Analysis on the Methods of Building Construction Standard of Hvac Specialty

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Abstract: under the New Situation, Chinese Residents Have New Requirements for Housing Conditions, Especially for Hvac Housing. Hvac is a New Energy-Type Air Conditioner That Combines Heating, Ventilation, Air Conditioning and Air Conditioning. It Directly Affects the Living Standards of Chinese Residents under Energy-Saving Environmental Conditions and Has Important Value for China's Energy-Saving and Environmentally-Friendly Housing Heating. However, the Living Environment in the North and South of China is Quite Different. under Cold Weather Conditions, the Hvac System is Difficult to Be Accepted by the Northerners. Therefore, This Paper Studies the Relationship between Hvac and Housing Construction Engineering Standards through Comparative Investigation, and Analyzes the Problems in the Practical Application of Hvac Systems. the Text Gives the Methods in the Aspects of Heating Inlet Setting, Technician Training and Exhaust System Upgrade. on This Basis, Some Suggestions Have Been Given to the Application of New Energy Heating Equipment in Energy-Saving Society.

1. Introduction

1.1 Literature Review

With the acceleration of urbanization and the increase of commercial buildings, people pay more and more attention to indoor heating, ventilation, air conditioning and other issues (Zhou, 2013). Due to the continuous deepening of energy exhaustion, energy conservation and environmental protection and other resource issues, the construction of HVAC houses has attracted the attention of the public. Therefore, HVAC system is of great significance in the process of Building Engineering (Wang, 2014). In addition, with the continuous progress of society, people's demand for living standards is higher and higher, especially in the residential environment, which requires energy conservation, environmental protection, health and comfort, so the HVAC system has become a new energy heating facility for modern household (Qiao, 2010). HVAC system can effectively reduce environmental pollution and increase economic benefits without reducing housing environmental comfort (Zhang, 2013). In addition, HVAC system can be used in building construction to promote energy conservation and emission reduction, which is of great significance for building a low-carbon economic society.

1.2 Purpose Ofresearch

With the development of low-carbon economy and society, the energy-saving design of HVAC system is also concerned by designers. The main source of energy in China is coal, which will produce a lot of pollutants, including carbon dioxide, sulfur dioxide and other harmful gases, which will cause great damage to the environment and bring no inconvenience to people's lives. Based on this, this paper studies the application of HVAC system in building construction to solve the problem of non renewable energy heating. However, due to environmental, human, economic and other factors, there are still many problems in the application of HVAC system in life.

2. Current Situation and Trend of Building Engineering Construction of Hvac Specialty

With the improvement of housing quality, the traditional HVAC technology has been unable to meet the current green energy-saving building needs. Therefore, using new technology, new products and new materials, HVAC can meet the energy-saving needs to some extent. The

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development of HVAC must follow the principles of energy conservation, sustainable development, health and safety of building environment and energy and environmental protection (Xi, 2015). In order to meet the requirements of modernization, the HVAC system should establish an intelligent automatic control system to integrate all the equipment in the building into one system, so as to realize information sharing and comprehensive management.

HVAC is an essential design in modern architecture, which not only improves the quality of life of residents, but also ensures the modern standard of housing construction. The biggest characteristic of HVAC is to create a comfortable and clean indoor environment, while general air conditioning can only solve the problem of heating and cooling, and can not solve the problem of air humidity and cleanliness. Therefore, the popularization of HVAC has solved the problem that people have been worried about for a long time (Li, 2016). With the improvement of people's living standards, the requirements for housing construction are also higher and higher. Therefore, HVAC professional housing construction has become an important design in engineering construction.

3. Problems in Building Construction of Hvac Specialty

3.1 Too Many Entrances for Heating Works

Because of China's vast territory and large latitude crossing from north to south, the climate in the north is dry and cold, and the climate in the south is mild and humid. However, in the construction of HVAC professional housing projects, due to the impact of cold weather in the north, heating facilities such as heating and geothermal system are mostly used to resist the cold, while in the south, there is not much energy consumption in winter, so HVAC can meet the heating demand (Cao, 2013). Among them, some construction units or owners will set up multiple heating outlets to meet the individual heating demand, regardless of the outdoor pipeline network system. Therefore, it is required to take measures according to local conditions during the project construction, and pay attention to the connection and maintenance with the external pipeline basic network while considering the rationality of resources. For example, a comprehensive residential building has 7 floors in total, and the indoor heating lines are divided into 10 loops. After the bad owner's private reform, the number of heating inlets reaches as many as 12, resulting in too many connection points of external lines and uneven extension in all directions, which will not only cause trouble for future work and maintenance, but also hinder the heating regulation of other residents.

3.2 Lack of Technical Training for Maintenance Personnel

At present, many construction personnel engaged in HVAC engineering are mostly from the construction, installation, design and other related fields, with different professional levels. HVAC in the field of construction and installation has a high demand for professionalism, but most of the engineering construction personnel are non professionals, and even there is no learning and training in this industry, which shows that the technical training problems in the unit are particularly serious. For example, in the bidding process, some outsourcing engineering companies take work experience as their rhetoric, constantly guide the principals to adopt the inertial thinking, and take experience as the reference point for construction, which will not only lead to hidden dangers in system operation, but also threaten the residential environment of residents. In addition, many operators have low professional quality, low level of professional knowledge, do not have the basic performance operation and maintenance skills of HVAC, and do not know how to adjust the HVAC system according to the actual situation. Therefore, if the technical operators only turn on and off in the actual work application, it will lead to waste of resources. Therefore, in order to achieve the purpose of energy conservation and consumption reduction, we must first solve the problems of professional training of technical personnel.

3.3 Unreasonable Design of Air Conditioning and Exhaust Works

With the continuous improvement of urbanization, more and more building malls are pouring into the city. For example, Wanda Plaza, Victoria Plaza and other business district buildings, not

only facilitate people's lives, but also promote urbanization. HVAC is mainly reflected in the application of air-conditioning exhaust system in the construction of business district. Because of the large flow of people in these shopping malls, there are corresponding exhaust systems for heating, ventilation, toilets, apartments, etc. according to these building standards, HVAC is selected. Generally, the length of ventilation pipe is 60m, the section is 200mm * 200mm, and the wind resistance is relatively large. In addition, in order to save cost in toilet construction, some projects use roof fan to exhaust air, which will damage the original outdoor pipeline network, or some projects use ceiling type exhaust fan. Although the installation cost is saved, the cross-section of 10 meter long air duct is only 150 mm * 150 mm, and the exhaust effect is very poor. In view of this, the business requires the construction unit to clean the air and eliminate the odor while ensuring the temperature of the toilet, so as to prevent the odor self circulation caused by no fresh air supply. Therefore, the HVAC exhaust system is particularly important in the application of the market toilet.

4. Construction Methods of Hvac Professional Housing Construction

4.1 Number of Control Heating Inlets

Through the understanding of the HVAC plan, we learned that we should pay attention to the observation when we want to set the heating inlet reasonably, without marking the horizontal pipe diameter and positioning size, pipe model, number and distribution of radiators. Among them, when the owner repairs or replaces the heating inlet without permission, it shall be approved by the urban construction department, otherwise, they will be investigated for their responsibilities according to the relevant laws, which not only protects the rights and interests of other residents, but also ensures the living environment of urban residents. It is far from enough to control the number of heating inlets only through the establishment of relevant laws and treaties. In addition, we need to increase the publicity of new energy heating, change the previous traditional ideas, promote the awareness of new energy environmental protection and the understanding of the application of energy conservation and emission reduction, and on this basis, promote the charging according to energy-saving building standards and cold and heat. In addition, in terms of maintaining the application of HVAC infrastructure, maintenance personnel alone can only solve emergencies. In daily life, residents and neighborhood committees need to supervise each other and take the community as the main unit to jointly maintain HVAC infrastructure and reduce accidents.

4.2 Improve the Technical Level of Operators

Technical personnel are the key members in the process of engineering construction. If the technical personnel are not proficient in operation, it will cause serious consequences. Therefore, it requires the engineering unit to improve the quality of professional personnel and improve the poor understanding of professional knowledge of technical personnel. First of all, starting from the structural design, choosing the HVAC system reasonably and letting each employee learn different HVAC systems can not only enhance the practical operability of the employees, but also improve the professional quality of the technicians, so as to exercise the emergency response measures of the technicians in case of emergency and make them operate in an efficient state. Secondly, we should attach great importance to the assessment of professional knowledge and practical operation of technical personnel, strengthen the professional development training of the trainers on HVAC, and implement the reward and punishment system to encourage the trainees to participate in the enthusiasm, so as to make them better developed. Finally, in order to improve the professional quality, we must instill the responsibility system, let the employees be alert to their responsibilities and obligations, make the awareness of energy conservation deeply rooted in the people's hearts, so as to speed up the implementation of new energy in the actual work.

4.3 Optimize and Upgrade the Exhaust System

In the face of unreasonable design and installation of exhaust system, the HVAC exhaust system

should be optimized and upgraded immediately, and the corresponding unreasonable installation behavior should be punished. In the aspect of toilet air circulation, fresh air should be added to the fan coil. On the basis of heating and cooling with the original horizontal concealed fan coil, fresh air should be supplied to solve the problem of air circulation. In addition, in the aspect of water circulation, the water system of HVAC should be equipped with balance valve which is consistent with the pipe diameter of the air duct. After being calibrated by the calibrator, it should be placed on the return pipe, so as to save more water resources and optimize the exhaust system to the extreme. At present, in most HVAC engineering construction, most exhaust fan models do not conform to the corresponding air conditioning, so it will lead to poor exhaust effect or frequent damage of exhaust fan and other phenomena. Based on this, the main direction of optimizing the exhaust system should be the matching of the pipe setting and the machine, strictly control the random connection and overlap of the outdoor pipes, and do not damage the outdoor pipe network system because of cost saving.

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