Irish Standard
I.S. EN ISO 25457:2023

Version 2.00

Oil and gas industries including lower carbon energy - Flare details for general refinery and petrochemical service (ISO 25457:2023)

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National Foreword

I.S. EN ISO 25457:2023 V2.00 is the version of the NSAI adopted European document EN ISO 25457:2023, *Oil and gas industries including lower carbon energy - Flare details for general refinery and petrochemical service (ISO 25457:2023),* including any Corrections, Amendments etc. to EN ISO 25457:2023.

This normative document by CEN/CENELEC the elaboration of which includes a public enquiry, followed by a Formal Vote of CEN/CENELEC national members and final ratification. This European Standard is published as an identical national standard and every conflicting national standard will be withdrawn. The content of a European Standard does not conflict with the content of any other EN (and HD for CENELEC).

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 25457

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Supersedes EN ISO 25457:2008

English Version

Oil and gas industries including lower carbon energy - Flare details for general refinery and petrochemical service (ISO 25457:2023)

Industries du pétrole et du gaz, y compris les énergies à faible teneur en carbone - Détails sur les torches d'usage général dans les raffineries et dans les usines pétrochimiques (ISO 25457:2023)

Erdöl-, petrochemische und Erdgasindustrie - Fackeln für den allgemeinen Betrieb in Raffinerien und petrochemischen Service (ISO 25457:2023)

This European Standard was approved by CEN on 12 October 2023.

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

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European foreword

This document (EN ISO 25457:2023) has been prepared by Technical Committee ISO/TC 67 "Oil and gas industries including lower carbon energy" in collaboration with Technical Committee CEN/TC 12 “Oil and gas industries including lower carbon energy” the secretariat of which is held by NEN.

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of an identical text or by endorsement, at the latest by April 2024, and conflicting national standards shall be withdrawn at the latest by April 2024.

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.

This document supersedes EN ISO 25457:2008.

Any feedback and questions on this document should be directed to the users’ national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Endorsement notice

The text of ISO 25457:2023 has been approved by CEN as EN ISO 25457:2023 without any modification.

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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 document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 67, *Oil and gas industries including lower carbon energy*, Subcommittee SC 6, *Process equipment, piping, systems, and related safety,* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 12, *Oil and gas industries including lower carbon energy,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 25457:2008), which has been technically revised.

This document supplements API Std 537, 3rd edition (2017) including Addendum 1.

The technical requirements of this document and API Std 537 used to be identical. In the meantime API Std 537 has been technically revised as API 537, 3rd edition (2017) with Addendum 1. The purpose of this edition of ISO 25457 is to bring it up to date, by referencing the current edition of API Std 537 and including its supplementary content.

The main changes are as follows:

— supplementary requirements edition for pellet flare ignition systems;

— update of the volumetric flow formula.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Oil and gas industries including lower carbon energy — Flare details for general refinery and petrochemical service

1 Scope

This document specifies requirements and provides guidance for the selection, design, specification, operation, and maintenance of flares and related combustion and mechanical components used in pressure-relieving and vapor-depressurizing systems for petroleum, petrochemical, and natural gas industries.

While this document is primarily intended for onshore facilities, guidance related to offshore applications is included. Guidance and best practices for the selection, specification, and mechanical details for flares and on the design, operation, and maintenance of flare combustion and related equipment is also provided.

This document is a supplement to API 537, 3rd edition (2017) including Addendum 1, the requirements of which are applicable with the exceptions specified in this document.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

API Std 537, 3rd edition (2017), *Flare Details for Petroleum, Petrochemical, and Natural Gas Industries*

API Std 537, Addendum 1, *Addendum to Flare Details for Petroleum, Petrochemical, and Natural Gas Industries, Third Edition (2020)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in API 537, 3rd edition (2017) and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
ballistic/pyrotechnical ignition system
flare tip ignition system based on projectile technology that is launched from a cabinet via a guide tube to the flare deck

4 Supplements to API 537, 3rd edition (2017)

4.1 General requirements

The requirements specified in API 537, 3rd edition (2017) shall apply, with the exception specified in 4.2 and 4.3.