Discussion on the Practice of Management and Maintenance of Chemical Machinery Equipment Technology

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Abstract: This paper analyzes the common problems in the process of chemical machinery equipment, including equipment corrosion, equipment scaling, equipment leakage, etc., combined with the management status of chemical machinery equipment technology, and the introduction of advanced operating technology, innovative technology management. Optimization measures such as mode, strengthening talent training management, strengthening supervision and management, and researching the maintenance ideas of chemical machinery equipment technology, aiming at raising people's awareness of chemical machinery equipment technology and promoting the stable development of the industry economy.

1. Introduction
The rapid development of Internet technology has improved the efficiency of all work. At the same time, the safety level of chemical machinery operations is also increasing. Because of the special nature of chemical equipment during its work, the maintenance and management of chemical machinery and equipment is a very important part. With the rapid development of science and technology, chemical machinery and equipment are also updated, so it is necessary to develop corresponding management measures for new equipment, thereby extending the service life of chemical machinery equipment and improving the safety level of chemical product production.

2. Frequently Asked Questions during the Use of Chemical Machinery Equipment

2.1 Equipment Corrosion Problem

| Cause of corrosion     | Environmental corrosion | Chemical corrosion | Corrosion of raw materials | Other corrosion |
|-----------------------|-------------------------|--------------------|---------------------------|-----------------|
| Corrosion statistical probability | 23.63%                  | 34.67%             | 25.36%                    | 16.34%          |

As shown in Table 1, equipment corrosion can be divided into four types of corrosion: environmental corrosion, chemical corrosion, raw material corrosion and other corrosion. According to Table 1, it can be seen that chemical corrosion accounts for the highest proportion of all corrosion types. This is because chemical machinery and equipment are mainly used to produce chemical products. In production, a large amount of chemical substances are required to be released. These chemicals will be used in equipment. Corrosion, long-term in this environment, will accelerate the corrosion rate of equipment, so its corrosion rate accounted for the highest, reaching 34.67%. The environmental corrosion is mainly the physical environment in which chemical machinery and equipment operate, including temperature and humidity, which will accelerate the corrosion of...
equipment. In addition, the raw materials for the production of chemical products are inherently corrosive, and chemical machinery and equipment will inevitably corrode during long-term use. According to statistics, at present, China's chemical machinery and equipment will increase the economic input by 10% every year due to corrosion problems, which is also a very important economic investment.

2.2 Equipment Scaling Problem
For equipment with high heat content, fouling is a common problem, which occurs mostly in chemical mechanical equipment for high-energy, high-heat material conduction. The resulting scale deposits contain a high degree of thermal resistance, which greatly reduces the heat transfer rate of the chemical machinery and the resistance to heat. At the same time, the thermal conductivity of the scale deposits is relatively poor, which directly leads to a decrease in the heat transfer efficiency of the chemical mechanical equipment.

2.3 Device Leak Problem
The problem of material leakage of chemical machinery and equipment is mostly caused by leakage of seals. The main reason is the improper operation of the construction personnel, unreasonable sealing and selection, equipment design defects, and equipment installation problems. Therefore, in order to completely prevent the occurrence of leakage accidents, the equipment should be inspected regularly, and the equipment parameters should be checked to ensure the safe operation of the equipment.

3. Management Status of Chemical Machinery Equipment Technology

3.1 Operating Technology is Relatively Backward
With the rapid development of science and technology, in order to ensure the normal operation of the equipment, the corresponding maintenance level must be improved accordingly, especially the lubrication and maintenance of the equipment is the key content. The professional skills of many maintenance personnel do not meet the corresponding standards. The professional knowledge and experience are relatively insufficient. The equipment fault cannot be accurately and accurately positioned, and it takes a lot of maintenance time. The problem cannot be solved in time, which directly affects the use of the equipment.

3.2 Management Mode is Relatively Lagging
Most chemical companies did not summarize the actual use characteristics of the equipment or occasional accidents and the corresponding management mode when formulating and managing the system, and then encountered some undocumented problems in the subsequent maintenance work. Miscellaneous diseases take a lot of time, and maintenance results cannot be guaranteed 100%.

3.3 Lack of Talent Training System
When many companies conduct equipment management, they only carry out simple equipment maintenance. However, the problems of many equipments are not analyzed in detail, which leads to many equipment operation problems in the long-term use process, because the glitch can not be repaired in time. It directly causes a lot of equipment operation problems, which has a serious economic impact on the enterprise. At the same time, there are obvious differences in the level of many technicians. Although enterprises will also train them, the difference in acceptance ability directly leads to the difference in the quality of work in actual operation, which in turn reduces the efficiency of chemical machinery equipment management.

3.4 the Supervision is Relatively Small
In the process of implementation of specific management work, because chemical industry equipment management involves relatively more content, in the implementation of management measures,
real-time supervision of the implementation process is required to ensure the implementation of the measures. However, in the actual operation process, because the department pays less attention to the work content, in the actual operation process, it is easy to happen that the management measures are greatly behind the actual operation process. Although some enterprises have set up supervision departments, they have little understanding of the implementation of each department. It is difficult to accurately grasp the specific implementation situation. As a result, many departments have misunderstood the specific implementation situation in order to escape the punishment and lead to equipment. The quality problems in the process of technical management are frequent, affecting the economic development speed of chemical companies.

4. Optimization Measures for Technical Management of Chemical Machinery Equipment

4.1 Introducing Advanced Operating Technology
In the case of chemical machinery and equipment with higher modern technical standards, the maintenance work on it has increased the more rigid requirements. First of all, according to the actual operation effect of the equipment, the corresponding management mode should be formulated to maximize the service life of the equipment, and the safety hazards should be reduced as much as possible. In addition, in the actual work of maintenance, the chemical environment and production of the plant should also be taken into consideration to ensure that all departments can coordinate and carry out.

4.2 Innovative Technology Management Model
Responsibility awareness is the basis for any activity. Innovation is an important guarantee to promote the economic development of the industry. In order to improve management efficiency, technicians need to actively introduce new management models. In the process of trial operation, managers need to collect measures to solve the problem in time. The problems arising from the analysis, analyze the economic impact caused by the current problems, sort all the problem weights, determine the relevance of the problem, and thus improve the effectiveness of the data analysis results, and improve the scientific nature of the management model. In the specific implementation process, managers need to conduct scientific analysis on the existing management mode, determine the update point of the current management mode, and also learn relevant management experience from advanced enterprises, and combine the current operating conditions to construct reasonable operational management measures to improve the effectiveness of equipment operation management will increase the economic efficiency of enterprises by 15% to 25%.

4.3 Strengthen Talent Management
By strengthening the management of personnel training, for one thing, it can reduce the occurrence of human error and reduce the operation effect of equipment, for another thing, technicians can improve the comprehensive ability level and improve the efficiency of equipment operation and management. In the specific operation, the company can organize employees to conduct training on a regular basis. The training is based on three aspects: responsibility awareness, theoretical knowledge and practical operation knowledge. The development of responsibility awareness can improve the stability of employees' daily work, and reduce the probability of running failures by 30% to 40%, thereby improving the stability of all equipment operations. Theoretical knowledge and practical operational knowledge are mainly operational measures that assist the stable development of chemical enterprises. Because chemical equipment has been in a state of renewal, it is necessary to update the technology in a timely manner, and select an effective management method to increase the equipment management efficiency by 35% to 45%, which can provide a good space for the economic development of the enterprise and obtain more social economy benefits.
4.4 Strengthen Supervision and Management
By strengthening supervision and management, on the one hand, it can speed up the implementation of relevant management measures. On the other hand, it can clarify the specific work content of each department and enhance the sense of responsibility of each department. In the specific operation process, the enterprise needs to sort out the relationship between all current equipment management departments. After determining its relevance, the management measures are implemented to each management department, and make a unified time schedule is established, in the expected time period to carry out relevant statistics, for example, when the expected implementation progress is 30%, statistics on the management of all departments, determine the difference between all departments and expected progress, and strengthen supervision for more backward departments to ensure the stability of the implementation of supervision measures. In addition, managers need to build a comprehensive evaluation system, use the percentage system to evaluate the work of all employees, replace managers who are not serious in time, and improve the stability of the use of chemical equipment.

5. Research on Maintenance Thoughts of Chemical Machinery Equipment Technology

5.1 Analysis of Maintenance Value of Chemical Machinery Equipment
Chemical machinery and equipment plays a very important communication bridge in the production process of chemical enterprises. Because all chemical products are inseparable from the operation of chemical equipment, the quality of equipment operation will directly affect the quality of product generation [1]. Therefore, in the specific production process, all managers need to attach great importance to equipment maintenance problems, ensure the stability of chemical machinery equipment operation, and thus improve the safety level of product production. At the same time, equipment maintenance can improve the value of maintenance, because equipment purchase costs cost, and its service life determines the economic value of the equipment. Under normal circumstances, maintenance and maintenance can increase the economic value of the equipment by 20% to 30. %, reducing business operating costs. In addition, equipment maintenance can also reduce economic cost investment, because the equipment will be affected by different factors in daily operation, and corresponding faults will be generated. By strengthening daily equipment maintenance, equipment operation failures can be found in time, and subsequent maintenance costs can be reduced by 50%. 70%, the side helps companies save the basic cost of equipment operation.

5.2 Routine Maintenance
Routine maintenance is the way to routinely maintain chemical machinery and equipment in daily work. The most important feature of this maintenance mode is that the maintenance frequency is very high. It is basically maintained once a day or every week. This maintenance mode can timely find problems in the operation of the equipment and minimize the impact of the fault. In the specific operation process, the technician needs to accurately count the equipment information. At the same time, in determining the accuracy of the data information, it is necessary to be checked by the successor to confirm that the inspection result has no problem, and then the next stage of maintenance is performed, if the maintenance process is in progress. If there is a problem, it will be the responsibility of the previous employee to improve the effectiveness of routine maintenance and repair [2].

5.3 Primary Maintenance
The first-level maintenance is mainly the stage of maintenance and maintenance of the equipment during the specified period. Under normal circumstances, the maintenance time of the equipment cannot exceed one month. During the maintenance of this month, the technicians need to record the working status of the equipment in detail, including Equipment running sound, running frequency, running status, etc. [3]. If the device has a noise during the operation, it will also represent a problem in the operation of the device. It is necessary to find the source of the noise to avoid the expansion of
the cause of the malfunction. The operating frequency is similar to the operating state, which can reflect the running problems of the current equipment. After completing the equipment-related records, the technicians need to objectively analyze the relevant data to determine the relevant factors that may affect the operation of the equipment, thereby improving the effectiveness of equipment maintenance [4].

5.4 Secondary Maintenance
The secondary maintenance refers to the maintenance mode of the equipment with a long span of maintenance. In general, the secondary maintenance cycle is between six months and one year, that is, the equipment maintenance time can be maintained once or twice a year. Although the maintenance time period is relatively long, all maintenance items are very important each time the equipment is maintained. The details include aging parts replacement, equipment precision adjustment, and new equipment assembly. The replacement of aging parts is relatively simple. The parts of the equipment have a fixed service life and will behave differently during different service lives. This replacement requires the replacement of parts with an aging degree of more than 80%, and the aging of the parts exceeds 50%. The parts are selectively replaced, and the unused parts are recorded to detect the use of the parts. In the process of using chemical machinery and equipment, there is a clear requirement for the accuracy of the equipment, because the accuracy of the equipment will directly affect the production quality of subsequent products, and may affect the safety of the equipment for some dangerous goods. Therefore, it is necessary to adjust the accuracy of the use of the device by means of a standard control object, thereby improving the accuracy of the use of the device. In terms of new equipment assembly, because of the continuous development of science and technology, the technicality of related equipment is also constantly improving. In this regard, chemical companies will also regularly update equipment, which requires the installation of new equipment, so the installation of the maintenance link new equipment is also very important. [5]

6. Conclusion
In summary, in the daily use of chemical machinery and equipment, in addition to doing a good job in related management, it is also necessary to strengthen equipment maintenance work. Due to various corrosion reasons, many mechanical devices will have different degrees of aging during use, which will affect the safety level of equipment use. In response to such problems, technicians need to pay attention to daily maintenance, count the aging of different equipment, and replace chemical production equipment in time to improve the stability of the operation of the enterprise.

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