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Emission standard of air pollutants for surface coating of auto parts manufacturing industry

表面涂装（汽车零部件） 大气污染物排放标准

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Emission standard of air pollutants for surface coating of auto parts manufacturing industry

1 Scope

This Standard specifies requirements for air pollutant emission control, monitoring and supervision and management requirements for surface coating operations in the auto parts manufacturing industry.

This Standard applies to air pollutant emission control of existing auto parts manufacturing enterprises, as well as environmental impact assessment of construction projects of auto parts manufacturing enterprises, design of environmental protection facilities, environmental protection acceptance of completed construction, issuance of pollution permits, and management of air pollutant emissions after commissioning.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 16157, *The determination of particulates and sampling methods of gaseous pollutants emitted from exhaust gas of stationary source*

GB 37822, *Standard for fugitive emission of volatile organic compounds*

HJ 38, *Stationary source emission - Determination of nonmethane hydrocarbons - Gas chromatography*

HJ/T 42, *Stationary source emission - Determination of nitrogen oxide - Ultraviolet spectrophotometric method*

HJ/T 43, *Stationary source emission - Determination of nitrogen oxide-N-(1-naphthyl)-ethylenediamine dihydrochloride spectrophotometric method*

HJ/T 56, *Determination of sulphur dioxide from exhausted gas of stationary source Iodine titration method*

HJ 57, *Stationary source emission - Determination of sulfur dioxide - Fixed*

HJ 944, *Environmental management records and compliance reports of pollutant emission permit technical specification for pollution sources - General rule (on trial)*

HJ 1131, *Stationary source emission - Determination of sulphur dioxide - Portable ultraviolet absorption method*

HJ 1132, *Stationary source emission - Determination of nitrogen oxides - Portable ultraviolet absorption method*

Administrative Measures for Automatic Monitoring of Pollution Sources (State Environmental Protection Administration Order No. 28)

Environmental Monitoring Management Measures (State Environmental Protection Administration Order No. 39)

3 Terms and definitions

For the purposes of this document, the terms and definitions defined in GB 37822 as well as the followings apply.

3.1 surface coating

The process of applying paint on the surface of the substrate to form a protective, decorative or specific functional coating.

3.2 volatile organic compounds (VOCs)

The organic compounds that participate in atmospheric photochemical reactions, or organic compounds determined in accordance with relevant provisions, abbreviated as VOCs; when characterizing the overall emissions of VOCs, according to industry characteristics and environmental management requirements, total volatile organic compounds (expressed in TVOC) and non-methane total hydrocarbons (expressed in NMHC) are used as pollutant control items.

3.3 benzene homologues

It refers to benzene-containing monocyclic aromatic hydrocarbons, including benzene, toluene, xylene (m-, p-xylene and o-xylene), trimethylbenzene (1,2,3-trimethylbenzene, 1,2,4-trimethylbenzene and 1, mathematical addition of the concentration of 1,3,5-trimethylbenzene), ethylbenzene and styrene. The gas-species that are not indicated are calculated as toluene.

3.4 control facilities for air pollutants

The effective pollution control facilities such as dust removal equipment,

4.4.5 The fugitive emission control requirements of open liquid VOCs shall meet the requirements of GB 37822. Waste gas discharged from wastewater storage and treatment facilities shall meet the requirements of Table 1.

4.4.6 The waste gas collection and treatment system shall operate synchronously with the production process equipment. When the exhaust gas collection-treatment system fails or is overhauled, the corresponding production process equipment shall stop running. Put it into use synchronously after the overhaul is completed. If the production process equipment cannot be stopped or cannot be stopped in time, emergency waste gas treatment facilities shall be set up or other alternative measures shall be taken.

4.4.7 The enterprise shall establish a ledger in accordance with the requirements of HJ 944. Record the purchase, storage, use and processing of VOCs materials every month, and keep them for at least 3 years for inspection by the competent authority. The data to be recorded includes:

a) The content of VOCs in each VOCs material, the monthly usage, recycling and disposal of VOCs materials, the recovery and disposal methods, the VOCs content in the materials shall be subject to the VOCs content test report issued by a qualified testing authority;

b) The operating time of the waste gas collection system and pollution control facilities, and the waste gas treatment volume. The adsorption device shall record the type of adsorbent, the replacement/regeneration cycle and the replacement amount, and the operating temperature. The thermal combustion device shall record the combustion temperature and the residence time of the flue gas daily. The catalytic oxidation device shall record the type of catalyst, the date of catalyst replacement, and the operating temperature. For other pollution control equipment, maintenance items shall be recorded. The main operating parameters shall be recorded daily;

c) Replacement and disposal records of filter materials.

5 Air pollutant monitoring requirements

5.1 General requirements

5.1.1 Enterprises shall, according to relevant laws, "Environmental Monitoring Management Measures" and HJ 819 and other regulations, establish an enterprise monitoring system and formulate a monitoring plan to conduct self-monitoring of pollutant discharge state and its impact on surrounding environmental quality. Keep original monitoring records. Announce monitoring results.

5.1.2 The requirements for the installation of automatic pollutant discharge monitoring equipment for new enterprises and existing enterprises shall be implemented in accordance with relevant laws and the "Administrative Measures for Automatic Monitoring of Pollution Sources".

5.1.3 Enterprises shall design, construct, and maintain permanent sampling ports, sampling test platforms and sewage outlet signs in accordance with the requirements of environmental monitoring management regulations and technical specifications.

5.1.4 Air pollutant monitoring shall be carried out at the specified monitoring location. If there are waste gas treatment facilities, they shall be monitored before and after the treatment facilities.

5.2 Monitoring sampling and analysis methods

5.2.1 The number of sampling points and location settings for VOCs monitoring of exhaust cylinders shall be implemented in accordance with the provisions of GB/T 16157, HJ/T 397, HJ/T 373 and HJ 732.

5.2.2 When monitoring fugitive emissions of VOCs in the plant, the monitoring shall be carried out at a position 1 m outside the discharge openings such as factory doors, windows, vents, and other openings (holes), and 1.5 m above the ground. If the plant is incomplete (if there is a roof and no walls), the monitoring shall be carried out at a position where the wind direction is 1 m down the operating station and 1.5 m above the ground.

5.2.3 The monitoring of the average concentration of NMHC in any one hour in the plant area adopts the method specified in HJ 604. The average value is obtained by sampling for 1 hour, or 3~4 samples are collected at equal intervals within 1 hour to calculate the average value. The monitoring of the concentration value of NMHC at any one time in the plant area shall be carried out in accordance with the relevant regulations of portable monitoring instruments.

5.2.4 The analysis and determination of air pollutants shall be carried out in accordance with the method specified in Table 4.

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