

Session 16 – Area Classification Examples





Who Determines Area Classification Boundaries?

Internationally/Europe



CENELEC EN 60079-10



Energy Institute RP15



IEC 60079-10



UK BS7671-2008

Variety of Domestic or International Documents

Who Determines Area Classification Boundaries?

North America



American Petroleum Institute



National Fire Protection Agency

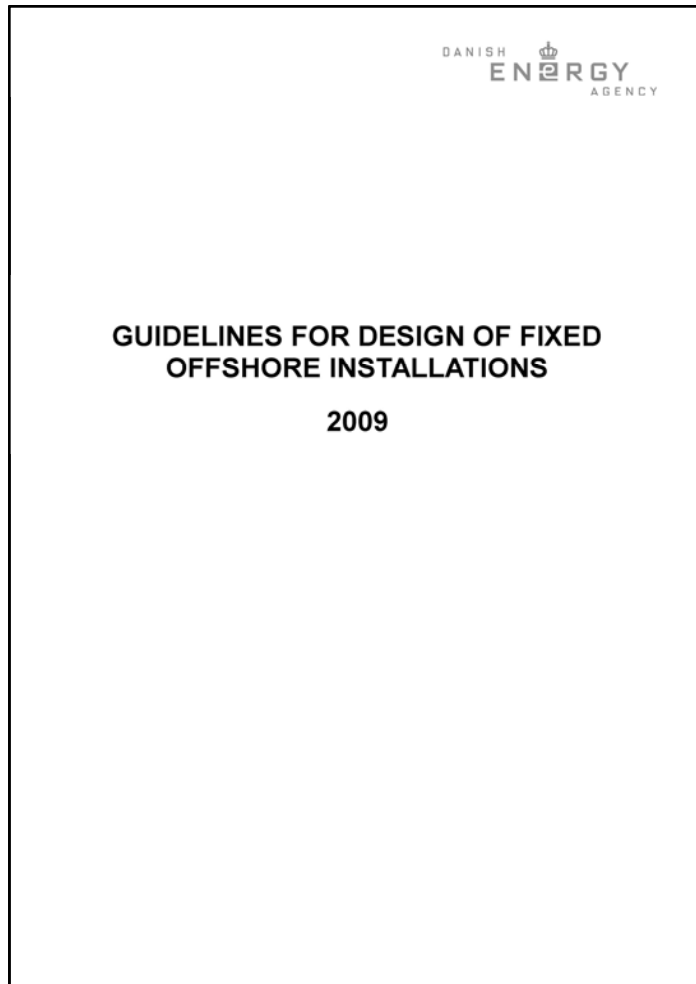


NEC & CEC Electrical Codes



Industry Practices

Area Classification Documents – Danish Offshore



GUIDELINES FOR DESIGN OF FIXED OFFSHORE INSTALLATIONS 2008		
Chapter 9. Area Classification and Electrical Equipment		
Rev. no.: 1	Rev. date: August 2008	Page: 15 of 45

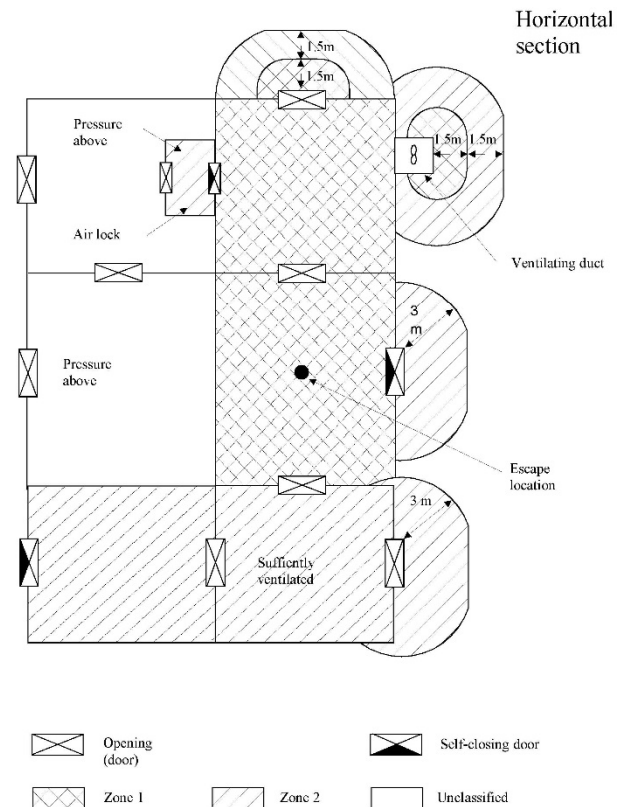


Fig. 5 Indoor premises and areas near openings

Area Classification Documents – IEC/EN Offshore/Onshore

BS EN 60079-10-2:2009

EUROPEAN STANDARD **EN 60079-10-2**
 NORME EUROPÉENNE
 EUROPÄISCHE NORM August 2009

ICS 29.260.20 Supersedes EN 61241-10:2004

English version

**Explosive atmospheres -
 Part 10-2: Classification of areas -
 Combustible dust atmospheres**
 (IEC 60079-10-2:2009)

Atmosphères explosives -
 Partie 10-2: Classification des
 emplacements -
 Atmosphères explosives poussiéreuses
 (CEI 60079-10-2:2009)

Explosionsfähige Atmosphäre -
 Teil 10-2: Einteilung der Bereiche -
 Staubexplosionsgefährdeten Bereiche
 (IEC 60079-10-2:2009)

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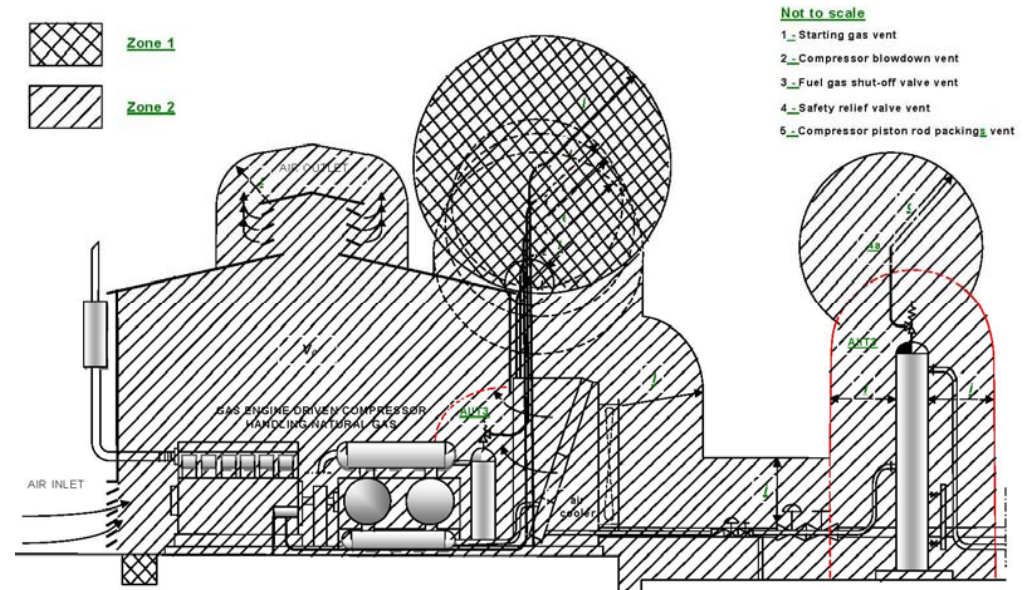
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CENELEC
 European Committee for Electrotechnical Standardization
 Comité Européen de Normalisation Electrotechnique
 Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: Avenue Marnix 17, B - 1000 Brussels

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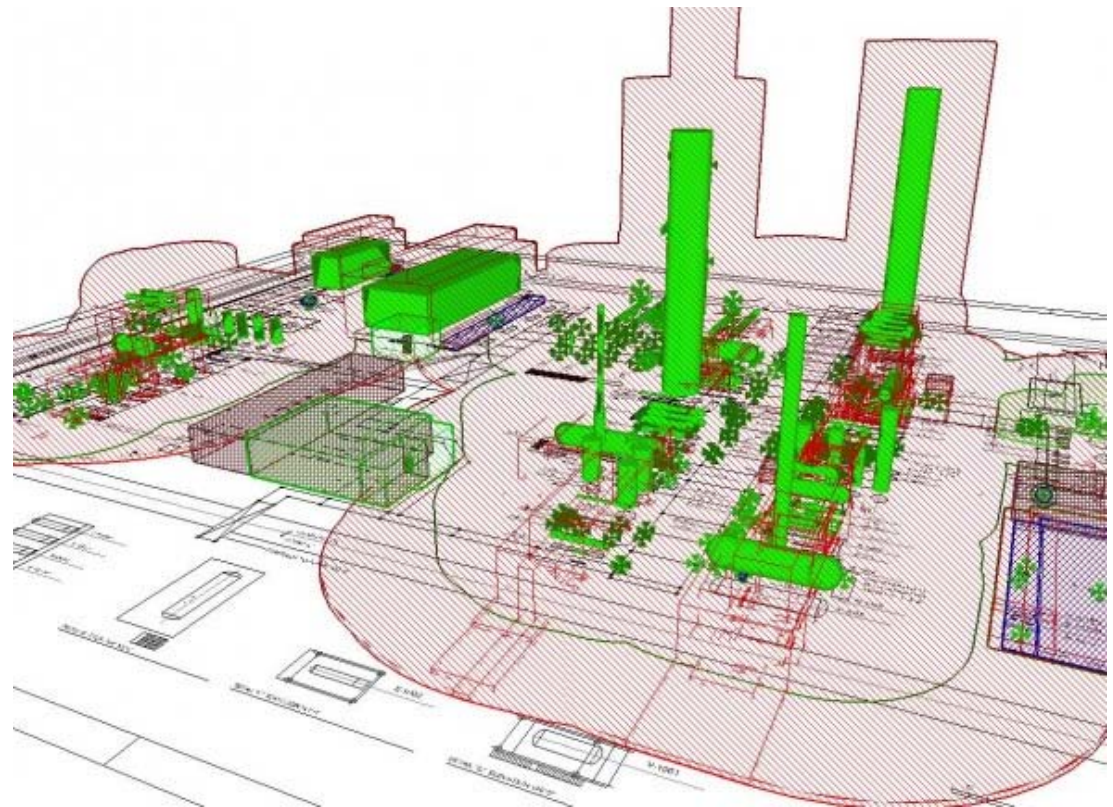


IP 15: Area Classification code for installation....

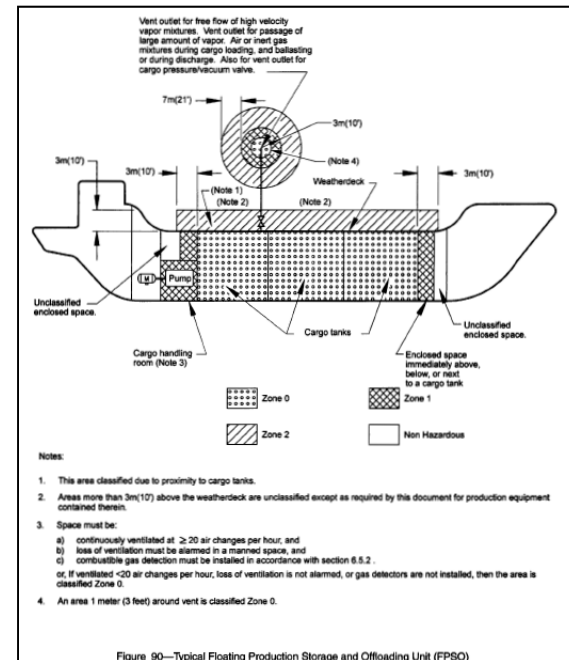
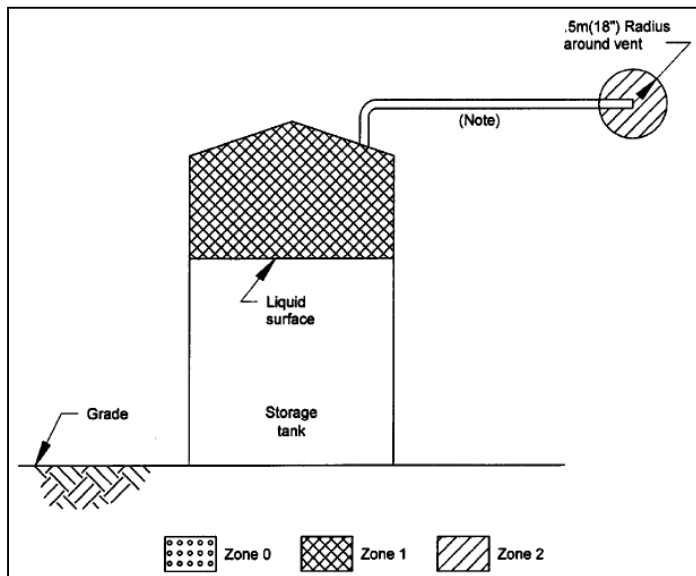
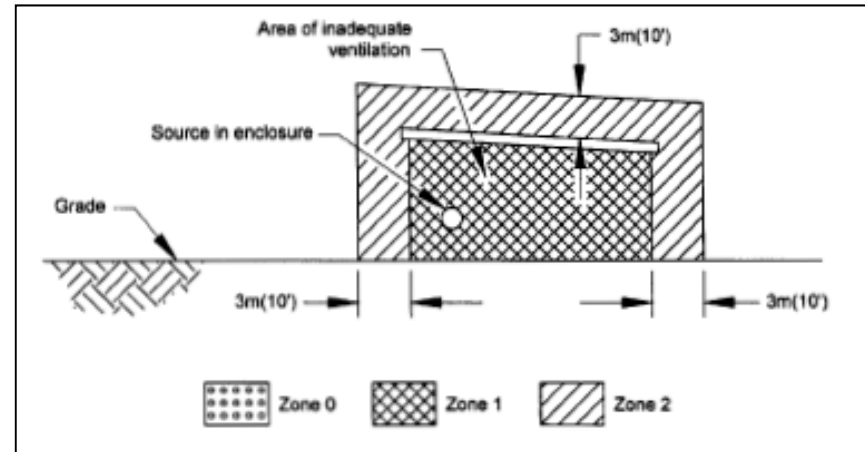
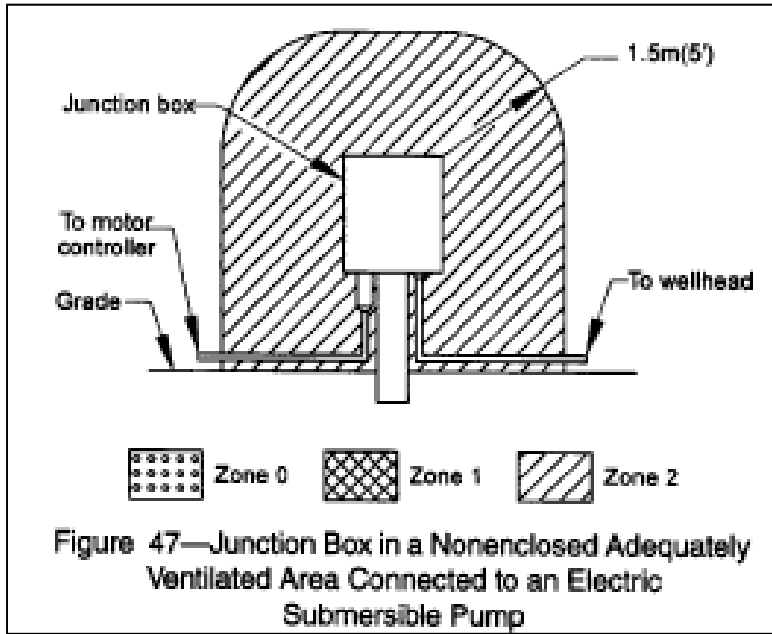


Research report: Dispersion modelling
and calculations in support of
*EI Model code of safe practice Part 15: Area
classification code for installations handling
flammable fluids*

2nd edition



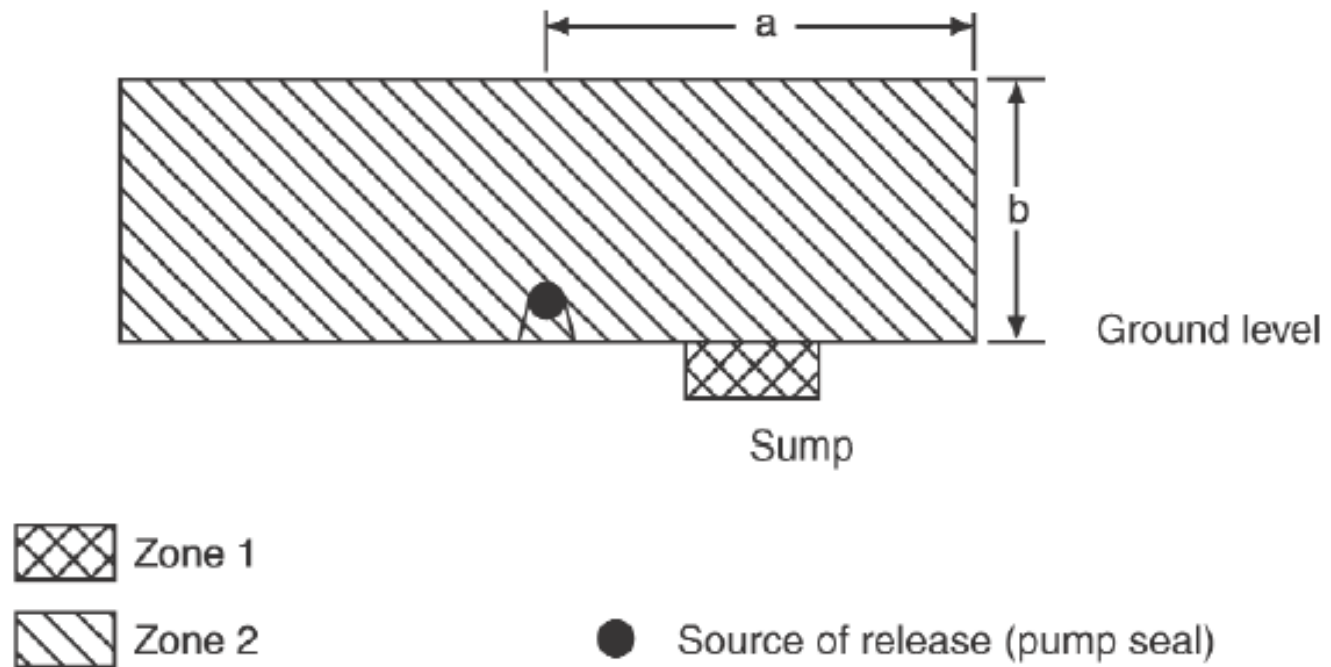
Examples of API 505 Installations



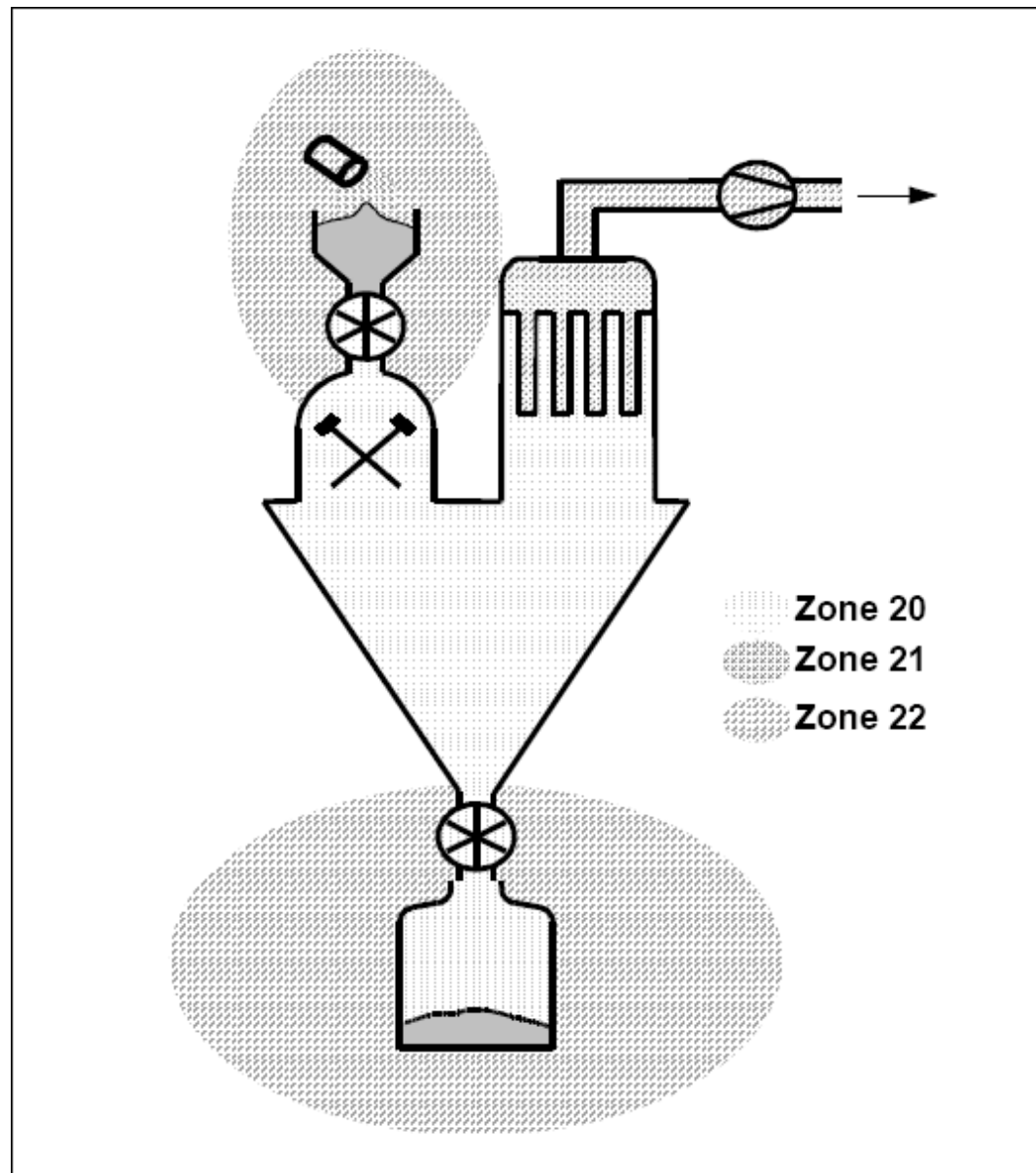
Examples of 60079 Zone Installations

15.1 INDUSTRIAL PUMP

Outdoors, pumping flammable liquid

Not to scale

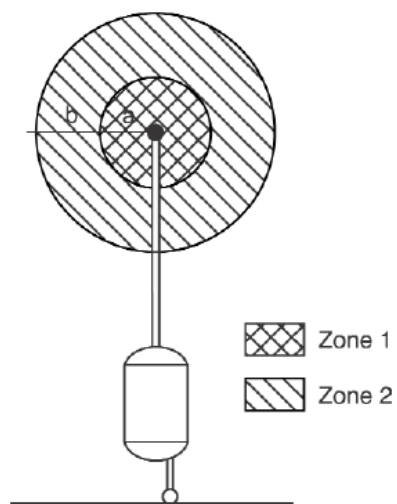
Examples of 60079 Zone Installations



Examples of 60079 Zone Installations

15.3 PRESSURE RELIEF VALVE

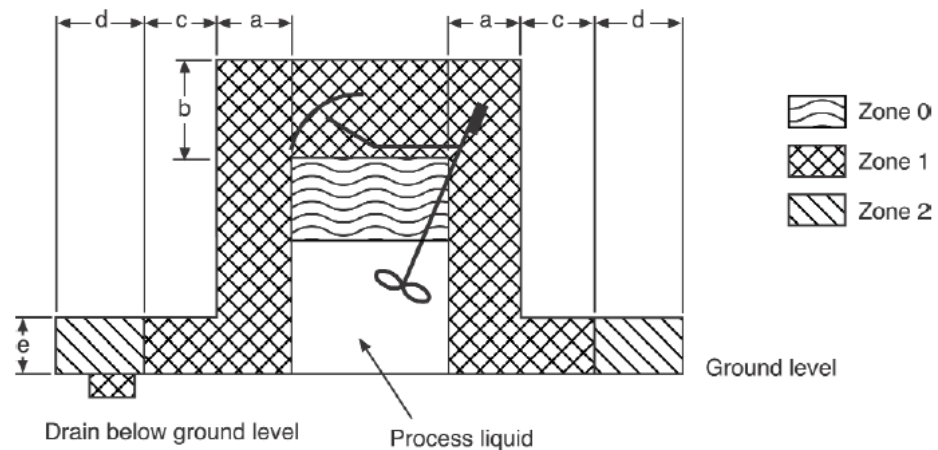
Open air from process vessel



● Source of release
(vent outlet diameter 25 mm)

15.4 PROCESS MIXING VESSEL

Indoor vessel, opened regularly for operations

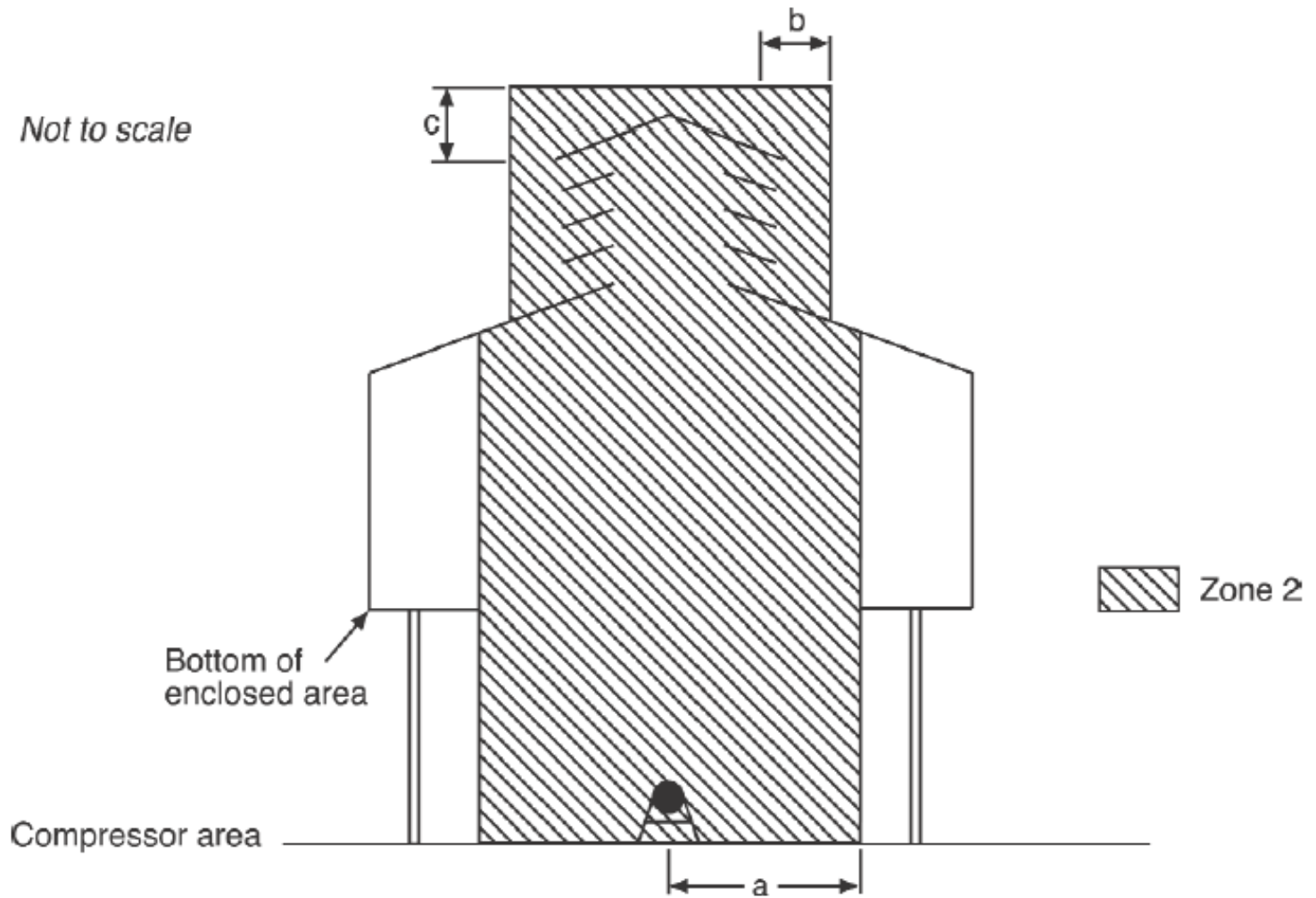


Examples of 60079 Zone Installations

15.7 HYDROGEN COMPRESSOR

In a building open at ground level

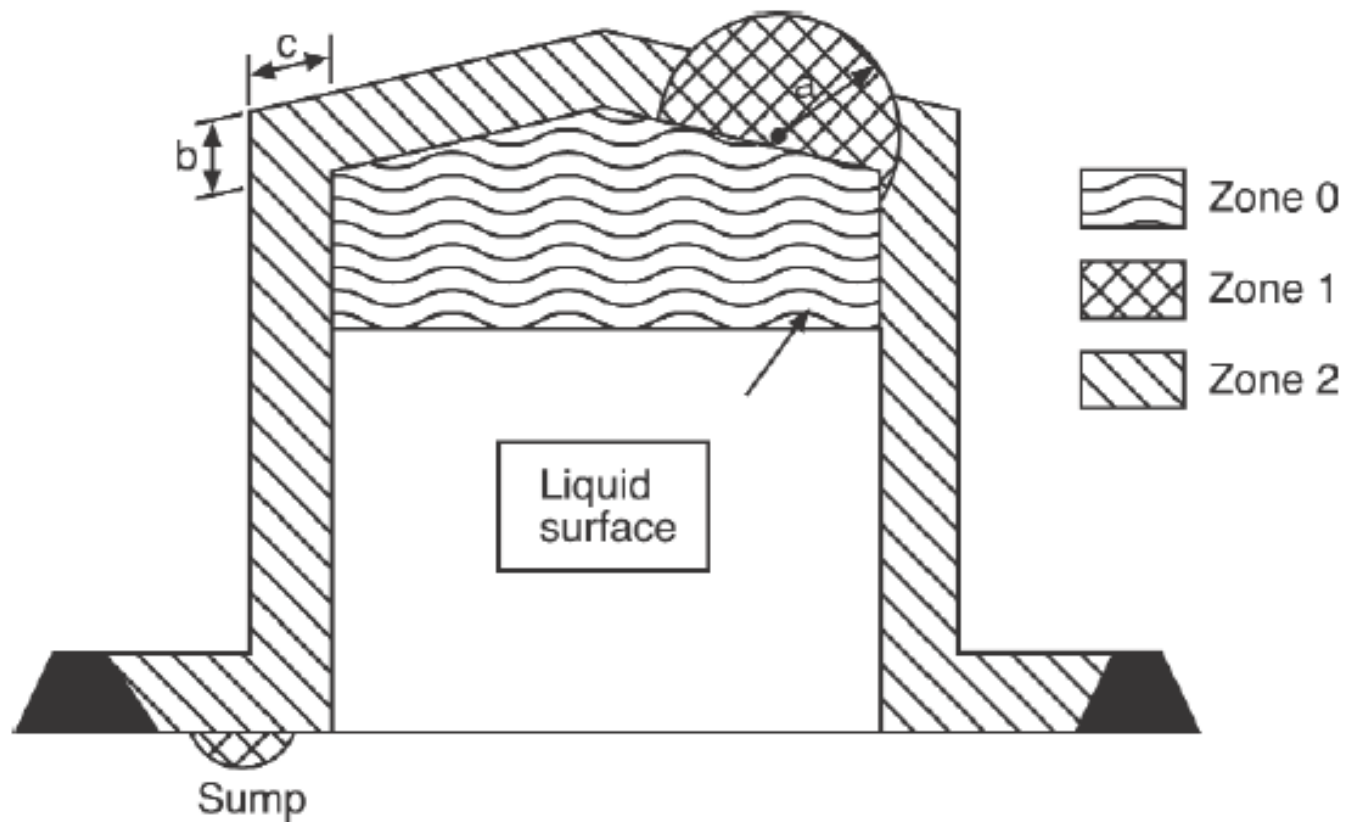
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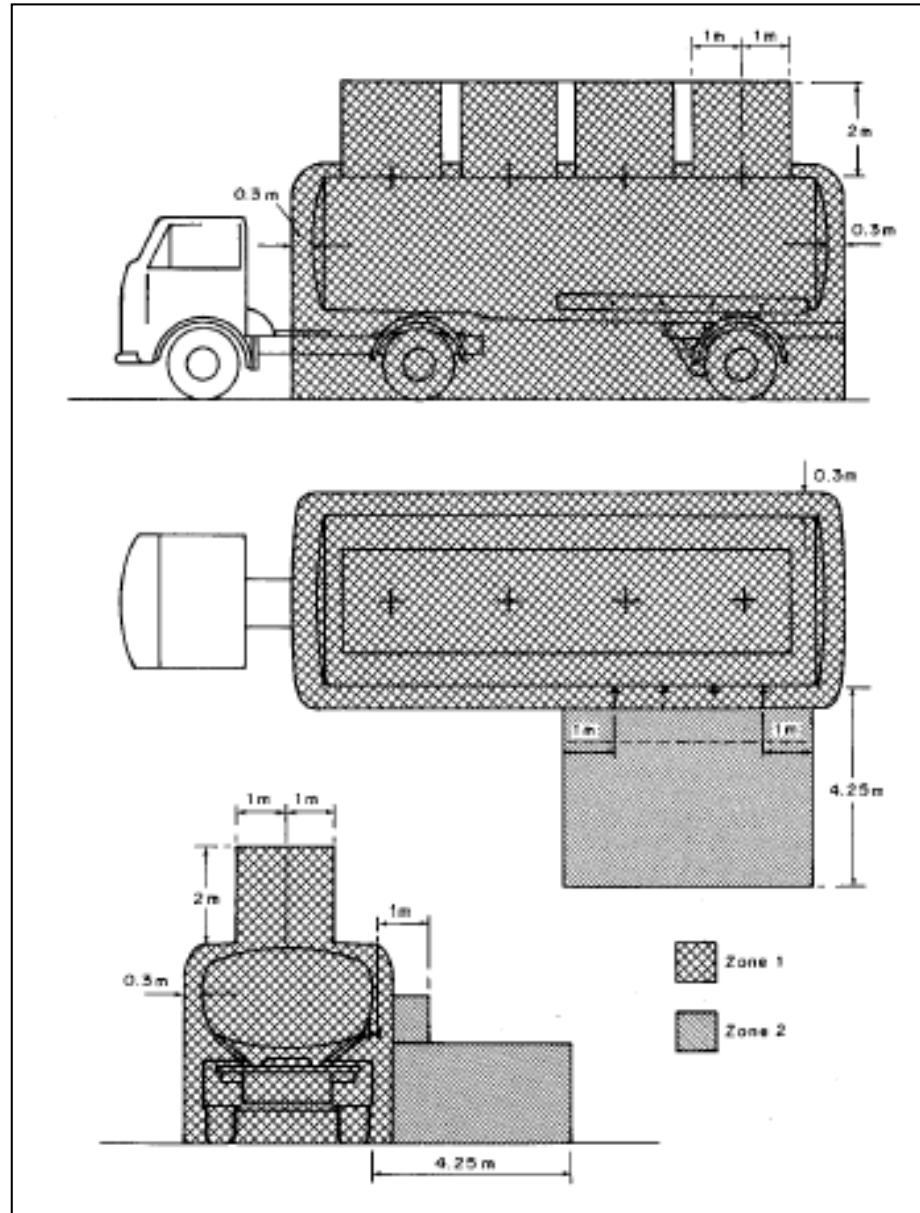
Examples of 60079 Zone Installations

15.8 FLAMMABLE LIQUID STORAGE TANK

Outdoors with fixed roof (not floating roof)



Examples of 60079 Zone Installations



Comparison of Zone Installations

The key point to understand is that even with a harmonization of electrical equipment and installation guidelines is underway in the world, area classification guidelines can and are still country specific....

In general... When in Rome....

