

Analysis of Air Pollution Control in Environmental Engineering

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Abstract: According to the actual situation in the current society, the air pollution of environmental engineering has become more and more serious, which has brought great harm to the environment and organisms. In order to improve the air pollution problem, it is necessary to formulate reasonable control measures according to the actual situation, increase the pollution control, deal with the atmospheric environment. This paper first expounds the types and causes of air pollution. Finally, the characteristics of air pollution are outlined, and the countermeasures for air pollution control are proposed, such as implementing the concept of green economic development and ensuring the level of greening in urban areas, hoping to provide valuable reference for those who study the same problem.

Keywords: Environmental Engineering; Air Pollution; Control Measures

Introduction

In recent years, our country's social economy has developed rapidly. On the one hand, people's material life has been greatly improved, but on the other hand, the rapid economic development has resulted in inadequate and insufficient protection of the ecological environment. At present, the rapid development of society development, has formed a relatively serious environmental pollution. The Chinese government attaches great importance to the problem of environmental pollution. In recent years, a number of policies and regulations have been issued, and local governments have also issued a number of action plans to jointly solve the problem of environmental pollution. In this paper, we will do a good job in cleaning up pollutants, and analyze the various pollutants in air pollution in detail. After understanding their components, we will carry out in-depth treatment, improve environmental protection awareness, reduce air pollution, and ensure that society can achieve sustainable development.

1. Types and causes of air pollution

In environmental pollution, air pollution is the most common one, that is, the concentration of pollutants in the atmospheric environment continues to increase, which in turn poses harm to the natural ecological environment, human body, and the growth of animals and plants.

1.1 Types of air pollution

When classifying the types of air pollution, it is first necessary to analyze the nature of air pollution and divide it into two types: reducing air pollution and oxidizing air pollution. Among them, reducing air pollution is also known as London-type air pollution, that is, there are mainly three types of pollutants in the atmospheric environment, including sulfur dioxide (SO₂), carbon monoxide (CO) and particulate matter. In addition, some pollutants occur in low-altitude aggregation reactions. Afterwards, reducing smog can be formed, causing serious harm to the atmospheric environment. In addition, the main pollutant of oxidative air pollution is carbon monoxide (CO). In industrial production, combustion of oil-fired boilers,

and automobile exhaust emissions, a large amount of gas and solid wastes, including hydrocarbons, nitrogen oxides, etc., will be produced. cause oxidative pollution. Oxidizing air pollutants will cause serious adverse effects on the atmospheric environment, and at the same time, photochemical reactions will occur, thereby forming strong oxidizing substances, causing secondary pollution to the atmospheric environment.

1.2 Causes of air pollution

When the composition of pollutants in the air environment is complex and exceeds a certain concentration, it can cause air pollution, which will cause harm to the ecological environment and human health, and will also cause damage to the atmospheric circulation. Through the investigation and analysis of the atmospheric environment, the causes of air pollution mainly include the following points:

Air pollution caused by natural factors. In the formation process of air pollution, the influence of natural factors is relatively large. For example, when a volcanic eruption or earthquake occurs, the earth moves violently, which can produce a large amount of dust particles, and also emit carbon dioxide and other pollutants. Various pollutants Into the atmospheric environment, it can harm the environmental climate, and at the same time, it can gradually affect the air environment during the flow of pollutants. In addition, when a forest fire occurs, it will also induce air pollution. The forest contains a lot of vegetation resources, and plants play a very important role in purifying the air environment. If a forest fire occurs, it will not only lead to a large reduction in vegetation, but also A large amount of pollutants will be produced, and it cannot be restored to the original atmospheric state in a relatively short period of time.

Air pollution caused by industrial and agricultural production. With the urbanization

The development process has been accelerated, all walks of life are developing rapidly, the industrial structure has been upgraded and adjusted, and great changes have taken place in industrial production and agricultural development. For example, in industrial production, the types of enterprises include petrochemical enterprises, metal enterprises, coal mining enterprises, etc., a large amount of pollutants will be emitted in various production links, which will cause the concentration of harmful substances in the atmospheric environment to increase. In addition, the type of pollution It is more complicated, such as carbon dioxide, metal element smoke, dust, etc., which makes it more difficult to control air pollution. In addition, all kinds of pesticides need to be used in farmland cultivation. If the amount of pesticides is not properly controlled or not treated effectively, a large amount of residue will enter the air environment in the form of dust, and the burning of straw will also cause serious damage to the air environment. Pollution.

2. Management measures for air pollution prevention and control in environmental engineering

2.1 Improve the air pollution management system

In the management of air pollution prevention and control, it is necessary to establish sound and complete rules and regulations, promote the scientific and standardized development of environmental engineering, make efficient use of various resources, and improve the level of air environment management and control. Develop a post responsibility system. Analyze the specific performance of air pollution in our country, summarize the deficiencies in air pollution prevention and management according to national laws, and put forward many precautions to improve air pollution control requirements, and ensure that the heads of each unit and relevant staff can determine their own Job responsibilities and scope of work. Develop an assessment and evaluation system. In the management of air pollution prevention and control, regular inspections should be carried out on the operation and production of various enterprises and the discharge of gas pollutants to ensure compliance with national laws and regulations. The system requires enterprises to rectify within a time limit to ensure that emissions are discharged after meeting relevant standards. Establish and improve the legal supervision mechanism. Guarantee the people's right to supervise and report, and create a good atmosphere for national supervision in the whole society. If the concentration of gas pollutants discharged in the production of enterprises exceeds the standard,

they can report to the relevant supervision departments. Provide incentives to personnel to guide the whole society to actively participate in the management of air pollution prevention and control.

2.2 Effectively implement sustainable development strategies

In the management of air pollution prevention and control, we should adhere to the concept of sustainable development, analyze the sustainable development goals, comprehensively understand the actual situation of air pollution in different regions, and formulate targeted treatment plans accordingly. Relevant departments must pay more attention to the management of air pollution prevention and control, investigate and analyze the needs of urban planning and construction, and the situation of natural ecological and environmental protection. In the formulation of urban planning goals and the management of ecological and environmental protection, they should adhere to the guidance of the concept of sustainable development. This controls air pollution. In the process of formulating the air pollution control plan, it is not only required to increase the awareness of air pollution prevention and management, but also to increase the amount of capital investment to ensure that air pollution control work can be carried out in an orderly manner. Real-time detection and analysis of the air environment quality, optimization and adjustment of the air pollution control plan, while strengthening supervision and management, to ensure that the air pollution control plan can be put into practice and meet the requirements of sustainable development.

3. Build a new industrial layout for ecological and environmental protection

In the planning and construction of major cities, the regional industrial structure should be optimized and adjusted, and all regions must implement the relevant concepts of ecological and environmental protection. Such industries should be encouraged to carry out technological transformation, industrial upgrading and adjustment, and accelerate the creation of an ecologically environmentally friendly industrial layout. Through the analysis of the inducing factors of air pollution, the impact of the heavily polluting industries is relatively large. Therefore, we should pay more attention to the heavily polluting industries, carry out scientific management of such industries, and optimize and adjust the regional industrial structure. In urban planning and construction, environmental protection policies and norms must be formulated to provide preferential policies for enterprise transformation. In terms of industrial layout, the local government should actively introduce green, energy-saving and environment-friendly enterprises to improve the local atmospheric environment while promoting local economic development. For heavily polluting enterprises, it is not only necessary to encourage them to adjust their industrial structure, but also to urge such enterprises to innovate their production processes and machinery and equipment, and to formulate a sound exhaust emission control system to prevent emissions from causing harm to the atmospheric environment.

4. Promote the construction of green projects

In the management of air pollution prevention and control, green project construction should be actively promoted, that is, afforestation, increase vegetation coverage, and gradually improve the ecological environment. Among all kinds of green plants, trees can absorb a large amount of harmful dust and air suspended particles, and at the same time can reduce the wind speed to avoid a large amount of dust from causing harm to the atmospheric environment.

In general, to control air pollution in environmental engineering, it is necessary to formulate appropriate control plans and measures according to the current actual problems, which will bring favorable conditions for the development of the atmospheric environment, and can bring certain help to ecological development. . In the process of pollution control, it is necessary to formulate suitable plans in strict accordance with the causes of air pollution. In the process of control, consider whether the control measures are in line with the needs of environmental development, prevent adverse effects on the environment, use appropriate governance methods to control, and effectively improve atmospheric environment.

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