

# *Gas Publications Relevant to the domestic, commercial and industrial sectors*



**August 2013**

**From IGEN,** *IGEM House, 26 & 28 High Street, Kegworth, Derbyshire, DE 74 2DA*

UP/1	Testing and purging. Edition2
UP/1A	Testing and purging installations at 25mbar below 1 m <sup>3</sup> volume
UP/1B	Testing and purging domestic installations
UP/2	Pipework on industrial and Commercial premises. Edition 2
UP/3	Gas engines
UP/4	Commissioning
UP/5	Natural gas vehicles
UP/6	Gas compressors
UP/7	Gas in timber framed housing
UP/8	Gas in caravans, moored boats and mobile homes.
UP/9	Gas Turbines
UP/10	Installation of flued gas appliances.
UP/11	Gas in educational establishments
UP/12	Gas process plant.
UP/15	Gas in flats MOP up to & incl 16 bar
UP/16	hazardous Areas
UP/17	Gas in schools and educational establishments
TD/1	Steel Pipelines for HP Transmission
TD/3	Steel and PE pipelines for gas distribution
TD/13	Pressure regulating installations.
SR/5	Working in confined spaces
SR/15	Programmable controls for plant
SR/22	Purging operations for fuel gases [also pertinent to LPG/air systems]
SR/23	Venting of large volumes of gas
SR/24	Risk assessment techniques
SR/25	Hazardous areas
GM/1	Gas metering
GM/4	Flow metering practice 38 to 250 barg.
GM/5	Installation of correctors
GM/6	Metering up to 38000 scfh
GM/7	Electrical connections
GM/8	Gas metering installations
GL/8	Reporting and investigating incidents

**From HSE Books**

GS4	Pressure testing
EH/22	Ventilation of the workplace
EH/40	Occupational exposure limits
HSG16	Evaporating ovens (out of Print)
PM5	Steam and hot water boiler safety
PM 84	Control of safety risks at gas turbines used for power generation
COP 20	Standards of training in safe gas installation
ACOP L56	Safety in the installation and use of gas systems and appliances
ACOP L122	Safety of pressure systems over 0.5 bar Dated 1993 Safe operation of ceramic kilns
ACOP L73	RIDDOR
ACOP L81	Gas service pipes

**From BSI**

10	Specifications for flanges and bolting for pipes
715	Spec for metal flue boxes for gas fired appliances not exceeding 20kW
799	Oil burning equipment (Parts 2,3 &4)
848	Fans for general purposes. Includes performance testing in situ Part3.
853	Spec for calorifiers/storage vessels for C/H & H/W
1560	Steel pipe flanges for the petroleum industry (now EN 1759:2004)
1640	Steel butt welding fittings for the petroleum industry
1710:	Painting and identification of services in industry
1856	Requirements for metal chimneys
2633:	Class 1 arc welding
2775:	Laboratory rubber tube
3381	Spiral wound gaskets
3410	Spec for washers general purpose engineering
3601	Carbon steel pipes and tubes
3063	Specification of gaskets for pipe flanges
4163	Health and safety in schools.
4504:	Flanges and bolting for pipes, valves and fittings
4814:	Expansion vessels for hot water systems
4872;	Fusion welding approval
5292	Joining materials for gas, low pressure water and steam installations
5258	Domestic gas appliances
5410	Code of practice for oil firing (Installation of oil equipment)
5440	Flues and ventilation for gas appliances up to 70kW net Part 1 Specification of installation of gas appliances to chimneys and maintenance Part 2 Installation & maintenance of ventilation for gas appliances up to 70 kW
5422	Pipe and duct insulation
5446	Specification for installation of hot water supplies for domestic purposes, using gas-fired appliances of rated input not exceeding 70kW
5482	LPG installations in dwellings and caravans
5546	Installation of gas water heating appliances not exceeding 70 kW
5588:	Fire precautions in design and use of buildings
5720:	Mechanical ventilation
5839:	Fire detection and alarm systems in buildings
5854:	Large flue structures
5864	Installation & maintenance of gas fired ducted air heaters up to 70kW
5871	Installation of gas fires and convectors, live effect fires Pt1, 2 & 3:1999 back boilers etc
5990	Direct gas fired air heaters –330kW to 2MW net
5991	Indirect gas fired air heaters – 330kW to 2MW net
5925:	Natural ventilation design
6144	Spec for expansion vessels for unvented HW
6172	Installation of Gas cookers
6173:	Installation of Gas Catering appliances
6230:	Installation of Gas fired Air heaters over 60 kW
6332	Thermal performance of domestic gas appliances
6400	Installation, exchange, relocation & removal of Domestic meters up to 6 m <sup>3</sup> /h Part 1 low pressure Part 2 medium pressure Part 3 LP & MP 3 <sup>rd</sup> family gas
6644	Installation of Boilers over 60 kW (see also IGE UP/10)
6700:	Installation of domestic hot water services
6778:	Specification for fire guards for appliances
6798:	Installation of Boilers up to 60 kW
6880.;	Installation of water heating systems
6891	Installation of Low pressure domestic pipes up to 28 mm
6896:	Installation of Overhead radiant heaters [see also IGE UP/10]
6956:	various Joining compounds
7071	Application, selection and installation of expansion vessels for sealed systems

7079	Preparation of steel substrates before application of paints and related products
7261	Non-domestic flueless space heaters burning LPG
7420	Guide for determination of CV of solid fuels, liquid and gaseous fuels
7593:	Treatment of water in domestic central heating systems
7624:	Spec for Tumble Driers (domestic) see EN1458
7671:	Electrical wiring (IEE Regs) 17 edition
7967	Carbon monoxide in dwellings & combustion performance of gas fired appliances
8210	Guide to building management systems
8313:	Installation of Pipes in ducts
8494:	Electronic portable apparatus to detect and measure CO <sub>2</sub> in indoor environments.
8499	Specification of domestic gas meter boxes and meter brackets
PAS33	Design and installation of domestic central heating systems
PD 970	Wrought steels for mech and allied engineering
PD 6579	Classification of gas appliances
PD 5500	Spec for unfired fusion welded pressure vessels
EN 26	Spec for Instantaneous water heaters
EN 30	Domestic cooking appliances: safety
EN 88	Pressure regulators & associated safety devices for appliances Part1 up to 500mbar. Part 2 500mbar to 5 bar
EN 89	Gas fired storage water heaters for domestic hot water
EN 125	Flame supervision devices Thermoelectric
EN 161	Automatic safety shut of valves for appliances and burners
EN 203	Spec of gas fired catering equipment. Part 1 General safety rules Part 2 – 1 Open burners and wok burners 2 Ovens, Barbecues etc 3 Boiling pans 4 Fryers 6 Hot water heaters for beverage 7 Salamanders & rotisseries 8 Brat pans and paella cookers 9 Solid tops, warming plates and griddles 11 Pasta cookers
EN 230	Specification for monobloc oil burners
EN 267	Forced Draught oil burners
EN 275	Mechanical thermostats for gas appliances
EN 287	Welder approval. Was BS4871
EN 297:	Spec for type B boilers up to 70kW
EN 334:	HP regulators up to 100 bar
EN 416:	1 Single Overhead radiant tube air heaters 2 Single Overhead radiant tube air heaters - rational use of energy
EN 419	Non-domestic overhead luminous radiant heaters-safety
EN 483	Spec for Type C boilers up to 70kW
EN 509	Amnd 2 Decorative fuel effect appliances
EN 521	Specification for LPG appliances Portable vapour pressure appliances
EN 525	Non-domestic direct fired air heaters not exceeding 300kW
EN 598	Automotive fuels LPG requirements & test methods
EN 613	Independent gas fired convection heaters
EN 621:	Non-domestic gas-fired forced convection air heaters for space heating not exceeding a net heat input of 300kW
EN 624 :	Installation of dedicated LPG appliances - room sealed LPG space heating equipment for installation in vehicles and boats.
EN 676	Forced Draught Gas burners
EN 682	Elastomeric seals (Pipes foe gas and hydrocarbon fluids)
EN 746	Industrial thermoprocessing equipment Installation of burner in process applications, [see IGEM UP/12]
EN 746 -2	Industrial thermoprocessing equipment – Combustion and fuel handling systems
EN 746-4	Safety requirements for hot dip galvanising thermo-processing Equipment
EN 751	Sealing materials for metallic threaded joints gas and hot water
EN 777	Multiple Burner Overhead radiant tube air heaters

- EN 778: Non-domestic gas-fired forced convection air heaters for space heating not exceeding a net heat input of 70kW
- EN 832 Thermal performance of buildings – Calculation of energy use for heating residential buildings
- EN1020: Non-domestic gas-fired forced convection air heaters for space heating not exceeding a net heat input of 300kW
- EN 1011 Welding of steels
- ENV 1041,2,5,6 Chimneys for room sealed appliances
- EN 1106 Manual gas taps for appliances
- EN 1319 Domestic forced convection air heaters not exceeding 70 kW
- EN 1092 Flanges for steel pipework, replaces BS 4504-3
- EN 1359: Meters specs. Was BS416
- EN 1435 Non-destructive examination of welds
- EN 1439 LPG Equipment and accessories – Transportable steel cylinders checking
- EN 1440 LPG Equipment & accessories – refillable periodic testing
- EN 1443: Chimneys general requirements
- EN 1458: Spec for Tumble dryers up to 6kW
- EN 1473 LNG Design of onshore installation
- EN 1514-2 Spiral wound gaskets for steel flanges
- EN 1515 Flanges and their joints
- EN 1539 Dryers and ovens in which flammable substances are released - safety Requirements
- EN 1555-3 PE plastic pipe systems for gaseous fuels – Fittings. Amendment 1
- EN 1594: Gas supply systems – pipelines with MOP over 16 barg
- EN 1643: Valve proving systems
- EN 1759 Specification for steel flanges
- EN 1775: Installation of Gas pipework. Functional requirements only,.
- EN 1845: Pressure sensing for gas burners
- EN 1854 Pressure sensing devices for gas burners & appliances
- EN 1856 Requirements for metal chimneys
- EN 1859 Metal chimneys - test methods
- EN 1949 Spec for LPG installations in accommodation vehicles
- EN 1983 Industrial valves: steel ball valves
- EN ISO 3977-5 GT procurement for Petroleum and NG industries
- EN 10028 Weldability Steels
- EN 10160 Ultrasonic testing flat steels
- EN 10216-2 Steel tubes Replaces BS 3602-1
- EN 10217-2,3,5 Steel tubes Replaces BS 3602-1 and 2
  
- EN12007: Gas supply systems - pipelines for maximum pressure up to and including 16 bar
- EN 12186 Gas supply systems Gas pressure regulating stations
- EN 12279: Gas supply systems - gas pressure regulating installations on service lines - functional requirements
- EN 12309: Gas-fired absorption and adsorption air-conditioning and/or heat pump appliances with a net heat input not exceeding 70 kW: part2:
- EN 12327 Gas supply systems - pressure testing, commissioning and decommissioning procedures - functional requirements
- EN 12336 Tunnelling machines. Safety requirements
- EN 12405-1 Gas meters, volume conversion devices
- EN 12669 Direct gas-fired hot air blowers for use in greenhouses
- EN 12817 LPG equipment and accessories tanks up to 13m<sup>3</sup>
- EN 12864 LP non-adjustable LPG regulators up to 200mbar and 4Kg/h
- EN 12952-8: Water-tube boilers and auxiliary installations: requirements for firing systems for liquid and gaseous fuels for the boiler
- EN 12952 Water tube boilers and auxiliary installations
- EN 12953 Shell boilers,
- EN 13203-1 Gas fired domestic appliances not exceeding 70 kW & below 300 litre – Assessment of delivery performance
- EN 13203 Solar supported gas fired appliances producing hot water up to 70kW . Assessment of energy consumption
- EN 13084-7 Free standing chimneys, single waal chimney and liners
- EN 13423 Compressed NG Vehicle operations

- EN 13480 Metallic Industrial Piping.  
Part 3 design and calculation
- EN 13482 Safety devices for gas pressure regulating stations
- EN 13611: Safety and control devices for gas burners and gas-burning appliances
- EN 13673 Determination of max explosion pressures etc for gases and vapours
- EN 13774 Valves for gas distribution up to 16 bar
- EN 13376 LPG filling equipment road tankers
- EN 13831: Closed expansion vessels with built-in diaphragm for water systems.
- EN 1407 Static welding cylindrical LPG tanks
- EN 1417 LPG Equipment and accessories – Transportable aluminium cylinders checking
- EN 14236 Ultrasonic domestic gas meters
- EN 14241 Chimneys, material requirements and test methods for elastomeric seals and sealants in chimneys
- EN 14 Foam producing solutions for leak detection on gas installations
- EN 14141 Valves NG transportation pipelines
- EN 14336 Heating systems in buildings. Installation and commissioning of water based heating systems. Supersedes BS5449
- EN 14373 Explosion suppression systems
- EN 14382 Safety devices of gas regulating stations. Safety shut off devices up to 100 bar
- EN 14394 Heating boilers with forced draught burners not exceeding 10MW or 110°C
- EN 14422 Clamp couplings liquid LPG transfer
- EN 14459 Control functions in electronic systems for gas burners and appliances
- EN 14513: Transportable gas cylinders Busting discs/reliefs
- EN 14522: Determination of auto ignition temperatures for gases and vapours
- EN 14543: LPG gas appliances. Parasol patio heaters
- EN 14585-1 Corrugated metal hoses for pressure applications
- EN 14678 LPG Equipment and accessories Automotive filling stations
- EN 14797 Explosion venting devices
- EN 14800 Corrugated safety metal hoses for connection of domestic appliances
- EN 14829: Gas fired flueless space heaters not exceeding 6kW
- EN 14870-3 Petroleum & Natural gas – flanges
- EN 14986 Design of fans working in potentially explosive atmospheres
- EN 14994 Gas explosion venting protective systems
- EN 15001 Gas infrastructure pipework over 0.5 bar industrial and > 5bar all installations  
Part 2 Detailed functional requirements commissioning, operation and maintenance EN 15069 Gas safety connection valves for metal hose assemblies for domestic appliances
- EN 15198 Methodology for risk assessment of non-electrical equipment and components for intended use in potentially explosive atmospheres
- EN 15266 S.S. pliable corrugated tubing – gas up to 0.5 bar
- EN 15316 Heating systems in buildings Energy requirements/Efficiencies domestic HW
- EN 15332 Heating Boilers, energy assessment of hot water storage systems
- EN 15378 Heating systems in buildings Inspection of boilers and systems
- EN 15387 Heating systems in buildings Inspection of boilers & heating systems
- EN 15417 Gas fired central heating boilers – condensing boilers 70 -1000 kW
- EN 15420 Gas fired central heating boilers Type C 70 – 1000 kW
- EN 15665 Ventilation of buildings Performance criteria -residential
- EN 15794 Determination of explosion points for flammable liquids
- EN 16310 Terminology for engineering services in buildings
- EN 16314 Gas meters additional functionalities
- EN 16348 Gas infrastructure Management PIMS
- EN 31010 Risk assessment techniques
- EN 45522 Procurement of shell boilers
- EN 50014 to 50020 Zoned electrical equipment
- EN 50018:: Electrical apparatus for potentially explosive atmospheres - flameproof enclosure 'd'
- EN 50073 Installation and maintenance of Gas Detectors
- EN 50156-1 Electrical equipment for furnaces [includes boiler plant]
- EN 50194 Spec for gas detection Replaces BS 7348
- EN 50244: Electrical apparatus for the detection of combustible gases in domestic premises - guide on the selection, installation, use and maintenance.
- EN 50379-1 Portable apparatus for flue gas measurement-General requirements
- EN 50271: Electrical apparatus for detection and measurement of combustible

	gases- test for items using software or digital technologies.
EN 50291	Spec for CO Detectors
EN 50465	Gas appliances fuel cell gas heating appliance
EN 60079	Part 10 Classification of hazardous areas
	Part 15 type 'n' electrical apparatus for explosive gas atmospheres
	Part 29 gas detectors
	Part 25 intrinsically safe systems
EN 60534	Industrial process control valves
EN 61511	Functional safety. Safety instrumented systems for the process sector.
	Part 2 Guidelines for application
	Part 3 Guidance for the determination of the required safety integrity levels.
EN 61310:	Safety of machinery – Marking
EN 62086-1	Electrical apparatus for ex – trace heating
ISO 2314	Gas turbines acceptance tests
ISO 3046-5	Reciprocating engines performance Torsional vibrations
ISO 3977	Gas turbine procurement. Applications for petroleum and NG industries
ISO 3046	Reciprocating internal combustion engines declaration of power, fuel and oil consumptions
ISO 4081	Rubber hoses for Engine cooling systems
ISO 4126	Safety devices for protection against excess pressure
ISO 5011:	Inlet air cleaning equipment for internal combustion engines and compressors, performance testing.
ISO 7967	Reciprocating internal combustion engines
	Part 4 Pressure charging and ducting systems
	Part 7 Governing systems
ISO 5389:	Turbo compressors Performance test code
ISO 6145-5	Gas analysis – capillary calibration devices
ISO 6974	Pt 6 Natural gas determination of composition
ISO 6975	NG Extended analysis Gas chromatographic method
ISO 6978-1	NG determination of mercury by chemisorption in iodine
ISO 7919	Mechanical vibration Parts 2 & 4 steam & gas turbines
ISO 7967	Reciprocating IC Engines
ISO 8178:	Reciprocating engines: exhaust emissions
ISO 85281-6	Reciprocating engines
ISO 9934	Non destructive testing – Magnetic Particle testing
ISO 10723	Natural gas Performance evaluation for analytical purposes
ISO 11439	Gas cylinders - high pressure cylinders for the onboard storage of natural gas as a fuel for automotive vehicles, Part1.
ISO 13707	Reciprocating compressors
ISO 10440	Rotary type positive displacement compressors, part 1.
ISO 11042-1	Gas turbines Exhaust emissions measurement & evaluation
ISO 11086	Gas turbines vocabulary
ISO 11439	Gas cylinders for NG Vehicles
ISO 12100	safety of machinery Principles of design Risk Assessment
ISO 12176:2	Plastic pipes and fittings Electrofusion equipment for PE systems
ISO 12213-3	NG calculation of compression factor using physical properties
ISO 11299	plastic piping systems renovation underground networks – general
ISO 13443	Natural gas. Standard reference conditions
ISO CD 13623:	Transportation pipelines.
ISO 13686	Natural gas quality designation
ISO 13706:	Petroleum and natural gas industries Air cooled heat exchangers
ISO 13709	centrifugal pumps for petroleum and natural gas industries
ISO 14469-3	Road vehicles compressed NG 250 bar fuelling connector
ISO 15112	Natural gas Energy determination
ISO 15547-1	Petroleum and natural gas industries Plate & frame heat exchangers
ISO 15501:	Compressed CNG fuel systems for road vehicleISO 15500:19 CNG in vehicles 19 parts see IGE UP/5.
ISO 15609-1	Specification and qualification of welding procedures arc welding
ISO 16812	Petroleum Petrochemical & NG Shell and tube heat exchangers
ISO 21789	Gas turbine applications
ISO/TR 19480	PE pipes and fittings. Training and assessment of fusion operators
ISO 22266	Land based steam & gas turbine generator sets

ISO 22621	Plastic Piping gas fitness for purpose 20 bar max
ISO 22621	Plastic Piping gas design & installation 20 bar max
ISO 22967	Forced draught gas burners
ISO 23551	Safety and control devices for gas burners Valve proving
IEC 60079-17	Explosive atmospheres. Electrical installations, installation and maintenance.
IEC 60079-29	Gas detectors Part 1 Performance Part 2 Selection, installation and use.
IEC 61508	Safety of Programmable safety related systems
IEC 62305	Protection against lightning Part 1 General principles Part 2 Risk assessments

### **Published Documents**

PD IEC TR 61508-0	Functional safety of programmable electronic safety related systems.
PD 5304 – 2005	Guidance on safe use of machinery
PD 5500 – 2006	Specification for unfired fusion welded pressure vessels
PD CEN/TR 1749	European scheme for classification of gas appliances according to method of evacuation of combustion products. Supersedes PD CR 1749:2001.
PD CEN/TR 16061	Smart gas meters
PD ISO/TR 11150	Natural gas Measurement of properties
PD ISO/TR 12148	Natural gas Calibration of Hydro carbon dewpoint instruments
PD ISO/TR 26762	Natural gas Upstream allocation of condensate

### **Miscellaneous publications**

PSG2 Guidelines on the Operation of Steam Boilers - SAFed from [info@safed.co.uk](mailto:info@safed.co.uk)  
 DW/171 Kitchen ventilation systems HVCA – [www.hvca.org.uk](http://www.hvca.org.uk)

Guide to Steam plant Operation - CEA – [cea@combustion.co.uk](mailto:cea@combustion.co.uk) Climate Change Levy -  
 Guide for industry, commerce and public sector. –  
 CEA – [cea@combustion.co.uk](mailto:cea@combustion.co.uk)

The above list of publications cannot claim to be all that is available and if any reader is aware of additional publications or errors, GEA would be grateful for the information in order to assist other users of this page. GEA will post latest information on changes within BSI and the IGE, monthly if possible on their website.