इंटरनेट मानक

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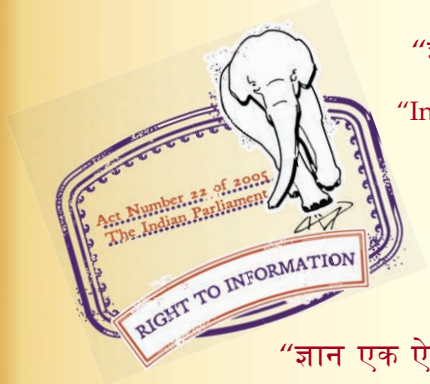
Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

"जानने का अधिकार, जीने का अधिकार"
Mazdoor Kisan Shakti Sangathan
"The Right to Information, The Right to Live"

"पुराने को छोड नये के तरफ"
Jawaharlal Nehru
"Step Out From the Old to the New"

IS 8868 (1988): Periodical inspection interval of gas cylinders in use [MED 16: Gas Cylinders]



"ज्ञान से एक नये भारत का निर्माण"
Satyanarayan Gangaram Pitroda
"Invent a New India Using Knowledge"

"ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है"
Bhartṛhari—Nītiśatakam
"Knowledge is such a treasure which cannot be stolen"

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(Reaffirmed 2002)

Indian Standard

PERIODICAL INSPECTION INTERVAL FOR GAS CYLINDERS IN USE

(First Revision)

Gas Cylinders Sectional Committee, EDC 16 [Ref : Doc : EDC 16 (4552)]

1. Scope — Covers the recommended interval for periodical inspection of gas cylinders in use containing different gases conveyed in cylinders. The interval specified is valid for cylinders made from steel only.

1.1 This standard does not cover the detailed procedure of the periodical inspection or criteria for acceptance and rejection of the cylinders on the basis of the inspection.

2. Periodical Inspection Interval — The periodical inspection interval for gas cylinders containing different gases shall be as follows:

Name of Gas	*Chemical Symbol of Gas*	*Periodical Inspection Interval (in Years)*
Acetylene, dissolved	C_2H_2	(*See* 2.1)
Air, compressed	—	5
Ammonia (anhydrous or dissolved)	NH_3	2
Argon	Ar	5
Boron trichloride	BCl_3	2
Boron trifluoride (boron fluoride)	BF_3	2
Butadiene (vinylethylene, divinyl)	C_4H_6	5
Butane	C_4H_{10}	5
Butene	C_4H_8	5
Carbogen (O_2=95 percent, CO_2=5 percent by weight)	O_2+CO_2	5
Carbon dioxide	CO_2	5
Carbon monoxide	CO	2
Chlorine	Cl_2	2
Chlorine trifluoride	ClF_3	2
Chlorine pentafluoride	ClF_5	2
Coal gas (town gas, lighting gas)	$H_2+CO+CH_4$	2
Cyanogen	$(CN)_2$	2
Cyanogen chloride	ClCN	2
Cyclopropane	C_3H_6	5
Diborane (boroethane)	B_2H_6	2
Dichlorodifluoromethane (R-12)*	CCl_2F_2	5
Dichlorofluoromethane (R-21)*	$CHCl_2F$	5
1·2 Dichlorotetrafluoroethane (R-114)*	$CClF_2CClF_2$	5
1·1 Difluoroethane (R-152a)*	CH_3CHF_2	5
1·1 Difluoroethane (R-1132a)* (vinylidene fluoride)	$CH_2=CF_2$	5

*IS : 10609-1983 'Refrigerants — Number designation'.

(*Continued*)

Adopted 16 May 1988

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Name of Gas	*Chemical Symbol of Gas*	*Periodical Inspection Interval (in Years)*
Dimethylamine	$(CH_3)_2NH$	5
Dimethyl ether (methyl ether, methyl oxide)	$(CH_3)_2O$	5
Dimethylpropane	C_5H_{12}	2
Ethane	C_2H_6	5
Ethylamine (aminoethane)	$C_2H_5NH_2$	5
Ethyl chloride (chloroethane)	C_2H_5Cl	5
Ethylene	C_2H_4	5
Ethylene oxide	C_2H_4O	2
Fluorine	F_2	2
Helium	He	5
Hydrogen	H_2	5
Hydrogen bromide	HBr	2
Hydrogen chloride	HCl	2
Hydrogen cyanide	HCN	2
Hydrogen fluoride	HF	2
Hydrogen sulphide	H_2S	2
Isobutane	$CH(CH_3)_3$	5
Isobutylene	$CH_2=C(CH_3)_2$	5
Krypton	Kr	5
Liquefied petroleum gas (LPG)	—	5
Methane	CH_4	5
Methanethiol (methylmercaptan)	CH_3SH	2
Methyl acetylene	$CH_3C=CH$	5
Methylamine (aminoethane)	CH_3NH_2	2
Methyl bromide (bromomethane)	CH_3Br	2
Methylchioride (chloromethane)	CH_3Cl	2
Methyl fluorids	CH_3F	5
Monochlorodifluoroethane (R-142b)*	CH_3CClF_2	5
Bromotrifluoromethane (R-13B1)*	$CBrF_3$	5
Chlorodifluoromethane (R-22)*	$CHClF_2$	5
Bromochlorodifluoromethane (R-12B1)*	$CClF_2Br$	5
Monochlorotetrafluoroethane (R-124a)*	CHF_2ClCF_2	5
2-chlorotrifluoroethane (R-133a)*	CH_2ClCF_3	5
Chlorotrifluoroethane (R-1113)*	$CClF=CF_2$	5
Chlorotrifluoromethane (R-13)*	$CClF_3$	5
Neon	Ne	5
Nitrogen	N_2	5
Nitrogen peroxide (nitrogen dioxide)	NO_2	2
Nitrogen tetroxide (dinitrogen tetroxide)	N_2O_4	2
Nitrosyl chloride	NOCl	2
Nitrous oxide	N_2O	5
Nitrox	—	5
Octafluorocyclobutane (R-C318)*	C_4F_8	5
Oil gas, compressed	$CO+C_mH_n$	2
Oil gas, liquefied (Z-gas)	$CO+C_mH_n$	2

*IS : 10609-1983 'Refrigerants — Number designation'.

Name of Gas	*Chemical Symbol of Gas*	*Periodical Inspection Interval (in Years)*
Oxygen	O_2	5
Phosgene (carbonyl chloride)	$COCl_2$	2
Propane	C_3H_8	5
Propene (propylene)	C_3H_6	5
Sulphur dioxide	SO_2	2
Sulphur hexafluoride	SF_6	5
T-gas 28	$10\%CO_2+90\%C_2H_4O$	2
T-gas 250 (cartox)	$90\%CO_2+10\%C_2H_4O$	5
Trichlorofluoromethane (R-11)*	CCl_3F	5
1.1.2 Trichlorotrifluoroethane (R-113)*	CCl_2FCClF_2	5
Trifluoromethane	CHF_3	5
Trifluoromonobromomethane	CF_3Br	5
Trimethylamine	$(CH_3)_3N$	5
Vinyl bromide	$CH_2=CHBr$	5
Vinyl chloride	$CH_2=CHCl$	5
Vinyl methylether (methylvinyl oxide)	$CH_3OCH=CH_2$	2
Water gas	H_2+CO	2
Xenon	Xe	5

2.1 Dissolved acetylene gas cylinders having monolithic porous mass shall be subjected to periodical inspection once in two years, and those having loose mass once in a year. It may be noted that dissolved acetylene gas cylinders are not subjected to hydrostatic testing at the time of periodical inspection.

*IS : 10609-1983 'Refrigerants — Number designation'.

EXPLANATORY NOTE

This standard was first published in 1978. The Committee responsible for preparation of this standard decided to revise the same to bring it in line with current practice. Periodic inspection intervals have been specified for some more gases in the revised standard.

Manufacture, possession and use of any gas when contained in cylinders in a compressed or liquefied state is regulated under the Gas Cylinder Rules, 1981 of the Government of India as amended from time to time. This standard has been prepared in consultation and agreement with the statutory authorities under those rules.

Gas cylinders which are in use are subject to wear and tear during handling. Thus with the passage of time they may become unsafe for further use. In order that their safety might be ascertained. gas cylinders which have been in use, are periodically inspected and tested at regular intervals. The periodical inspection comprises visual examination, measurement of wall thickness, internal cleaning, weighing and hydrostatic testing. However, the cylinder is subjected to external visual examination [*see* IS : 5845-1984 Code of practice for visual inspection of low pressure welded steel gas cylinders in use (*first revision*)], whenever it comes for refilling.

Such periodical inspection is carried out in accordance with the instructions of Chief Controller of Explosives, which is the national statutory authority for the enforcement of Gas Cylinder Rules, 1981. The inspector, on the basis of the inspection, decides whether the cylinder:

a) may be taken into use as it is,

b) may be taken into use after the defect is remedied in a suitable manner, and

c) is to be rejected and destroyed because of the nature and extent of the damage.

Toxic or corrosive gases constitute a greater danger than non-toxic or non-corrosive gases. Hence the former category requires more frequent periodical inspection interval.

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