Hazardous areas
Applications

Protection for critical wiring in hazardous areas
From our UK-based facility, ABB manufactures a wide range of globally approved products, including metallic conduit and fittings along with a full range of conduit accessories.

We are committed to an extensive and ongoing product development program, which will continue to deliver innovative and high performance products for effective cable protection in safety-critical areas.

Our current range of high performance products is designed for many highly demanding market sectors, including petrochemical, pharmaceutical and offshore industries or any ATEX/IECEx/UL/CSA areas.

ATEX/IECEx
The directive is designed to harmonize the law of EU member states concerning equipment and protective systems intended for use in potentially explosive areas.

Products are categorized 1, 2 and 3 with category 1 meaning the product employs a very high level of protection; category 2, a high level of protection; category 3, a normal level of protection.

Its main requirements are the need to classify areas as Zones 0, 1 and 2 (for gases and vapours) and Zones 20, 21, 22 (for dusts and equipment for mining). Mining applications are covered by Group I and non-mining applications by Group II.

UL/CSA directives
Products are categorized into Classes and Divisions (UL) or Zones (CSA), where Class I denotes use in gas environments and Class II, dust and flyings.

This Class and Division or Zone system identifies what equipment can be used as stated in the NEC National Electrical Code or CEC Canadian Electrical Code, Part I.

Technical support
ABB can provide technical assistance in the selection of the appropriate product from its range. For help, please contact your regional sales office.

Hazardous areas

Standards and what they mean

Zone definitions – Dust (as per ATEX 60079)

ZONE 20

Zone 20

Permanent/frequent

Area in which an explosive atmosphere in the form of a cloud of combustible dust in air is **present continuously,** or for long periods, or frequently.

ZONE 21

Zone 21

Occasional

Area in which an explosive atmosphere, in the form of a cloud of combustible dust in air is **likely to occur,** in normal operation, occasionally.

ZONE 22

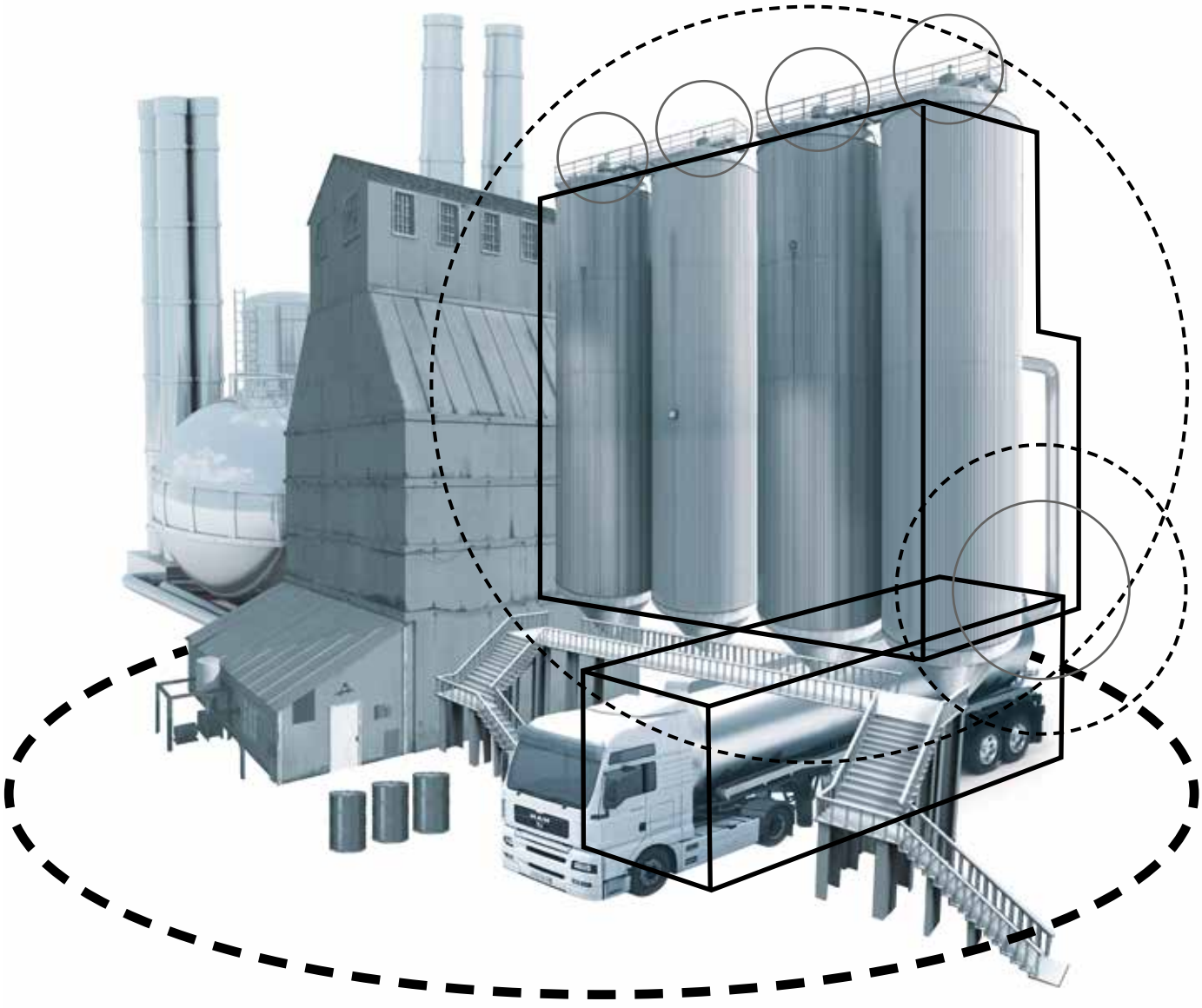
Zone 22

Dust irregular/short duration

Area in which an explosive atmosphere, in the form of a cloud of combustible dust in air is **not likely to occur** in normal operation but, if it does occur, will persist for a **short period** only.

Safety zone

No explosion risk



Hazardous areas

Standards and what they mean

Zone definitions – Gases and vapours (as per ATEX 60079-10)

ZONE 0

Zone 0

Permanent/frequent

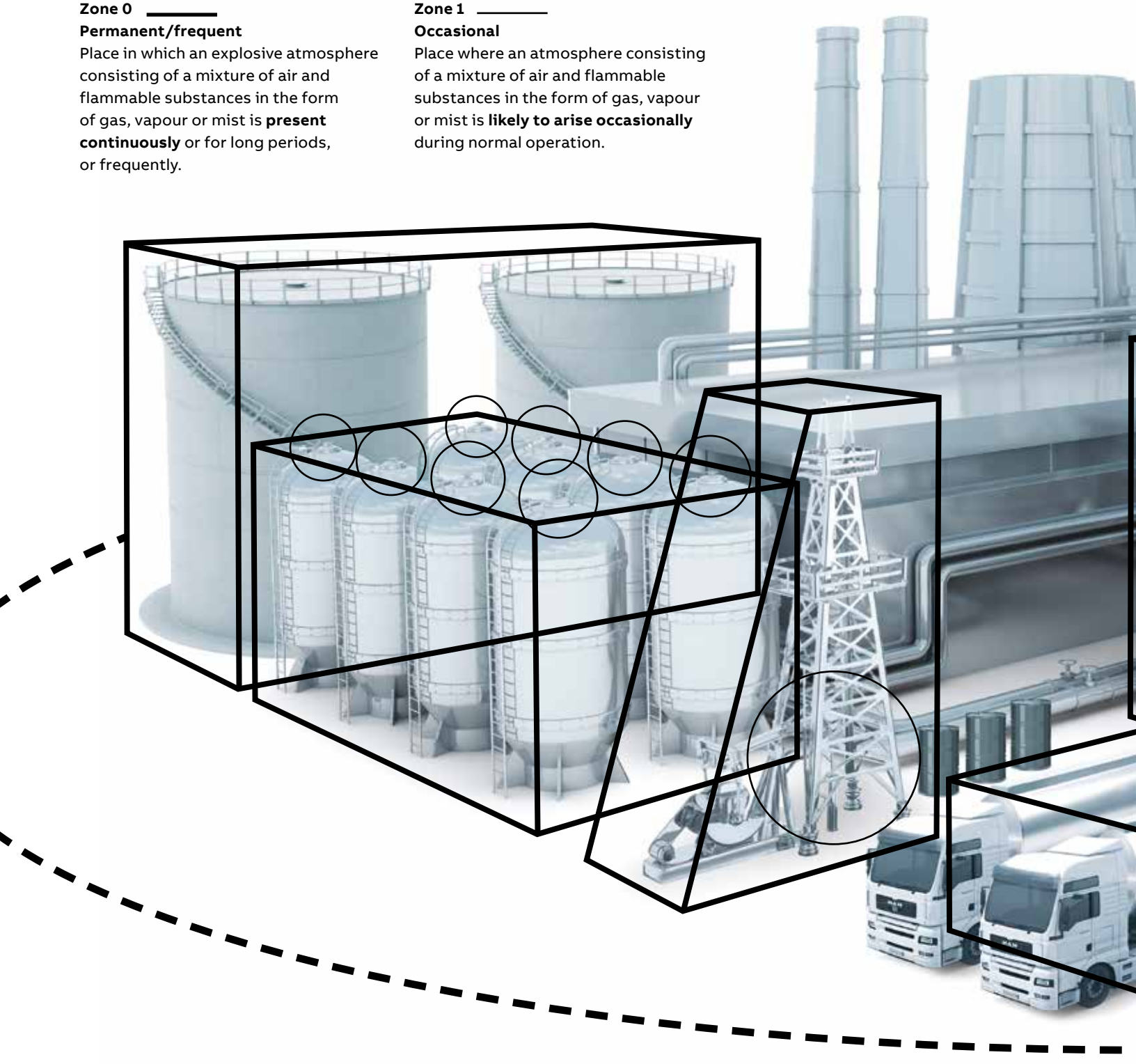
Place in which an explosive atmosphere consisting of a mixture of air and flammable substances in the form of gas, vapour or mist is **present continuously** or for long periods, or frequently.

ZONE 1

Zone 1

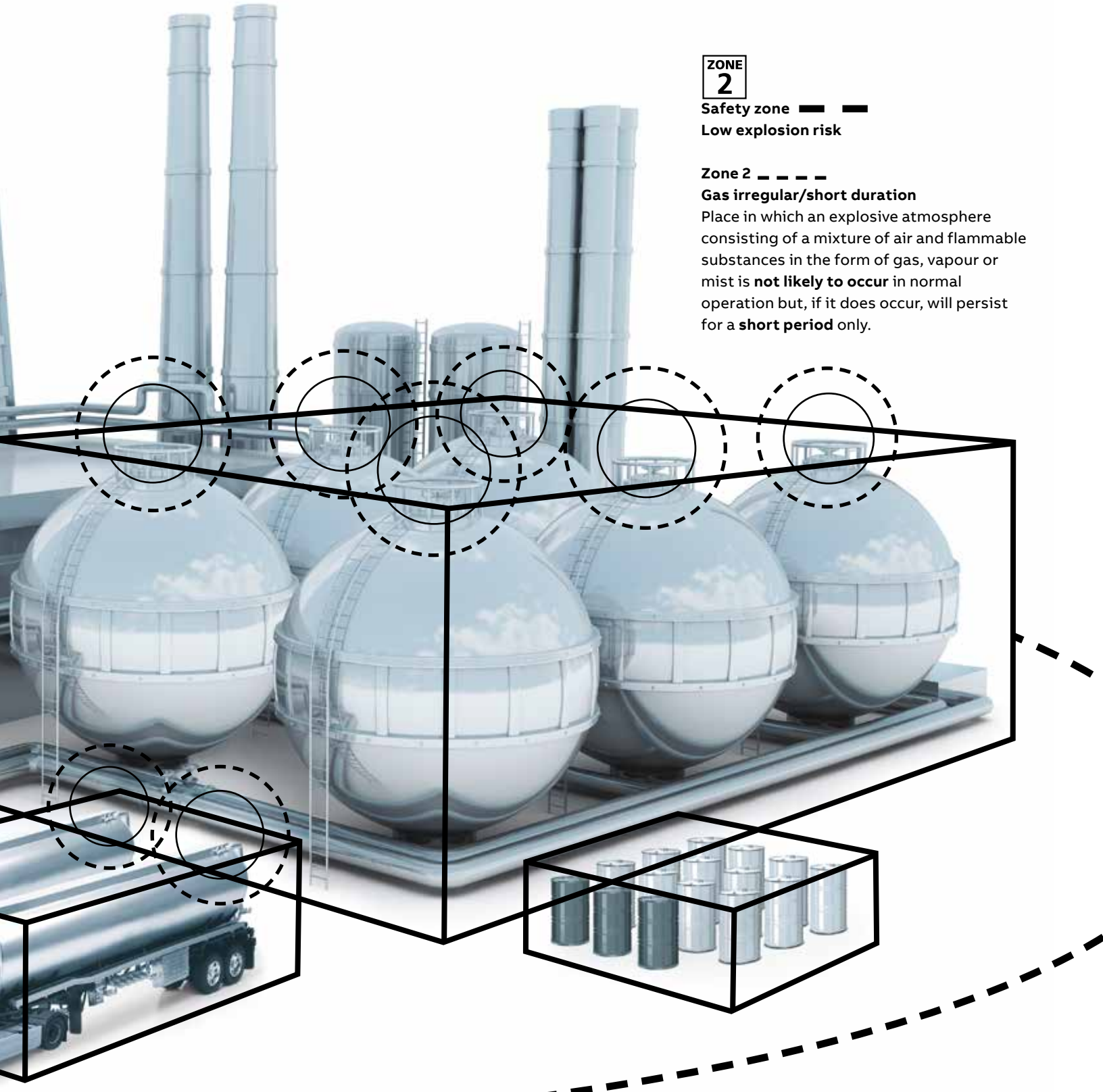
Occasional

Place where an atmosphere consisting of a mixture of air and flammable substances in the form of gas, vapour or mist is **likely to arise occasionally** during normal operation.



Hazardous areas

Standards and what they mean



ZONE 2

Safety zone
Low explosion risk

Zone 2
Gas irregular/short duration
Place in which an explosive atmosphere consisting of a mixture of air and flammable substances in the form of gas, vapour or mist is **not likely to occur** in normal operation but, if it does occur, will persist for a **short period** only.