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Alkoholne zapore - Preskusne metode in zahtevane lastnosti - 3. del: Navodilo za nosilce odločanja, kupce in uporabnike

Alcohol interlocks - Test methods and performance requirements - Part 3: Guidance for decision makers, purchasers and users

Alkohol-Interlocks - Prüfverfahren und Anforderungen an das Betriebsverhalten - Teil 3: Leitfaden für Entscheider, Käufer und Nutzer

Alcootests électroniques anti-démarrage - Méthodes d'essai et exigences de performance - Partie 3: Lignes directrices pour décideurs, acheteurs et utilisateurs

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**Alcohol interlocks -
Test methods and performance requirements -
Part 3: Guidance for decision makers, purchasers and users**

Alcootests électroniques anti-démarrage -
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Alkohol-Interlocks -
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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

This Technical Report was prepared by the CENELEC BTTF 116-2, Alcohol interlocks.

It was circulated for voting in accordance with the Internal Regulations, Part 2, Subclause 11.4.3.3 (simple majority) and was approved by CENELEC as CLC/TR 50436-3 on 2010-06-04.

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Introduction

According to the European Transport Safety Council (ETSC), in about a quarter of the fatal accidents that occur in traffic on European roads, alcohol impairment has been a contributory factor. Drink-driving is found in all social classes and professional categories, often without their families, friends, colleagues or supervisors knowing about it. In those cases where there actually is an awareness, it is often difficult to know how to act or confront the problem. A strategy has been drawn up within the European Commission to decrease alcohol related injuries as well as to support countries that are working in different ways to tackle the problem of drink-driving.

One strategy to decrease alcohol-related accidents is to implement the use of alcohol interlocks. The main purpose of alcohol interlocks is to prevent persons with breath alcohol concentrations exceeding a set limit value from driving a vehicle.

There are several areas in which alcohol interlocks may be used:

- installed in a vehicle as a general preventive measure for the promotion of traffic safety, or
- in vehicles as ordered by a court or an administrative authority as part of a drink-driving offender programme, or
- for persons subject to a medical or rehabilitation programme, or
- as a safety measure for the access to machinery or certain restricted areas.

The use of alcohol interlocks in the vehicles of drink-driving offenders was started in the USA in 1985, followed a few years later in Canada. From the end of the 1990s, the use of alcohol interlocks has spread worldwide, especially in Australia and several European countries. In Sweden, offender programmes started in 1999, followed closely by the use of alcohol interlocks for quality assurance of transportation.

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This guidance for decision makers, purchasers and users contains numerous recommendations for those interested in the use of alcohol interlocks. However, it is not mandatory and it does not contain any requirements.

This Technical Report is part of a series of European Standards/documents which mainly describe test methods and requirements for alcohol interlocks. It is assumed that the recommendations given in this document are used for alcohol interlocks fulfilling the requirements of one or more of the performance standards of this series.

1 Scope

An alcohol interlock is a system comprising a breath alcohol measuring instrument and an immobiliser which may be easily installed in a motor vehicle. Before the vehicle can be started, a breath sample has to be provided to the alcohol interlock, normally through a mouthpiece. Once the breath alcohol measurement has been performed, the alcohol interlock will prevent drivers from starting the motor if they have an alcohol concentration above a predetermined limit value. This limit may be set at the legal limit of a respective country or lower.

Alcohol interlocks that meet the relevant European Standards detect, for example, if the sample is delivered by a human being. They are also capable of preventing and detecting tampering with the instrument.

Additional parts of the system may include identity checking or recording mechanisms.

The purpose of this Technical Report is to give practical guidance for selection, installation, use and maintenance of alcohol interlocks. It is directed to all those who have an interest in alcohol interlocks as well as companies selling and installing alcohol interlocks, purchasers and users for commercial, professional or private use. The Technical Report gives information about the alcohol interlock and how it is to be used.

This Technical Report primarily describes alcohol interlocks for use in vehicles as a general preventive measure in traffic safety. However, information provided may also be useful for alcohol interlocks in other applications.

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2 Normative references (standards.iteh.ai)

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 50436-1:2005, *Alcohol interlocks – Test methods and performance requirements – Part 1: Instruments for drink-driving-offender programs*

EN 50436-2:2007, *Alcohol interlocks – Test methods and performance requirements – Part 2: Instruments having a mouthpiece and measuring breath alcohol for general preventive use*

NOTE The technology of alcohol interlocks is rapidly evolving, and further innovations can be expected, which could be considered in future amendments or new parts of these European Standards.

EN ISO/IEC 17025:2005, *General requirements for the competence of testing and calibration laboratories* (ISO/IEC 17025:2005)

International Recommendation OIML R 126:1998, *Evidential breath analyzers*.
International Bureau of Legal Metrology, 11, rue Turgot – 75 009 Paris – France

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply. They are carried forward from EN 50436-2.

3.1

alcohol interlock

device which provides, in the blocking state, an output signal which is intended for example to prevent the starting of a vehicle motor, and which can be brought into the unblocking state only after presenting and analysing a breath sample with an alcohol concentration below a limit value

NOTE 1 It normally consists of a handset and a control unit electrically connected to the vehicle.

NOTE 2 In this European Standard the expression “starting of the vehicle motor” includes alternatively the provision of an respective output signal.

3.2

breath alcohol concentration

mass concentration of ethanol, given in mg/l (milligram ethanol per litre breath air), in a breath sample delivered into an alcohol interlock

3.3

breath sample

breath air sample taken under forced expiration through the mouth

3.4

accepted breath sample

breath sample fulfilling set requirements for volume, flow and exhalation time

3.5

mouthpiece

part connecting the mouth of the tested person and the alcohol interlock to assure hygienic conditions and to avoid that the breath sample is mixed with ambient air

3.6

blocking state

state in which the alcohol interlock is inhibiting the start of the vehicle motor

3.7

unblocking state

state in which the vehicle motor can be started

3.8

breath alcohol concentration limit

predefined value of the breath alcohol concentration below which the vehicle motor may be started. A breath test result equal to or above this limit value will prevent the vehicle motor from being started

3.9

retest

breath test after the vehicle motor has been started

3.10

start period

time interval after an accepted breath sample has been delivered during which the vehicle motor may be started

3.11**restart period**

time interval after the ignition is switched off during which the vehicle motor may be started again without the presentation of another breath sample

NOTE This restart period is intended to ensure the driver's ability to restart the vehicle motor after a stall situation.

3.12**bypass**

starting the vehicle motor without providing a breath sample with an accepted breath test result below the concentration limit or without engaging the override function

3.13**override**

method of unblocking the start of the vehicle motor without providing a breath sample with an accepted breath test result below the concentration limit

3.14**tampering**

unauthorised change to or interference with the alcohol interlock or its installation in the vehicle or its functioning

3.15**data memory**

record of breath test results and other events with date and time stored in the internal memory of the alcohol interlock

3.16**manufacturer**

person or organisation responsible for the design, construction and/or production of the alcohol interlock

3.17**aftermarket installation**

any installation of an alcohol interlock in a vehicle after the original retail sale of a vehicle

3.18**warm-up time**

duration from power-up of the alcohol interlock until it is ready to accept a breath sample and to fulfil the functional test requirements.

4 Intended application of alcohol interlocks**4.1 General preventive application for commercial and professional use**

Installing an alcohol interlock as a general preventive measure in vehicles for the safe transport of persons or goods such as hazardous goods transporters, lorries, coaches, taxis, trains, boats, snow mobiles or other modes of transportation can reduce accidents and related downtime. Installation can also improve the image of the transport company by increasing road safety, and improve their customers perception of their own safety. Alcohol interlocks may be used as a transport quality instrument for vehicles operated by companies or authorities. They may also be a requirement of employment within an alcohol policy of a company or authority, and they may be used for compliance monitoring.

4.2 General preventive application for private use

The control of drink-driving behaviour through alcohol interlocks may also be proposed for private use on a personal voluntary decision basis. In private vehicles, boats, snow mobiles or recreational vehicles the voluntary installation of an alcohol interlock as a preventive measure can help to ensure that vehicle drivers are sober. Furthermore, they can offer reassurance to partners or for example to parents whose children may also drive a vehicle. Interlocks may also be applicable with regard to self control for families who wish to avoid drink driving under any circumstances, or to insurance companies which may allow a reduced premium for certain drivers, especially young drivers or drivers with a personal history of alcohol problems.

The self evaluation of alcohol levels is considered as a major factor in prevention of alcohol related accidents. If alcohol interlocks are installed in private vehicles, then this will provide an additional means for self evaluation.

4.3 Drink-driving offender programmes

Alcohol interlocks may be used when a court or administrative authority orders an alcohol interlock to be installed in the vehicles of drink-driving offenders. An increasing number of countries are implementing drink-driving offender programmes.

This application requires alcohol interlocks with special capabilities, for example possibilities to request retests after the motor has started and data memory to store all relevant information.

4.4 Alcohol rehabilitation and treatment programmes

In alcohol rehabilitation and treatment programmes, the alcohol interlock may be used to enhance harm reduction, remedial measures and compliance monitoring.

4.5 Automatic access control

Wider use of alcohol interlocks includes limiting entry to locations for which an alcohol policy or regulation is in place. These locations may include, for example, nuclear power plants, laboratories, factories and gates in harbours or mines. Other applications may include access control to specialised machinery.

An alcohol interlock is able to control access based on the measured alcohol concentration and could send a notification to security personnel under pre-determined circumstances.

As an integrated device, the alcohol interlock may be used in conjunction with other access control systems such as swipe cards, retinal scanners or PIN control. In these cases, the result of the breath sample could be recorded along with details of the user who provided the breath sample.

Requiring users of machinery to use an alcohol interlock for gaining access to the operation of the machinery would prevent alcohol related damage or injuries.

5 Introduction of alcohol interlocks for commercial and professional use

5.1 Alcohol interlocks, a way to assure transport quality

Companies and organisations can use alcohol interlocks to ensure that their vehicles are being driven by sober drivers. Alcohol interlocks are then an element of a companies alcohol and overall quality assurance policy. Such an holistic approach requires determination and patience and has to be integrated step by step into normal operations.

Companies and organisations that procure or provide transportation will help to improve road safety through the use of alcohol interlocks to counteract drink driving. They will also bolster the customers view of the company, create a better working environment, and achieve competitive advantages for their own operations.

5.2 Systematic procedures to introduce alcohol interlocks

For the introduction of alcohol interlocks it is necessary to create credibility for the programme. To achieve this, the introductory process could be divided into several steps:

- *Decision and support:*

In order to create a sense of commitment and involvement, management decisions should be communicated at an early stage so that they permeate the entire organisation from the decision makers to the actual drivers.

- *Policy and objectives:*

A straightforward policy should be drafted with clear, realistic and quantifiable targets describing the direction and intention for the work ahead. This policy could be associated with legal issues and health and safety campaigns. The policy should be communicated repeatedly in order to be made known within the entire organisation if it is to gain acceptance and stimulate a sense of involvement.

- *Action plan and measures:*

The action plan describes how the policy is to be put into effect, e.g. time schedules, allocation of responsibilities, etc. It should also take into consideration the individual employee's sense of integrity and job security. The measures undertaken through the plan could for example involve information campaigns, training and instruction programmes in connection with the introduction of alcohol interlocks, or stipulating the use of alcohol interlocks in future transport procurements.

- *Monitoring and evaluation:*

Monitoring and evaluation is a necessary part of a systematic work method to show whether the objectives of the policy have been achieved. This could be done for example by monitoring of:

- the data memory of the alcohol interlocks,
- manipulation attempts,
- false positive tests,
- regular calibration of the alcohol interlocks,
- traffic and work accidents,
- illness times of employees.

5.3 Dialogue with union representatives and other relevant bodies

It is important to initiate an early dialogue between company management and the unions / union representatives or other legally relevant bodies concerning the prospective use of alcohol interlocks as a quality assurance tool. Moreover, it is preferable that this dialogue is supported by a policy document and action plans formulated within the framework of a quality assurance programme. Based on experience, it has been found that information and discussion available at an early stage increases the chance of mutual understanding.

It is suggested that the dialogue should be centred around the use of alcohol interlocks as a quality assurance tool which improves the working environment in companies and organisations, and creates safer and more reliable conditions. This applies both to those out on the road as well as to those who procure or provide transport services.