Fostering innovation with European AeroSpace standards

ASD-STAN

Standardization

September 2022
ASD-STAN is an international non-profit association (AISBL) that develops and maintains European standards for the European aerospace & defence industry.

As an associated body to CEN (European Committee for Standardization) we are the main provider of European aerospace Norms (EN).

To enhance the competitiveness of European companies, we established an agreement with CEN to shorten the process of European standardization. ASD-STAN publishes projected-EN standards (ASD-STAN prEN) which are technically identical to the final European Norm (EN).

Our values of openness, transparency, consensus and balance are at the core of our Working Groups. Bringing experts from all across Europe and the industry together, we guarantee the safety of our standards by having Original Equipment Manufacturers (OEMs) and Type Certificate (TC) holders chair our Working Groups.
Our members include national industrial associations, national standardization bodies, major aerospace companies and public institutions:

- **GIFAS** – French Aeronautical and Space Industries Group
- **DIN** – German Institute for Standardization (NSB)
- **ADS** – UK Aerospace, Defence, Security & Space Industries association
- **TEDAE** – Spanish association of Defense, Aeronautics, Security and Space Technology Companies
- **AIAD** – Federation of Italian Companies for Aerospace, Defence and Security
- **SOFF** – Swedish Security and Defense Industry Association
- **ASD** - AeroSpace and Defence Industries Association of Europe
- **AIRBUS**
- **EASA** - European Aviation Safety Agency

More information about the involvement in the Aerospace Standardization and its benefits can be found on our web-page “Why and how to be involved?” and on our corporate leaflet.
ASD-STAN is a non-profit association registered in Belgium and working according to Belgian legislation.

**Governance**

ASD-STAN Board & General Assembly

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**Governing Bodies:**

- ASD-STAN General Assembly and Board of Directors
- Technical Authority
- Executive team (main secretariat responsible for the daily management based in Brussels)
What we do

- Develop standards related to the design, production and maintenance of aircraft systems, equipment and standard parts
- Manage standardization projects in 10 Domains and 45 Working Groups
- Work in close cooperation with National Standardization Bodies (BNAE, DIN, BSI)
- Contribute to the promotion of European standards at international level
- Cooperate with EDA (EDSTAR - European System to reference standards for defence use) on the application of civil standards for military purposes
- Act as the European body for the development of global quality aerospace standards by the International Aerospace Quality Group (IAQG)
10 domains of activity

Link to the table of the Technical organization with the WG allocation
Work Programme 2021 & beyond

• Covers all domains and working groups

• Available in the website following this link
## Description of ASD-STAN Domains

<table>
<thead>
<tr>
<th>Domain D01 &quot;Program Management and System Engineering&quot;</th>
<th>The D01 Domain addresses the processes contributing to the delivery of a given system and its associated enabling systems required for production and logistical support to aerospace programmes. The objective of the D01 domain is to optimise the development of programme management and systems engineering best practices.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTC: Gilles Beuzelin, Framatome Domain secretary: Marina Epis (BNAE)</td>
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</table>

<table>
<thead>
<tr>
<th>Domain D02 &quot;Electrical&quot;</th>
<th>The ASD-STAN Domain D02 &quot;Electrical&quot; covers the European standardization activities in the field of electrical parts, components and systems for aerospace applications. The Domain develops and maintains European Standards (ENs) for electrical cables, stripping tools, connectors, contacts, accessories and crimping tools, protection system (circuit breakers, etc.), optical components and much more for the aerospace industry.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTC: Didier Dejardin, Dassault Aviation Domain Secretary: Philippe Thomas (BNAE, France)</td>
<td></td>
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</tbody>
</table>

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<thead>
<tr>
<th>Domain D03 &quot;Mechanical&quot;</th>
<th>The ASD-STAN Domain D03 &quot;Mechanical&quot; covers the European standardization activities in the field of parts and technical requirements for aerospace mechanical systems, (e.g. bearings, rods, bushes, vibration isolators), fasteners (e.g. bolts, nuts, screws, washers, high-locks, quick fasteners, rivets), and fluid systems (e.g. couplings &amp; fittings, clamps, flexible hoses, tubes).</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTC: Dean Rogers, Airbus UK Domain Secretary: Daniel Güth (DIN, Germany)</td>
<td></td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Domain D04 Material</th>
<th>ASD-STAN Domain D04 covers the European standardization activities in the field of materials for aerospace applications. Its work covers metallic materials (aluminium, steel, titanium, superalloys), non-metallic materials (elastomers, composites, sealants) as well as processes (surface treatments, welding and brazing, additive manufacturing).</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTC: Robert Jarczyk, Airbus Germany Domain Secretary: Cristopher Wild (DIN, Germany)</td>
<td></td>
</tr>
<tr>
<td>Domain Name</td>
<td>DTC</td>
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<tr>
<td>-----------------------------</td>
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</tr>
<tr>
<td>Domain D05 Autonomous Flying</td>
<td>Fredrik Nordström, Airbus Germany</td>
</tr>
<tr>
<td>Domain D06 &quot;Quality and Safety Management&quot;</td>
<td>Fabrizio DIDO, Safran Landing Systems</td>
</tr>
<tr>
<td>Domain D07 Digital Projects</td>
<td>Jean-Yves Delaunay, Airbus</td>
</tr>
<tr>
<td>Domain D08 Propulsion Systems</td>
<td>tbc</td>
</tr>
<tr>
<td>Domain D09 Environment</td>
<td>Gilles Goujon, Airbus Helicopters, France</td>
</tr>
<tr>
<td>Domain D12 Cabin</td>
<td>Ralf Schliwa, Airbus, Germany</td>
</tr>
</tbody>
</table>
Our Main Projects/Standards:

- EN 4179 — Qualification and approval of personnel for non-destructive testing
- EN 9100 series deriving from the International Aerospace Quality Group (IAQG)
- EN 4709 series — UAS product requirements, CE marking and operating rules for the Open & Specific categories (harmonized standards to support European legislation on drones)
- EN 2282 "Characteristics of aircraft electrical supplies" and EN2283 “Testing of Aircraft Wiring”
- EN 3155-xxx series “Electrical contacts”
- EN 3773 and 3774 series “Circuit breakers”
- EN 2591 series “Aerospace series — Elements of electrical and optical connection — Test methods
- EN 6049 & EN 6059 series “Electrical cables, installation — Protection sleeve”
- EN 3197 “Aerospace series — Design and installation of aircraft electrical and optical interconnection systems
- EN 3745 series “Aerospace series - Fibres and cables, optical, aircraft use”
- DOA — Design Organization Approval standards (preparation for EASA recognition as AMC)
- LOTAR series — Long Term Archiving and Retrieval of digital technical product data-9300 series
The ASD-STAN prEN (projected European Norm) is an early publication of the CEN EN. The CEN EN is a later publication of the ASD-STAN prEN with a CEN coversheet.

ASD-STAN prENs are technically identical (with exactly the same content) to the further EN publications by CEN members.

All the European Standards (EN) in the range between 2000-9999 are originating from ASD-STAN.

ASD-STAN prEN publications can be used for any training and/or certification activity!

Technical Report (TR)

An informative document that provides information on the technical content of standardization work.

A TR can be published in the following cases:

- The subject to be covered by the TR is still under technical development requiring wider exposure but needs to be laid down at its current status for further development;
- Informative publication containing collected data of a different kind, which currently cannot be published as European Standard (EN).
- A TR may include, for example, data obtained from a survey carried out among members, data on work in other organizations, or data on the “state-of-the-art” in relation to national standards on a particular subject.

ASD-STAN TR is not transformed into CEN TR and is part of the 5 years periodic review.
## ASD-STAN publication process

ASD-STAN publication process ensures compliance with the requirements for transparency established under the Regulation (EU) 1025/2012, the principles of the WTO Agreement on Technical Barriers to Trade ‘Code of Good Practice for the Preparation, Adoption, and Application of Standards’ and the relevant provisions of CEN-CENELEC Internal Regulations.

### Standardization Process

<table>
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<tr>
<th>Process Step</th>
<th>Stage Code</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Work Proposal (NWP) issue</td>
<td>00.00</td>
<td></td>
</tr>
<tr>
<td>NWP Assessment</td>
<td>00.20</td>
<td>Max 2 weeks</td>
</tr>
<tr>
<td>Vote on NWP</td>
<td>10.00</td>
<td>1 month</td>
</tr>
<tr>
<td>Review of target dates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final Assessment, prEN number allocation Launch Project</td>
<td>20.00</td>
<td>Max 1 week</td>
</tr>
<tr>
<td>Establishing Committee Draft (CTD) by the Working Group</td>
<td>20.99</td>
<td>0 to 6 months</td>
</tr>
<tr>
<td>Check conformance to the CEN drafting rules</td>
<td></td>
<td>*Depending on the maturity of the NWP draft document. Extension needs approval of the TAC</td>
</tr>
<tr>
<td>Editing Stage 1</td>
<td>21.90</td>
<td>1 to 2 months</td>
</tr>
<tr>
<td>Submission to CEN-CENELEC Management Center (CCMC) for CEN-CENELEC Enquiry</td>
<td></td>
<td>5 weeks</td>
</tr>
<tr>
<td>National Domain Ballot (NDB) / CEN-CENELEC Enquiry</td>
<td>30.00</td>
<td>3 months</td>
</tr>
<tr>
<td>NBD / CEN-CENELEC Enquiry Results</td>
<td>30.70</td>
<td></td>
</tr>
<tr>
<td>Disposition of comments Template and preparation of Consensus Draft (CD) Check conformance to the CEN drafting rules</td>
<td>30.70</td>
<td>Max 2 months</td>
</tr>
<tr>
<td>Editing Stage 2</td>
<td>30.90</td>
<td>2 to 4 weeks</td>
</tr>
<tr>
<td>Final check and approval for publication</td>
<td>30.99</td>
<td>Max 2 weeks</td>
</tr>
<tr>
<td>ASD-STAN prEN Published</td>
<td>40.00</td>
<td>1 week</td>
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</table>

Duration of the process is between minimum 8 and maximum 17 months.

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**Note:**

- Depending on the maturity of the NWP draft document. Extension needs approval of the TAC.
ASD-STAN prEN Process

Development & publication time is 8 to 17 months.
ASD-STAN Transforming Process

The process is used to transform ASD-STAN prEN into final EN

Development & publication time is at least 14 months.
No technical change is accepted during ASD-STAN prEN transformation into EN.
The production of an EN once ratified results in:

- a publicly available standard-owned, maintained and distributed by the National Standardisation Bodies;
- all competing National Standards being withdrawn by the National Standardisation Bodies within six months;
- permits its incorporation into European legislation thereby re-enforcing its worth;
- allows ASD-CERT to provide qualification at a much-reduced cost to industry.
ASD-STAN Technical Report (TR) process

NEW WORK PROPOSAL

NWP Assessment ➞ NWP Ballot ➞ Consensus Draft ➞ NDB ➞ Results of Ballot ➞ Editing ➞ Approval for publication

1 Month ➞ 1 Month

Disposition of comments + incorporate in final text

ASD-STAN TR

Development & publication time is minimum 6 months.
Statistics of the ongoing standardization work

*Note: 2022 figures cover period of January-August*
External Cooperation

Collaboration with European and International organizations and other SDOs:

- **CEN**: cooperation is dated back to 1986. ASD-STAN is an associated body of CEN and Technical Body for Aerospace.

- **ISO**: ASD-STAN established several liaisons within ISO and via the Vienna Agreement can upgrade its standards until ISO level-ISO EN..... Example of standards: EN 3748 became ISO 23748:2016; EN 3274 published as ISO 22436:2018

- **EDA**: Cooperation on the aerospace sector defence standards-more than 500 standards in the EDSTAR system are originating from ASD-STAN. ASD-STAN takes part in EDA Joint Maintenance Committee for Standardization.

- **ASD-CERT**: Qualification of aerospace parts according to the EN standards originating from ASD-STAN

- **IAQG**: MOU-ASD-STAN is a European sector publisher for quality standards originating from IAQG

- **EUROCAE**: MoU on the coordination work for the UAS standards; MoC on the development of the compatible standard on drone’s geo-awareness topic

- **SAE**: MoU for cooperation on the development of hydraulic systems standards; coordination work on HVDC topic

- **ASTM**: MoU on the development of the compatible standard on drone’s Direct Remote Identification

- **AIA**: development of common quality system standards (NAS410 and EN4179) for the certification and qualification of non-destructive test (NDT)
Cooperation with CEN

- In 1986 ASD-STAN recognized by CEN as an “Associated Body” and “Main Provider of European Aerospace Standards”

- Cooperation agreement to shorten the European standardization process

- ASD-STAN is the CEN Technical Body (TC) for “Aerospace”

- About 2574+ currently published European Standards originate from ASD-STAN (16% of the total CEN/CENELEC publications of ENs)

- Currently 290 ASD-STAN prENs are in progress towards becoming ENs.

- Yearly production (2018): ca. 107 ASD-STAN prENs and 125 ENs  
  (2019): ca. 42 ASD-STAN prENs and 170 ENs  
  (2020): ca. 43 ASD-STAN prENs and 43 ENs  
  (2021): ca. 39 ASD-STAN prENs and 21 ENs
## Liaison Representation in ISO

<table>
<thead>
<tr>
<th>ISO/TC 20</th>
<th>Aircraft and space vehicles</th>
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<tbody>
<tr>
<td>ISO/TC 20/SC 1</td>
<td>Aerospace electrical requirements</td>
</tr>
<tr>
<td>ISO/TC 20/SC 4</td>
<td>Aerospace fastener systems</td>
</tr>
<tr>
<td>ISO/TC 20/SC 10</td>
<td>Aerospace fluid systems and components</td>
</tr>
<tr>
<td>ISO/TC 20/SC 14</td>
<td>Space systems and operations</td>
</tr>
<tr>
<td>ISO/TC 20/SC 16</td>
<td>Unmanned aircraft systems</td>
</tr>
<tr>
<td>ISO/TC 20/SC 17</td>
<td>Airport infrastructure</td>
</tr>
<tr>
<td>ISO/TC 20/SC 18</td>
<td>Materials</td>
</tr>
<tr>
<td>ISO/TC 79</td>
<td>Light metals and their alloys</td>
</tr>
<tr>
<td>ISO/TC 155</td>
<td>Nickel and nickel alloys</td>
</tr>
<tr>
<td>ISO/TC 184</td>
<td>Automation systems and integration</td>
</tr>
<tr>
<td>ISO/TC 184/SC 1</td>
<td>Physical device control</td>
</tr>
<tr>
<td>ISO/TC 184/SC 4</td>
<td>Industrial data</td>
</tr>
<tr>
<td>ISO/TC 184/SC 5</td>
<td>Interoperability, integration, and architectures for enterprise systems and automation applications</td>
</tr>
</tbody>
</table>

*Vienna Agreement* between ISO and CEN allows common development of ISO EN publications by ASD-STAN involvement
More than 500 EN standards referenced on the European Defence Standards Reference System (EDSTAR) are originating from ASD-STAN.

EN developed standards are used in both civilian and military aircrafts:
- Domain D03 “mechanical”: developed ENs for Bolts, Nuts, fluidic fittings, Bearings, etc, are used for military aircrafts (Tornado, Mirage, Eurofighter, Rafale, gripen).
- Domain D02 “electrical”: developed ENs for civilian aircrafts (Circuit breakers, cables, connectors,...) like the A380 and A350 are also used for military aircrafts (A400m).
ASD-STAN works in close cooperation with ASD-CERT to extend certification and qualification activities with re-integrating ASD-CERT auditors’ feedback into the revision of standards. To support the revisions needed ASD-CERT experts are directly participating in ASD-STAN working groups.

Since ASD-STAN prEN publication’s technical content is identical to the ones of the CEN EN publication, ASD-STAN prEN publications can be used for any training and qualification activity.
Our Vision

• Improve the publication process of the European standard in a way that standards are quicker available for the industry;

• Establish the work programme mirroring the needs of the European aerospace industry;

• Avoid overlaps and duplications with other SDOs.
Thank you for your attention!