

ICS 91.140.40

CCS P 47



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB 50195-2013

Replacing GB 50195-1994

Design code for producer gas station

Issued on: December 25, 2012

Implemented on: May 1, 2013

**Issued by: Ministry of Housing and Urban-Rural Development of the
People's Republic of China;
General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China**

Table of Contents

- 1 General
- 2 terms
- 3 coal selection
- 4 Design Yield and Quality
- 5 station layout
- 6 Green spaces should be set up.
- 7 Safety of equipment
- 8 Process layout
- 9 air duct
- 10 Auxiliary facilities
- 11 Storage and transportation of coal and ash

1 General

1.0.1 This specification is formulated in order to make the design of producer gas station (hereinafter referred to as gas station) ensure safe production, save energy, protect the environment, improve working conditions, achieve advanced technology and economical rationality.

1.0.2 This specification is applicable to the design of gas stations and gas pipelines for newly-built, expanded and reconstructed atmospheric fixed-bed producers in industrial enterprises. This specification does not apply to the design of water gas station and its water gas pipeline.

1.0.3 The extension and reconstruction of the gas station shall make full use of the original equipment, pipelines, buildings and structures.

1.0.4 The environmental protection facilities of the gas station must be designed, constructed and put into operation at the same time as the main project.

1.0.5 The discharge of harmful substances and the control of noise in the gas station shall comply with the current relevant national standards.

1.0.6 The design of the gas station and its gas pipelines shall not only comply with this specification, but also comply with the current relevant national standards.

2.0.1 producer gas station

It is a general term for the production and auxiliary production facilities set up to continuously produce industrial gas by using coal and coke as raw materials and saturated air as gasification agent by using atmospheric pressure fixed bed gasifier.

2.0.2 Overhead bridge for coal (slag) conveyor

Belt conveyor corridors for transporting coal, coke or ash.

2.0.3 crusher and screen room

A room containing crushing or screening equipment for coal or coke.

2.0.4 coal receiving hopper

Coal storage hoppers in coal yards or in front of mechanized coal handling equipment.

2.0.5 fine coal

Coal with a particle size of less than 6mm.

2.0.6 mechanized transport transport by conveyor

Belt conveyor, multi-bucket elevator, scraper machine and hydraulic ash removal and other transportation methods.

2.0.7 Semi-mechanized transport transport by simple machine

Monorail electric hoist, single bucket elevator, electric traction trolley, rail trolley and simple coal transportation machinery and other transportation methods.

2.0.8 magnetic separator

Magnetic separation equipment, suspended magnetic separators, electromagnetic belt wheels, etc. installed on the coal transportation system.

2.0.9 small type gas station

A gas station with a gas design output less than or equal to 6000m³/h.

2.0.10 medium type gas station

A gas station whose designed output of gas is greater than 6000m³/h and less than 50 000m³/h.

2.0.11 Large type gas station

A gas station with a gas design output greater than or equal to 50,000m³/h.

2.0.12 common passage

Indoor operation and inspection often come and go.

2.0.13 main passage main passage

Main roads for equipment installation and maintenance transportation.

2.0.14 two-stage gasifier two stage gasifier

The gas generator with retort section is called "two-stage furnace" for short.

2.0.15 Equipment for gas purification

The general term for standpipe, cyclone dust collector, electrical filter, scrubber, indirect cooler, drip eliminator, etc.

2.0.16 Electrostatic precipitator

The general term for wet electric precipitator, electric tar remover and electrostatic precipitator.

2.0.17 Water knockout

Equipment for removing water droplets from gas.

2.0.18 bell type valve

A device for releasing gas or flue gas at the outlet of the gas generator.

2.0.19 non-return valve

A device that prevents the gas in the gas generator from flowing back into the air pipe.

2.0.20 Anti-explosion valve

When the gas explodes, after the diaphragm in the valve ruptures and releases the pressure, the valve cover will automatically close due to the action of the heavy hammer, which can play a safety role.

2.0.21 Bursting disc

The pressure relief diaphragm installed at the end of the air pipe and gas pipe.

2.0.22 Natural suction device draft ventilation equipment

It is a device for natural ventilation when the gas furnace is pressurized.

2.0.23 Drain water sea equipment

Equipment for removing condensed water in gas pipelines.

2.0.24 disc valve diskvalve

Disc valve for shutting off hot gas.

2.0.25 gas pipe compensator flexible section of gas pipe

A device for temperature change compensation on gas pipelines.

2.0.26 blanking plate

It is a blocking plate used for temporary partition or extension between flanges of gas equipment or pipelines.

2.0.27 side shoring

Installed before and after the flanges of gas equipment or pipelines, it is used for loading and unloading blind plates and supports for blind plate gaskets.

2.0.28 revolving gate valve

A rotary gate valve on a gas pipeline.

3 coal selection

3.0.1 The selection of gasification coal should make rational use of energy and save energy, meet the user's requirements for gas quality, and coordinate with safety production, economic benefits and environmental protection.

3.0.2 The selected gasification coal type should have its origin, element composition analysis and other technical index data and the corresponding gasification coal type supply agreement.

3.0.3 The technical indicators of the coal used for the gasification of the one-stage coal gasifier shall comply with the relevant provisions of the current national standard "Technical Conditions for Coal Used in Atmospheric Pressure Fixed Bed Gasification" GB/T 9143.

3.0.4 The technical indicators of the coal used for the gasification of the two-stage coal gasifier shall comply with the relevant provisions of the current national standard "Technical Conditions for Coal Used in the Gasification of Atmospheric Pressure Fixed Beds" GB/T 9143, and shall also comply with Table 3.0.4 regulations.

Table 3.0.4 Technical indicators of coal used for gasification of two-stage coal gasifier