

BUREAU OF INDIAN STANDARDS

Program of Work

CHD 6 : Industrial Gases

Scope: a) To formulate Indian Standards for terminology; methods of sampling and test; codes of practice and specifications for industrial gases including high purity speciality gases and gas mixtures other than LPG. b) To liaise with i) ISO/TC 158 Analysis of gases

Liaison: **ISO TC-158 (O): Analysis of gases** **ISO TC-158 (O): Analysis of gases**

Published Standards

S.No	IS No.	TITLE	Reaffirm M-Y	No. of Amds	Eqv.
1	IS 1090:2002	Compressed Hydrogen - Specification (Third Revision)	December, 2023	1	Indigenous
2	IS 13490:2024	HANDLING OF SPECIALITY GASES $i_1/2$ CODE OF PRACTICE (First Revision)		-	Indigenous
3	IS 15578:2005	Code of Practice for Handling and Usage of Gas Mixtures	February, 2021	-	Indigenous
4	IS 15583:2005	Compressed Helium Gas - Specification	February, 2021	1	Indigenous
5	IS 16142:2019 ISO 16664 : 2017 ISO 16664:2017	Gas Analysis - Handling of Calibration Gases and Gas Mixtures - Guidelines (First Revision)	March, 2024	-	Identical under dual numbering
6	IS 16247:2019 ISO 6141 : 2015 ISO 6141:2015	Gas Analysis - Contents of Certificates for Calibration Gas Mixtures (First Revision)	March, 2024	1	Identical under dual numbering
7	IS 16248:2014 ISO 6144 : 2003 ISO 6144 : 2003	Gas Analysis - Preparation of Calibration Gas Mixtures - Static Volumetric Method	June, 2020	-	Identical under dual numbering
8	IS 16249 (Part 10):2015 ISO 6145-10 : 2002 ISO 6145-10 : 2002	Gas Analysis - Preparation of Calibration Gas Mixtures Using Dynamic Volumetric Methods: Part 10 Permeation Method	June, 2020	-	Identical under dual numbering
9	IS 16249 (Part 7):2020 ISO 6145-7 : 2018 ISO 6145 (part 7):20	Gas Analysis - Preparation of Calibration Gas Mixtures Using Dynamic Methods Part 7 Thermal Mass-Flow Controllers (First Revision)	September, 2024	-	Identical under dual numbering
10	IS 16249 (Part 1):2021 ISO 6145 (part 1):20 ISO 6145 (part 1):20	Gas Analysis Preparation of Calibration Gas Mixtures Using Dynamic Methods Part 1 General Aspects		-	Identical under dual numbering
11	IS 16249 (Part 5):2015 ISO 6145-5 : 2009 ISO 6145-5 : 2009	Gas Analysis - Preparation of Calibration Gas Mixtures Using Dynamic Volumetric Methods: Part 5 Capillary Calibration	June, 2020	-	Identical under dual numbering

		Devices			
12	IS 16249 (Part 8):2015 ISO 6145-8 : 2005 ISO 6145-8 : 2005	Gas Analysis - Preparation of Calibration Gas Mixtures Using Dynamic Volumetric Methods: Part 8 Diffusion Method	June, 2020	-	Identical under dual numbering
13	IS 16249 (Part 4):2015 ISO 6145-4 : 2004 ISO 6145-4 : 2004	Gas Analysis - Preparation of Calibration Gas Mixtures Using Dynamic Volumetric Methods: Part 4 Continuous Syringe Injection Method	June, 2020	-	Identical under dual numbering
14	IS 16249 (Part 2):2019 ISO 6145-2 : 2019 ISO 6145-2:2014	Gas Analysis - Preparation of Calibration Gas Mixtures Using Dynamic Methods: Part 2 Piston Pumps (First Revision)	March, 2024	-	Identical under dual numbering
15	IS 16249 (Part 6):2019 ISO 6145-6 : 2017 ISO 6145-6:2017	Gas Analysis - Preparation of Calibration Gas Mixtures Using Dynamic Methods: Part 6 Critical Flow Orifices (First Revision)	March, 2024	-	Identical under dual numbering
16	IS 16249 (Part 9):2015 ISO 6145-9 : 2009 ISO 6145-9 : 2009	Gas Analysis - Preparation of Calibration Gas Mixtures Using Dynamic Volumetric Methods: Part 9 Saturation Method	June, 2020	-	Identical under dual numbering
17	IS 16249 (Part 11):2015 ISO 6145-11 : 2005 ISO 6145-11 : 2005	Gas Analysis - Preparation of Calibration Gas Mixtures Using Dynamic Volumetric Methods: Part 11 Electrochemical Generation	June, 2020	-	Identical under dual numbering
18	IS 16250:2015 ISO 15796 : 2005 ISO 15796 : 2005	Gas Analysis Investigation and Treatment of Analytical Bias	June, 2020	-	Identical under dual numbering
19	IS 16252:2014 ISO 14912 : 2003 ISO 14912 : 2003	Gas Analysis - Conversion of Gas Mixture Composition Data	June, 2020	-	Identical under dual numbering
20	IS 16253:2016 ISO 26142 : 2010 ISO 26142 : 2010	Hydrogen Detection Apparatus - Stationary Applications	November, 2021	-	Identical under dual numbering
21	IS 16260:2019 ISO 6142-1 : 2015 ISO 6142-1 : 2015	Gas Analysis Preparation of Calibration Gas Mixtures Gravimetric Method for Class 1 Mixtures (First Revision)	March, 2024	1	Identical under dual numbering
22	IS 16264:2014 ISO 6143 : 2001 ISO 6143 : 2001	Gas Analysis - Comparison Methods for Determining and Checking the Composition of Calibration Gas Mixtures	June, 2020	-	Identical under dual numbering
23	IS 16509:2020 ISO 22734 : 2019 ISO 22734:2019	Hydrogen Generators Using Water Electrolysis - Industrial, Commercial and Residential Applications (First Revision)	March, 2025	-	Identical under dual numbering
24	IS 16512 (Part 1):2016 ISO 16110-1 : 2007 ISO 16110-1 : 2007	Hydrogen Generators Using Fuel Processing Technologies: Part 1 Safety	October, 2021	-	Identical under dual numbering
25	IS 16749:2018 ISO/TR 15916 : 2015 ISO/TR 15916:2015	Basic Considerations for the Safety of Hydrogen Systems	March, 2024	-	Identical under dual numbering
26	IS 1747:2023	Nitrogen Compressed Gas and Liquid-Specification Second Revision		-	Indigenous

27	IS 19575:2026	Efficiency Assessment of Anion Exchange Membrane, Proton Exchange Membrane and Alkaline Water Electrolysers		-	
28	IS 2432:2024	LIQUID SULPHUR DIOXIDE $i_{\frac{1}{2}}$ SPECIFICATION (Second Revision)		-	Indigenous
29	IS 307:2024	Carbon Dioxide $i_{\frac{1}{2}}$ Specification (Third Revision)		-	Indigenous
30	IS 308:2024	Dissolved Acetylene (Gas) $\hat{\text{a}}$ Specification (Fourth Revision)		-	Indigenous
31	IS 309:2023	Oxygen Compressed Gas and Liquid-Specification (Fifth Revision)		-	Indigenous
32	IS 5610:2025	REFRIGERANTS - SPECIFICATION (Third Revision)		-	Indigenous
33	IS 5760:1998	Argon, Compressed and Liquid - Specification (Second Revision)	February, 2021	1	Indigenous
34	IS 7062:2024	OIL & GAS INDUSTRY - GLOSSARY OF TERMS (First Revision)		-	Indigenous
35	IS 7278:2024	Methyl chloride - Specification (Second Revision)		-	Indigenous
36	IS/ISO 8573-9:2004 ISO 8573-9 : 2004 ISO 8573-9:2004	Compressed Air: Part 9 Test Methods for Liquid Water Content	June, 2020	-	Identical under single numbering
37	IS/ISO 8573-8:2004 ISO 8573-8 : 2004 ISO 8573-8: 2004	Compressed Air: Part 8 Test Methods for Solid Particle Content by Mass Concentration	June, 2020	-	Identical under dual numbering
38	IS/ISO 8573-4:2019 ISO 8573-4:2019 ISO 8573-4:2019	Compressed Air Contaminant Measurement Part 4 Particle Content	March, 2024	-	Identical under single numbering
39	IS/ISO 8573-5:2001 ISO 8573-5 : 2001 ISO 8573-5: 2001	Compressed Air: Part 5 Test Methods for Oil Vapour And Organic Solvent Content	June, 2020	-	Identical under single numbering
40	IS/ISO 8573-1:2010 ISO 8573-1 : 2010 ISO 8573-1 : 2010	Compressed Air: Part 1 Contaminants and Purity Classes (First Revision)	March, 2022	-	Identical under dual numbering
41	IS/ISO 8573-3:1999 ISO 8573-3 : 1999 ISO 8573-3 : 1999	Compressed Air: Part 3 Test Methods for Measurement of Humidity	June, 2020	-	Identical under single numbering
42	IS/ISO 8573-2:2018 ISO 8573-2 : 2007 ISO 8573-2 : 2018	Compressed Air - Contaminant Measurement Part 2 Oil Aerosol Content (First Revision)	September, 2024	-	Identical under dual numbering
43	IS/ISO 8573-6:2003 ISO 8573-6 : 2003 ISO 8573-6: 2003	Compressed Air: Part 6 Test Methods for Gaseous Contaminant Content	June, 2020	-	Identical under dual numbering
44	IS/ISO 8573-7:2003 ISO 8573-7 : 2003 ISO 8573-7:2003	Compressed Air: Part 7 Test Method for Viable Microbiological Contaminant Content	June, 2020	-	Identical under single numbering

Standards under Development

Projects Approved

SI. No.	Doc No.	Title
<i>No Records Found</i>		

Preliminary Draft Standards

SI. No.	Doc No.	Title
<i>No Records Found</i>		

Drafts Standards in WC Stage

SI. No.	Doc No.	Title
<i>No Records Found</i>		

Draft Standards Completed WC Stage

SI. No.	Doc No.	Title
<i>No Records Found</i>		

Finalized Draft Indian Standard

SI. No.	Doc No.	Title
<i>No Records Found</i>		

Finalized Draft Indian Standards under Print

SI. No.	Doc No.	Title
1	CHD 6 (01714)	GAS ANALYSIS - PREPARATION OF CALIBRATION GAS MIXTURES USING DYNAMIC VOLUMETRIC METHODS PART 1 METHODS OF CALIBRATION
2	CHD 6 (01716)	GAS ANALYSIS - PREPARATION OF CALIBRATION GAS MIXTURES USING DYNAMIC VOLUMETRIC METHODS PART 4 CONTINUOUS SYRINGE INJECTION METHOD
3	CHD 6 (01718)	Gas Analysis - Preparation of Calibration Gas Mixtures Using Dynamic Volumetric Methods Part 6 Critical Orifices
4	CHD 6 (01719)	GAS ANALYSIS - PREPARATION OF CALIBRATION GAS MIXTURES USING DYNAMIC VOLUMETRIC METHODS PART 7 THERMAL MASS -FLOW CONTROLLERS
5	CHD 6 (01721)	Gas Analysis - Preparation of Calibration Gas Mixtures Using Dynamic Volumetric Methods Part 9 Critical Orifices
6	CHD 6 (01722)	Gas Analysis - Preparation of Calibration Gas Mixtures Using Dynamic Volumetric Methods Part 10 Permeation Method
7	CHD 6 (01723)	Gas Analysis - Preparation of Calibration Gas Mixtures Using Dynamic Volumetric Methods Part 11 Electrochemical Generation
8	CHD 6 (01724)	Gas Analysis Investigation and Treatment of Analytical Bias
9	CHD 6 (01910)	Compressed Air Part 4 Test Methods for Solid Particle Content
10	CHD 6 (01911)	COMPRESSED AIR PART 5 DETERMINATION OF OIL VAPOUR AND ORGANIC SOLVENT CONTENT
11	CHD 6 (01912)	COMPRESSED AIR PART 6 TEST METHODS FOR GASEOUS CONTAMINANT CONTENT
12	CHD 6 (01913)	COMPRESSED AIR PART 7 TEST METHODS FOR VIABLE MICROBIOLOGICAL CONTAMINANT CONTENT
13	CHD 6 (01914)	Compressed Air Part 8 Test Methods For Sold Practice Content by Mass Concentration
14	CHD 6 (01915)	Compressed Air Part 9 Test Methods For Liquid Water Content
15	CHD 6 (02037)	Compressed air - Part 1 Contaminants and Purity Classes
16	CHD 6 (02039)	Hydrogen Fuel - Product Specification Part 2 Proton Exchange Membrane PEM Fuel Cell Applications for Road Vehicles
17	CHD 6 (02038)	Compressed air - Part 2 Test Methods for Oil Aerosol Content
18	CHD 6 (01927)	Hydrogen generators using water electrolysis process -- Part 1 Industrial and commercial applications
19	CHD 6 (01917)	Hydrogen detection apparatus - Stationary application
20	CHD 6 (01726)	Hydrogen generators using fuel processing technologies Part 1 Safety
21	CHD 6 (10913)	Basic considerations for the safety of hydrogen systems
22	CHD 6 (13326) Revision	COMPRESSED AIR CONTAMINANT MEASUREMENT PART 2 OIL AEROSOL

	of: IS/ISO 8573:2018	CONTENT
23	CHD 6 (13327) Revision of: IS 16142:2019	GAS ANALYSIS HANDLING OF CALIBRATION GASES AND GAS MIXTURES GUIDELINES
24	CHD 6 (13328) Revision of: IS 16247:2019	GAS ANALYSIS CONTENTS OF CERTIFICATES FOR CALIBRATION GAS MIXTURES
25	CHD 6 (13329) Revision of: IS 16249:2019	GAS ANALYSIS PREPARATION OF CALIBRATION GAS MIXTURES USING DYNAMIC METHODS PART 2 PISTON PUMPS
26	CHD 6 (13330) Revision of: IS 16249:2019	GAS ANALYSIS PREPARATION OF CALIBRATION GAS MIXTURES USING DYNAMIC METHODS PART 6 CRITICAL FLOW ORIFICES
27	CHD 6 (13331) Revision of: IS 16260:2019	GAS ANALYSIS PREPARATION OF CALIBRATION GAS MIXTURES PART 1 GRAVIMETRIC METHOD FOR CLASS I MIXTURES
28	CHD 6 (13388)	Specification for Dissolved acetylene gas Amendment - 2
29	CHD 6 (15836) Revision of: IS/ISO 8573:2001	COMPRESSED AIR CONTAMINANT MEASUREMENT PART 4 PARTICLE CONTENT
30	CHD 6 (15837) Revision of: IS 16061:2016	HYDROGEN FUEL QUALITY PRODUCT SPECIFICATION
31	CHD 6 (15839) Revision of: IS 16249:2015	GAS ANALYSIS PREPARATION OF CALIBRATION GAS MIXTURES USING DYNAMIC METHODS PART 1 GENERAL ASPECTS
32	CHD 6 (15840) Revision of: IS 16249:2020	GAS ANALYSIS PREPARATION OF CALIBRATION GAS MIXTURES USING DYNAMIC METHODS PART 7 THERMAL MASS-FLOW CONTROLLERS
33	CHD 6 (15841) Revision of: IS 16509:2016	HYDROGEN GENERATORS USING WATER ELECTROLYSIS INDUSTRIAL COMMERCIAL AND RESIDENTIAL APPLICATIONS
34	CHD 6 (18839) Revision of: IS 309:2005	Oxygen Compressed gas and Liquid-Specification Fifth Revision
35	CHD 6 (18840) Revision of: IS 1747:1972	Nitrogen Compressed gas and Liquid-Specification Second Revision
36	CHD 6 (19997) Revision of: IS 2432:1993	LIQUID SULPHUR DIOXIDE SPECIFICATION Second Revision
37	CHD 6 (22400) Revision of: IS 308:1988	DISSOLVED ACETYLENE GAS SPECIFICATION Fourth Revision
38	CHD 6 (22865) Revision of: IS 307:1966	Carbon Dioxide Specification Third Revision
39	CHD 6 (22870) Revision of: IS 13490:1992	HANDLING OF SPECIALITY GASES CODE OF PRACTICE First Revision
40	CHD 6 (23657) Revision of: IS 7278:1993	Methyl chloride Specification Second Revision
41	CHD 6 (23698) Revision of: IS 7062:1973	OIL GAS INDUSTRY GLOSSARY OF TERMS First Revision
42	CHD 6 (25181) Revision of: IS 5610:1993	REFRIGERANTS SPECIFICATION Third Revision
43	CHD 6 (25351)	GAS ANALYSIS - CONTENTS OF CERTIFICATES FOR CALIBRATION GAS MIXTURES First Revision Amendment - 1
44	CHD 6 (25353)	GAS ANALYSIS PREPARATION OF CALIBRATION GAS MIXTURES GRAVIMETRIC METHOD FOR CLASS I MIXTURES Amendment No 1
45	CHD 6 (27637)	Efficiency Assessment of Anion Exchange Membrane Proton Exchange Membrane and Alkaline Water Electrolysers
46	CHD 6 (33179)	Gas analysis Preparation of calibration gas mixtures Part 2 Gravimetric method for Class II mixtures
47	CHD 6 (33183)	Gas analysis Comparison methods for the determination of the composition of gas mixtures based on one- and two-point calibration
48	CHD 6 (33184)	Gas mixtures Gravimetric preparation Mastering correlations in composition
49	CHD 6 (33185)	Gas analysis Analytical methods for hydrogen fuel Proton exchange membrane PEM fuel cell applications for road vehicles
50	CHD 6 (33186)	Gas analysis Sampling guidelines
51	CHD 6 (33188)	Gas analysis Purity analysis and the treatment of purity data
52	CHD 6 (33189)	Gas analysis General quality aspects and metrological traceability of calibration gas mixtures
53	CHD 6 (33190)	Compressed Air Part 5 Test Methods for Oil Vapour And Organic Solvent Content
54	CHD 6 (33191)	Gas Analysis - Comparison Methods for Determining and Checking the Composition of Calibration Gas Mixtures

55	CHD 6 (33192)	Gas Analysis - Conversion of Gas Mixture Composition Data
56	CHD 6 (33194)	Argon Compressed and Liquid - Specification Second Revision
57	CHD 6 (33196)	Compressed Helium Gas - Specification

Total Published Standards:44 Total Standards Under development:57

Aspect Wise Report

Product : 12
 Code of Practices : 2
 Methods of Test : 10
 Terminology : 1
 Dimensions : 0
 System Standard : 0
 Safety Standard : 3
 Others : 15
 Service Specification : 0
 Process Specification : 0
 Unclassified : 1

Annexure-I :List of Indian Standards Withdrawn/Superseded

SI. No.	IS No. & Year	Title
1	IS 14642 (Part 2):1999 ISO 8573-2:1996	Compressed air for general use Part 2 test methods for aerosol oil content
2	IS 16061 (Part 2):2016 ISO 14687-2 : 2012 ISO 14687-2 : 2012	Hydrogen fuel - Product specification Part 2 proton exchange membrane PEM fuel cell applications for road vehicles
3	IS 16509 (Part 1):2016 ISO 22734-1 : 2008 ISO 22734-1 : 2008	Hydrogen generators using water electrolysis process Part 1 industrial and commercial applications
4	IS 3551:1965	Pure Nitrogen dry

Annexure-II :List of Indian Product Standards

SI. No.	IS No. & Year	Title
1	IS 1090:2002	Compressed Hydrogen - Specification Third Revision
2	IS 15583:2005	Compressed Helium Gas - Specification
3	IS 16253:2016 ISO 26142 : 2010 ISO 26142 : 2010	Hydrogen Detection Apparatus - Stationary Applications
4	IS 16509:2020 ISO 22734 : 2019 ISO 22734:2019	Hydrogen Generators Using Water Electrolysis - Industrial Commercial and Residential Applications First Revision
5	IS 1747:2023 ISO 2969 : 2015	Nitrogen Compressed Gas and Liquid-Specification Second Revision
6	IS 2432:2024	LIQUID SULPHUR DIOXIDE SPECIFICATION Second Revision
7	IS 307:2024	Carbon Dioxide Specification Third Revision
8	IS 308:2024	Dissolved Acetylene Gas Specification Fourth Revision
9	IS 309:2023	Oxygen Compressed Gas and Liquid-Specification Fifth Revision
10	IS 5610:2025	REFRIGERANTS - SPECIFICATION Third Revision

11	IS 5760:1998	Argon Compressed and Liquid - Specification Second Revision
12	IS 7278:2024	Methyl chloride - Specification Second Revision