



UNI EN ISO 10882-1/2:2024

Nuove Ed. norme SSL

Campionamento processi saldatura

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ID 22752 | 17.10.2024 / Preview disponibili al link riportati

Pubbligate da UNI il 10 Ottobre, le nuove edizioni delle norme UNI EN ISO 10882-1:2024 (Ed. 3) e UNI EN ISO 10882-2:2024 (Ed. 2), relative al campionamento delle particelle in sospensione e dei gas nella zona respiratoria del saldatore (1. particelle / 2. gas).



UNI EN ISO 10882-1:2024

Campionamento particelle in sospensione processi di saldatura SSL

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UNI EN ISO 10882-1:2024

Salute e sicurezza in saldatura e nei processi correlati - Campionamento delle particelle in sospensione e dei gas nella zona respiratoria del saldatore - Parte 1: Campionamento delle particelle in sospensione

Data disponibilità: 10 ottobre 2024

Recepisce: EN ISO 10882-1:2024

Adotta: ISO 10882-1:2024

La norma specifica un procedimento per il campionamento personale delle particelle in sospensione nella saldatura e nei processi correlati. La norma descrive il procedimento per l'effettuazione di misurazioni dell'esposizione personale ai fumi di saldatura ed alle altre particelle in sospensione prodotte da operazioni legate alla saldatura.

Fornisce inoltre informazioni dettagliate sulle norme pertinenti che specificano le caratteristiche richieste, i requisiti di prestazione e i metodi di prova per la misurazione dell'aria sul luogo di lavoro, e integra la guida fornita nella norma EN 689 sulla strategia di valutazione e sulla strategia di misurazione.

Il documento specifica anche un procedimento per effettuare misurazioni gravimetriche dell'esposizione personale alle particelle in sospensione generate dalla saldatura e da processi correlati (fumi di saldatura) e ad altre particelle in sospensione

Introduction

The health of workers in many industries is at risk through exposure by inhalation to airborne particles generated by welding and allied processes (welding fumes) and other airborne particles generated by

welding-related operations, such as grinding. Industrial hygienists and other public health professionals need to determine the effectiveness of measures taken to control workers' exposure to these harmful substances and this is generally achieved by making personal exposure measurements.

This document is intended to be of benefit to agencies concerned with health and safety at work, industrial hygienists and other public health professionals, industrial users of welding and allied processes and their workers, and analytical laboratories.

It has been assumed in the drafting of this document that the execution of its provisions, and the interpretation of the results obtained, is entrusted to appropriately qualified and experienced people.

1 Scope

This document specifies a procedure for sampling airborne particles in the breathing zone of a person who performs welding and allied processes (the operator). It also provides details of relevant standards that specify required characteristics, performance requirements and test methods for workplace air measurement, and augments guidance provided in EN 689 on assessment strategy and measurement strategy.

This document also specifies a procedure for making gravimetric measurements of personal exposure to airborne particles generated by welding and allied processes (welding fumes) and other airborne particles generated by welding-related operations.

Additionally, it provides references to suitable methods of chemical analysis specified in other standards to determine personal exposure to specific chemical agents present in welding fumes and other airborne particles generated by welding-related operations.

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UNI EN ISO 10882-2:2024

Campionamento dei gas processi di saldatura SSL

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UNI EN ISO 10882-2:2024

Salute e sicurezza in saldatura e nei processi correlati - Campionamento delle particelle in sospensione e dei gas nella zona respiratoria del saldatore - Parte 2: Campionamento dei gas

Data disponibilità: 10 ottobre 2024

Recepisce: EN ISO 10882-2:2024

Adotta: ISO 10882-2:2024

La norma fornisce una guida per la determinazione dell'esposizione personale a gas e vapori nella saldatura e nei processi correlati. Essa si applica ad alcuni processi termici usati per le operazioni di giunzione, taglio, rivestimento superficiale od asportazione di metalli.

Introduction

Gases encountered during welding and allied processes are so numerous that it would be impracticable to cover them all in this document. Depending on the process, they can include:

- a) fuel gases which are used in gas welding and cutting, which on combustion produce carbon dioxide and, in some instances, carbon monoxide;
- b) shielding gases, such as argon, helium, carbon dioxide or mixtures of these gases, which can be toxic or asphyxiant;
- c) gases produced by the action of heat upon the welding flux or slag, e.g. carbon dioxide and carbon monoxide;
- d) gases produced by the action of heat or ultraviolet radiation upon the atmosphere surrounding the welding arc, e.g. nitric oxide, nitrogen dioxide and ozone;
- e) vapours produced as a result of thermal degradation of surface coatings in the welding or cutting of metals treated with paint, primer, sealer or other substances. Vapours can also be produced as a result of degradation of solvent vapour from degreasing operations, but their measurement is not dealt with in this document because good working practices will avoid their production.

The scope of this document has been limited to those gases which are produced by welding operations. In particular, fuel, oxidant and shielding gases used in welding and allied processes are not covered, since the hazards associated with their use (e.g. asphyxiation, explosion) are different from those arising from the gases dealt with in this document.

This document gives a generalised description of measurement methods suitable for the assessment of personal exposure to gases produced by welding and allied processes; gives details of relevant European Standards which specify required characteristics, performance requirements and test methods; augments guidance provided in EN 689 on assessment strategy and measurement strategy; lists basic sampling requirements; and provides specific information about the availability of direct reading electrical apparatus, detector tubes and indirect methods involving laboratory analysis for individual gases.

It has been assumed in the drafting of this document that the execution of its provisions, and the interpretation of the results obtained, is entrusted to appropriately qualified and experienced people.

1 Scope

This document provides guidance and specifications for the determination of personal exposure to gases and vapours in welding and allied processes. It applies to the following thermal processes used to join, cut, surface or remove metals:

- (111) Manual metal arc welding (metal arc welding with covered electrode); shielded metal arc welding /USA/
- (114) Self-shielded tubular-cored arc welding
- (131) Metal inert gas welding; MIG welding; gas metal arc welding /USA/
- (135) Metal active gas welding; MAG welding; gas metal arc welding /USA/
- (136) Tubular-cored metal arc welding with active gas shield; flux cored arc welding /USA/
- (137) Tubular-cored metal arc welding with inert gas shield; flux cored arc welding /USA/
- (141) Tungsten inert gas arc welding; TIG welding; gas tungsten arc welding /USA/
- (15) Plasma arc welding;
- (31) Oxy-fuel gas welding; oxy-fuel gas welding /USA/
- (52) Laser beam welding;

(912) Flame brazing; torch brazing /USA/
(97) Braze welding;

- arc and flame gouging;
- arc and laser cutting processes;
- flame and plasma cutting processes;
- metal-spraying (see ISO 4063).

The following gases and vapours which can be produced or be present during welding and allied processes are covered:

- ozone (O₃);
- carbon monoxide (CO);
- carbon dioxide (CO₂);
- nitric oxide (NO) and nitrogen dioxide (NO₂);
- vapours produced in the welding or cutting of metals having paint or other surface coatings.

Fuel, oxidant and shielding gases used in welding and allied processes are not covered.

The general background level of gases and vapours in the workplace atmosphere influences personal exposure, and therefore the role of fixed-point measurements is also considered.

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Rev.	Data	Oggetto
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Note Documento e legali

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