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Aerospace series - Metrological assessment procedure for kinematic fields measured by digital image correlation

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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English Version

Aerospace series - Metrological assessment procedure for kinematic fields measured by digital image correlation

Série aérospatiale - Procédure d'évaluation
métrologique applicable aux mesures de champs
cinématiques par corrélation d'images numériques

Luft- und Raumfahrt - Metrologisches Messverfahren
für kinematische Felder durch digitale Bildkorrelation

This European Standard was approved by CEN on 26 August 2019.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN 4861:2020) 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 Standard 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 European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2021, and conflicting national standards shall be withdrawn at the latest by June 2021.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

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EN 4861:2020 (E)**1 Scope**

This document specifies the monitoring of mechanical tests and inspections performed both at the material (coupon) and at the structural scale by the implementation of kinematic field measurements by digital image correlation. This document describes an in situ method for evaluating the metrological performance of an extensometer system using image correlation for the delivery of displacement fields, and by extrapolation, of deformation fields. It can be implemented prior to the actual start of the test (or inspection). It will inform of the metrological performance in testing conditions.

This document allows the metrological performance of the measuring technology to be quantified. The methodology described herein is not to be considered as a calibration step. This reference document does not exhaustively specify the constitutive elements of a generic system of Digital Image Correlation measurement. This reference does not address the measurement of 3D shapes via stereocorrelation systems.

2 Normative references

There are no normative references in this document.

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