

### SLOVENSKI STANDARD SIST-TS CEN ISO/TS 19392-3:2022

01-september-2022

Barve in laki - Premazni sistemi za lopatice rotorjev vetrnih turbin - 3. del: Ugotavljanje in vrednotenje odpornosti proti eroziji zaradi dežja z vodnim curkom pod tlakom (ISO/TS 19392-3:2018)

Paints and varnishes - Coating systems for wind-turbine rotor blades - Part 3: Determination and evaluation of resistance to rain erosion using water jet (ISO/TS 19392 -3:2018)

Beschichtungsstoffe - Beschichtungssysteme für Rotorblätter von Windenergieanlagen - Teil 3: Bestimmung und Bewertung der Beständigkeit gegen Regenerosion mittels Wasserstrahl (ISO/TS 19392-3:2018)

Peintures et vernis - Matériaux de revêtement pour pales de turbines éoliennes - Partie 3: Détermination et évaluation de la résistance à l'érosion causée par la pluie au moyen d'un jet d'eau (ISO/TS 19392-3:2018)

Ta slovenski standard je istoveten z: CEN ISO/TS 19392-3:2022

ICS:

27.180 Vetrne elektrarne Wind turbine energy systems

87.040 Barve in laki Paints and varnishes

SIST-TS CEN ISO/TS 19392-3:2022 en,fr,de

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# TECHNICAL SPECIFICATION SPÉCIFICATION TECHNIQUE TECHNISCHE SPEZIFIKATION

**CEN ISO/TS 19392-3** 

June 2022

ICS 87.040

#### **English Version**

Paints and varnishes - Coating systems for wind-turbine rotor blades - Part 3: Determination and evaluation of resistance to rain erosion using water jet (ISO/TS 19392-3:2018)

Peintures et vernis - Matériaux de revêtement pour pales de turbines éoliennes - Partie 3: Détermination et évaluation de la résistance à l'érosion causée par la pluie au moyen d'un jet d'eau (ISO/TS 19392-3:2018) Beschichtungsstoffe - Beschichtungssysteme für Rotorblätter von Windenergieanlagen - Teil 3: Bestimmung und Bewertung der Beständigkeit gegen Regenerosion mittels Wasserstrahl (ISO/TS 19392-3:2018)

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CEN ISO/TS 19392-3:2022 (E)

#### **European foreword**

The text of ISO/TS 19392-3:2018 has been prepared by Technical Committee ISO/TC 35 "Paints and varnishes" of the International Organization for Standardization (ISO) and has been taken over as CEN ISO/TS 19392-3:2022 by Technical Committee CEN/TC 139 "Paints and varnishes" the secretariat of which is held by DIN.

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### TECHNICAL SPECIFICATION

ISO/TS 19392-3

First edition 2018-04

Paints and varnishes — Coating systems for wind-turbine rotor blades —

Part 3:

Determination and evaluation of resistance to rain erosion using water jet

Peintures et vernis — Matériaux de revêtement pour pales de turbines éoliennes —

Partie 3: Détermination et évaluation de la résistance à l'érosion causée par la pluie au moyen d'un jet d'eau



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#### Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see <a href="www.iso.org/directives">www.iso.org/directives</a>).

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This document was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*, Subcommittee SC 9, *General test methods for paints and varnishes*.

A list of all parts in the ISO 19392 series can be found on the ISO website. 8-b477-4db4-ba76-

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#### Introduction

In the wind energy industry, coatings are applied to rotor blades surface to protect the glass fibre reinforced polymer composite substrate. Rain drops and hailstones can damage these coatings in such a way that individual layers come off or the whole coating delaminates from the substrate.

ISO/TS 19392-1 describes the minimum requirements and weathering of the coating system. Rain erosion can be simulated by means of high speed water jets or water droplets impinging on the specimen surface. ISO/TS 19392-2 describes a method which simulates rain erosion by accelerating one or more coated panels, attached to the end of rotating arms, through a simulated rain field at a constant rotational velocity. This document describes a method where a water jet or a series of water jets at defined pressure hits the surface of the specimen.

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