

TNI	Odolnosť kovových materiálov proti kvapalným biogénnym a alternatívnym palivám a ich zmesiam	TNI CEN/TR 17144 07 5830
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Resistance of metallic materials to liquid biogenic and alternative fuels and their blends

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TECHNICAL REPORT

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English Version

Resistance of metallic materials to liquid biogenic and alternative fuels and their blends

Résistance des matériaux métalliques aux biocombustibles liquides, aux combustibles liquides alternatifs et à leurs mélanges

Beständigkeit metallischer Werkstoffe gegenüber flüssigen biogenen und alternativen Brennstoffen und deren Blends

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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European foreword

This document (CEN/TR 17144:2017) has been prepared by Technical Committee CEN/TC 47 "Atomizing oil burners and their components - Function - Safety - Testing", the secretariat of which is held by DIN.

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Introduction

Both the limited range and scope of crude oil and other fossil energy sources, as well as the impact on the climate resulting from the anthropogenic output of greenhouse gases, have led to a politically induced initiation of the restructuring of energy usage.

In addition to increasing actual efficiency in the technical utilization of fossil energy sources, the focus is on the development and expansion of renewable energies. The integration of regenerative resources in sustainable heat generation can reduce the output of greenhouse gases such as CO₂, as well as the need for fossil energy sources. As a bio-component of blends, fatty acid methyl ester (FAME) is currently used. As a result of the chemical/physical properties, as well as evaporation and combustion characteristics, experience shows that an admixture is possible up to 30 % (V/V) FAME [22, 23]. Due to the possible interactions of the blends with components and in particular with non-ferrous metals such as copper/brass, the manufacturers of consuming units and devices have approved their products only to a limited extent for such an admixture. By contrast, the manufacturers of tanks and components in the fuel piping consider their products to also be suitable for blends with higher admixtures.

However, with regard to the increasing market penetration of blends as a liquid fuel with biogenic or alternative admixtures, requirements for the materials used should be defined and stipulated as standard. There is, therefore, the need to prove the resistance of the materials used against these fuels.

1 Scope

This Technical Report includes application-relevant metallic materials of supply systems for liquid fuels and their blends with regard to corrosive or service life reducing influences. Assessment of the specialist literature showed possible interactions with biogenic and alternative fuels and motor fuels as well as their blends with mineral oil and motor fuels. The results of this assessment are given in this CEN/TR.

2 Normative references

There are no normative references in this document.

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