BSI Standards Publication

Aerospace series — Quality management systems — Variation management of key characteristics

National foreword

This British Standard is the UK implementation of EN 9103:2023. It supersedes BS EN 9103:2014, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee ACE/1, International and European Aerospace Policy and Processes.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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Aerospace series - Quality management systems - Variation management of key characteristics

Série aérospatiale - Systèmes de management de la qualité - Gestion des variations des caractéristiques clés

Luft- und Raumfahrt - Qualitätsmanagementsysteme - Management der Veränderung der Haupteigenschaften

This European Standard was approved by CEN on 7 August 2023.

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EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 9103:2023) has been prepared by the Aerospace and Defence Industries Association of Europe — Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this document has received the approval of the National Associations and the Official Services of the member countries of ASD-STAN, prior to its presentation to CEN.

This document shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2024, and conflicting national standards shall be withdrawn at the latest by May 2024.

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This document supersedes EN 9103:2014.

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Introduction

This document was revised to align with the latest revisions of the International Aerospace Quality Group (IAQG) standards (i.e., EN 9100, EN 9110, EN 9102, EN 9138, EN 9145) and to incorporate industry feedback. Other changes made to standard requirements presented herein were editorial in nature for increased clarity, including additional terms and definitions, and references to other relevant external standards.

To assure customer satisfaction, aviation, space, and defence industry organizations must produce and continually improve safe, reliable products that meet or exceed customer and regulatory authority requirements. The globalization of the industry, and the resulting diversity of regional/national requirements and expectations, has complicated this objective. End-product organizations face the challenge of assuring the quality of, and integrating, product purchased from external providers throughout the world and at all levels within the supply chain. Industry producers, including external providers, face the challenge of delivering product to multiple customers having varying quality expectations and requirements.

The aviation, space, and defence industry established the IAQG for the purpose of achieving significant improvements in quality and safety, and reductions in cost throughout the value stream. This organization includes representation from companies in the Americas, Asia/Pacific, and Europe.

This document standardizes requirements for the variation management of key characteristics (KCs). The establishment of common requirements, for use at all levels of the supply chain, should result in improved quality and safety, and decreased costs, due to the elimination or reduction of organization-unique requirements and the resultant variation inherent in these multiple expectations.

General

This document establishes variation management requirements for KCs and provides a process to achieve those requirements.

The document requires a thorough assessment of the applicable manufacturing and maintenance processes with the primary goals being to control and minimize variation in characteristics generated by these processes. Specifically, the standard requires:

— understanding process elements that affect KCs;

— disciplined determination of process KCs using appropriate analysis tools for variation control and reduction to satisfy customer requirements;

— control and capability assessment to ensure variation is well understood;

— control plan (CP) that defines specific control of KCs, and manufacturing or maintenance process parameters.