaluable contributions during these unprecedented times. We are confident that next year's ambitious agenda will be our path to continue pursuing our primary goals: Advocating for independent modifiers; acting as a bridge between them and airlines, and helping operators, owners and lessors develop a clearer understanding of independent modifications.

On behalf of the whole IAMA team, I wish each and every one of you the very best in the coming new year. Like all of you, we look forward to our membership and indeed the aviation industry as a whole navigating a clearer sky in 2021.

As always, be well and stay safe.

—Marc Pinault

Chairman

ALL YOU NEED TO KNOW ABOUT PROTOTYPING

Continuing their efforts to educate IAMA members and other stakeholders, the Independent Aircraft Modifier Alliance has developed a white paper on prototyping. It investigates a major milestone in obtaining a Supplemental Type Certificate (STC).

In the aviation world, prototyping is an important tool for a variety of reasons. It helps refine documentation, allows the modifier, OEM and operator to assess the installation and requirement and it offers a standard method for certifying a modification. The document, "Considerations About the Prototyping Phase of an STC," available to IAMA members and to airlines and lessors with a free subscription, offers an in-depth examination of the process's intricacies, highlighting potential risks, and recommending best practices.

According to the OECD, the Organisation for Economic Co-operation and Development, a prototype is "an original model constructed to include all the technical characteristics and performances of the new product." In the aviation industry, an aircraft declared as a "prototype" is the first aircraft, of a specific type, to have a new modification implemented. The prototyping process is critical to achieving an STC because it is during this first installation of equipment that significant challenges are overcome.

Prototyping involves implementing aircraft modifications using a documentation package that has not yet received approval. In this state, the prototype aircraft may not be entered back into service until the modification

in question is certified through an STC. For obvious reasons, the aircraft owner or operator and the aircraft modifier have a vested interest in a smoothly run modification.

The prototyping process is incredibly important because it serves as a means to confirm and validate the first application of the installation design that leads to final approval and the STC. It allows modifiers and aircraft OEMs to test a somewhat theoretical design document against the real-world implementation. “There are always discrepancies between the modification design and the actual installation,” says Dimitrios Tsirangelos technical affairs manager at IAMA. “Aircraft documentation and initial configuration may not be as expected. Design misunderstandings or missing materials can also sometimes be the source of deviations. The critical part prototyping plays is to help the modifier evaluate, confirm, or adjust the installation design towards the needs and specifications of the final customer.”

Highlighting certain risks associated with aircraft modifications, the white paper rightly identifies the delay that variances and deviations can cause. It’s no surprise then that effective scheduling, a clear action plan and defined responsibilities, along with evaluation, testing and precise documentation are the basis of successful prototyping and STC completion. It’s easy to imagine a fleet of aircraft with various configurations undergoing a specific modification. With this in mind, it’s not hard to realize that installation on one aircraft in a fleet is unlikely to be exactly the same as another. Adding to this is the need for all the aircraft undergoing that modification to conform to rigorous certification requirements. This is where testing and evaluation play a fundamental role.

“It may seem obvious, but an experienced maintenance organization will not only possess a deep understanding of the process, they will also recognize potential risks and delays in advance,” Tsirangelos explained. “More important, still, they will already be prepared to address any challenges as they arise.”

Along the way, IAMA’s latest white paper addresses the differences between FAA and EASA terminology and processes. The results of which are the crucial steps towards a hassle-free, cost effective modification.

“Considerations About the Prototyping Phase of an STC,” is available to IAMA members and also to airlines and lessors through a free subscription. To obtain a copy visit our website.

ENVOY AEROSPACE: THE RELATIONSHIPS THAT BUILT A THRIVING CERTIFICATION BUSINESS

Ask Adrian Honer, a partner and founder at Envoy Aerospace (Envoy), about how the company was conceived and you will learn about knowledgeable and highly skilled individuals who often worked together on certification projects. Ask him about IAMA, the Independent Aircraft Modifier Alliance, and you’ll understand the company’s enthusiasm for being one of the alliance’s founding members, and the organization’s mission.

The company was founded, in July 2005, on professional relationships that had already spanned several years. Honer, the company’s ODA lead administrator, Mark Haycock, Marilyn Feigl, and Brenda Litchfield, Envoy’s co-founders, often came across each other while employed with different companies. They frequently worked together on various certification projects. As the Federal Aviation Administration’s (FAA) moved towards Organization Designation Authorization (ODA) delegation, the four colleagues joined forces to establish the now burgeoning company. Thanks to their long-time expertise and global experience, the company was delegated as an FAA Supplemental Type Certificate (STC) ODA, to work as a certification organization, in August 2010.

As a founding member of IAMA, Envoy’s team brings extensive experience to the alliance, and they were attracted to the idea of defending their life-blood—the Supplemental Type Certificate (STC). “We were delighted at the prospect of becoming a founding member of IAMA,” remarked Haycock, an IAMA executive board member. “The certification community is small, there is a lot of comradery, and we’ve benefited greatly from the networking opportunities. More importantly, the fact that IAMA wants to elevate and defend the STC is very attractive—an important business consideration for us.”

As a close-knit team, Envoy Aerospace offers a wide range of services to fit clients’ needs. Whether it’s certification, design or project management, the team is flexible and has the know-how to ensure projects are successful. Honer, Haycock, Feigl and the team thrive on the variety of work they’ve had the opportunity to

pursue. “We have a team of engineering and certification specialists including DERs, Designated Engineering Representatives, and DARs, Designated Airworthiness Representatives, that cover the gamut of certification needs,” Honer explained. “One of the most difficult and rewarding programs we tackled was the testing that eventually demonstrated the safety of Wi-Fi on aircraft. This particular certification work opened up the aviation industry to an amazing array of connectivity solutions we now take for granted. And, really, where would we be in today’s COVID-19 world without connectivity?”

Envoy has active participants in various IAMA working groups, but they focus on the IAMA Standard and Certification and Authority Affairs (CAA) Working Groups, owing to their expertise in these areas. “Participating in the working groups has given us a different perspective,” Feigl explained. “As the only U.S.-based organization in IAMA, we’ve had the great fortune of gaining an education in the differences between EASA and FAA processes. The CAA Working Group continues to investigate and document these differences, something we consider invaluable.”

The company serves clients from around the world seeking FAA compliance. And they also help define compliance for FAA certifications. “We are excited by and dedicated to solving complex problems,” Honer notes. “Our projects vary wildly, from retrofitting an innovative new weather radar system, that combines weather radar and terrain, on 12 different aircraft types, to installing large antenna systems and radomes on aircraft that involve significant structures work. And we are fascinated by every assignment.”

Based in Aurora, Illinois, the company’s leadership is passionate about aviation, and they have a great team of employees and contractors dedicated to providing top-shelf service. Learn more at envoyaerospace.com.

ENGAGE WITH US

Want to learn more about IAMA or meet us? We look forward to connecting with you during the following events:

- ALTA CCMA & MRO Conference | 06 - 08 December 2020 |
- Furthermore, IAMA's Virtual Think Tank (IVTT) will continue in 2021, join us on the 24th of February for a the following session: Risk Management Measures - Handling of Orphan STC's | 24 February 2021 - 3PM UTC+1 |

For questions, if you would like to meet us, or an invitation to our virtual think tank, get in touch with us via info@iamalliance.aero.

BECOME AN IAMA MEMBER

IAMA is open to all aviation market participants including aircraft manufacturers, airlines, suppliers and lessors. The alliance offers three types of paid memberships: Full, Advisory and Basic.

Members have access to specific benefits depending upon their role in the aviation ecosystem, and their membership level. Full and Basic memberships are for organisations with STC capabilities, while Advisory memberships are for airframe and system OEMs (Original Equipment Manufacturers). Airlines, banks and lessors may join for free.

Find out more about our membership possibilities here!