

International Journal of Vocational and Technical Education

DECEMBER 2023 VOLUME 3 NUMBER 4

Publisher: ACADEMIC PUBLISHING HOUSE
Address: Quastisky Building, Road Town, Tortola, British Virgin Islands
UK Postal Code: VG1110

E-mail: editorial@ij-ce.com
www.ij-ce.com



ACADEMIC PUBLISHING HOUSE

CONTENTS

The Cultivation of Students' Language Abilities in Vocational English Language and Literature	1
<i>XuGuang Li</i>	
Exploring the Promotion of Administrative Management in Secondary Colleges of Universities from the Perspective of "Three Comprehensive Education"	4
<i>Ying Rui</i>	
Reform of Classroom Teaching Mode for Collaborative Production and Education in the Course Group of Mechatronics Integration System Design in Applied Local Universities.....	9
<i>Xiuhong Zhang</i>	
The Translation Problems of Hotel Brochures in the Northern Zhejiang Province from the Perspective of Skopos Theory	12
<i>Tong Wenjian, Gao Jinxia, Qian Xinyi, Yang Jun</i>	
Fault Analysis of Exhaust Valve of Ship's Main Engine.....	15
<i>Peng Chen</i>	

The Cultivation of Students' Language Abilities in Vocational English Language and Literature

XuGuang Li
De La Salle University, 0922, Philippines

Abstract: Under the concept of core literacy education, vocational college English teaching should not only focus on imparting basic English knowledge to students, but also on cultivating and developing their English subject literacy, in order to ensure the scientific and adaptive nature of vocational college English teaching. This article provides a detailed analysis and in-depth exploration of the cultivation of students' language abilities in vocational English language and literature, with the aim of sharing and exchanging ideas with relevant teaching staff.

Keywords: Vocational Education; English Teaching; Language and Literature; Language Ability

INTRODUCTION

Language ability is one of the core competencies of the English subject, which is a fundamental ability and quality that students must develop. Therefore, vocational English teaching should prioritize the cultivation of language ability to ensure that students can achieve better development in English. English language and literature mainly refer to the brilliant civilization crystallization created by the people of English speaking countries, which is a reflection of foreign ideas, spirit, and culture. Simply put, English language and literature is literary works written in English, such as Hamlet, Pride and Prejudice, Young Werther's Troubles, Anne's Diary, etc., which are relatively famous English literary works. the use of English language and literature in vocational English teaching to cultivate students' language abilities has a certain degree of compatibility and scientificity, which can help students truly master the ability of English communication and thus achieve good development in English.

1. THE IMPORTANCE OF CULTIVATING STUDENTS' LANGUAGE ABILITIES IN VOCATIONAL ENGLISH TEACHING

The application of English language and literature in vocational English teaching has played a role in promoting the development of students' English subject literacy, specifically:

Firstly, it is conducive to cultivating students' oral skills. the main purpose of learning English is not to

cope with various exams, but to use English for basic communication, so mastering spoken English is a very important thing. There is a significant difference between written English and spoken English, with more use of spoken English in daily communication. However, English teaching in China focuses more on written English teaching, which leads to weaker English speaking abilities of students [1]. Using English language and literature to implement teaching can provide students with rich conditions for learning and practicing English oral communication. Through English literature, students can understand the language communication characteristics of English speaking countries and master the ability of English oral expression.

Secondly, it is conducive to cultivating students' English translation ability. English language and literature are literary works written in English. When reading English language and literature works, students need to translate English into Chinese themselves in order to understand the thoughts, emotions, and other content in the literary works. In this process, students' English translation ability will be significantly improved, which plays an important role in improving their English language ability.

Thirdly, it is conducive to developing students' cultural literacy. Under the background of globalization, cultures of various countries around the world are gradually integrating. If vocational English teaching cannot be reasonably integrated into foreign cultures, even if students have mastered basic English knowledge, they cannot be reasonably applied in English communication. the application of vocational English language and literature in teaching can convey excellent foreign culture to students, which will help them form a broader cultural perspective and excellent cultural literacy.

2. THE PROBLEMS IN CURRENT VOCATIONAL ENGLISH TEACHING

2.1 Problems with teaching methods

Teaching methods are the key conditions that constitute teaching activities and one of the main factors affecting teaching quality. Teaching methods that meet the curriculum standards and the actual

situation of students often have higher teaching effectiveness and educational functions. the current teaching methods of English in vocational colleges face problems of singularity and dryness, which to some extent hinder the development of students' language abilities [2]. For example, many teachers are enthusiastic about using theoretical indoctrination teaching methods, repeatedly explaining English knowledge in textbooks to students, or requiring students to learn English by rote memorization. This not only fails to stimulate students' interest in learning English, but also fails to ensure the effectiveness of English teaching.

2.2 Problems in teaching philosophy

Teaching philosophy can directly affect the direction and goals of teaching, and is the cornerstone for teachers to design and organize teaching activities. There is a lack of scientific teaching philosophy in vocational English teaching, which is manifested in the following aspects: many teachers believe that language ability in English subject literacy can gradually form in students' long-term learning and later development, without the need for specialized language ability training measures. This kind of thinking has one sidedness and limitations, which can affect teachers' judgment of teaching direction and even affect their adjustment of teaching objectives, ultimately leading to a serious lag in the development of students' language abilities.

3. STRATEGIES FOR APPLYING ENGLISH LANGUAGE AND LITERATURE TO CULTIVATE STUDENTS' LANGUAGE ABILITIES

Based on the importance of English language and literature in cultivating students' language abilities, vocational English teachers need to find ways to apply English language and literature, create a more comprehensive and scientific English learning environment for students, and ensure the scientificity and adaptability of vocational English teaching.

3.1 Organize English language and literature exchange activities

Vocational college students face heavy academic burden and learning pressure, resulting in limited time and opportunities to read English language and literature works, which will not be able to fully utilize the language ability cultivation effect of English language and literature. Therefore, vocational college English teachers need to provide students with more abundant time for English language and literature appreciation, ensuring that students can draw high-quality "nutrients" from literary works. For example, teachers can regularly hold English literary works exchange meetings, allowing students to share recent or completed English literary works. the focus of the sharing can be on classic literary phrases, rich emotions, excellent ideas, reading experiences, and so on. Taking the classic sentences from Hamlet as an example, students stand on the podium and express

themselves in English, Hamlet: "The reason why kindness is powerful is because it requires a kind of human cultivation. It requires a noble character to make people believe that it is worthy of respect and praise." Other students try to translate this sentence and gain a deeper understanding of it. Through this process, students can improve their English translation skills and develop a good interest in reading Hamlet literature, which will be beneficial for developing their language and literary literacy.

3.2 Using multimedia to play English literature related film and television works

The lack of interest in reading English language and literature works among vocational college students is a major obstacle for teachers to implement teaching in English language and literature. Therefore, teachers need to attach importance to stimulating students' interest in literary reading, so that students can develop good reading habits and form excellent reading abilities. For example, teachers can innovate English language and literature teaching methods that interest students by combining their physical and mental development patterns and personality traits. This can stimulate students' interest in reading and cultivate their English language abilities. Teachers can use multimedia functions to display English literary works to students in the form of watching movies, but students need to translate independently based on subtitles and sound. This not only exercises students' English listening skills, but also enhances their English translation abilities, making them more efficient in English communication later on. Taking the Harry Potter film series as an example, after seeing novel and interesting movie plots, students can develop a strong interest in the literary works of Harry Potter. Some students can even resist the desire to read the original Harry Potter works. It can be seen that using multimedia to implement English language and literature teaching is conducive to stimulating students' interest in reading English literary works. This lays a solid foundation for cultivating students' English language abilities.

4 CONCLUSION

In summary, the application of English language and literature in vocational English teaching to cultivate students' language abilities is highly in line with the requirements of modern English subject teaching. the previous text mainly proposed relatively reasonable teaching strategies for English language and literature by organizing English language and literature exchange meetings and using multimedia to play English literary works related to film and television. It is hoped that this can help develop the language ability of vocational college students.

REFERENCES

- [1] Jin Yufang A Study on the Effect of English Language and Literature on Improving Basic Skills of

College Students [J]. Campus English, 2021, (27):61-62.

students [J]. Scientific Consulting (Technology ·Management), 2020, (03):51.

[2] Du Xueli the influence of English language and literature on the English acquisition ability of college

Exploring the Promotion of Administrative Management in Secondary Colleges of Universities from the Perspective of "Three Comprehensive Education"

Ying Rui

School of Mechanical Engineering, Nanjing University of Science and Technology, NanJing, Jiangsu province, 210094, China

Abstract: With the reform and innovation of education in China, the teaching methods of many disciplines have undergone tremendous changes. Among them, the education management work of universities is highly valued by everyone. Due to the attention of relevant education departments in China to ideological and political education in universities, ideological and political education work is gradually implemented through administrative management, adhering to the educational concept of "three comprehensive education" for all staff, the whole process, and all aspects, Promoting the gradual improvement of moral qualities among college students, in order to cultivate more successors and builders of Chinese socialism, the implementation of the "Three Comprehensive Education" educational concept can achieve the comprehensive development of the three education mechanisms of scientific research education, management education, and service education, covering the entire process, all aspects, and all channels of education. In this article, the author analyzes the feasibility of promoting administrative management in secondary colleges of universities from the perspective of "comprehensive education", and elaborates on the problems existing in promoting administrative management in secondary colleges of universities from the perspective of "comprehensive education". Finally, the author explores the implementation strategies for promoting administrative management in secondary colleges of universities from the perspective of "comprehensive education".

Keywords: Three Comprehensive Education; Universities; Second Level Colleges; Administrative Management; Discuss

To lay a solid foundation for the implementation of the "Three Comprehensive Education" in university management. Therefore, based on this situation, universities no longer rely solely on ideological and political teachers and counselors in the process of

implementing educational management work, but also need to make reasonable use of various educational resources to achieve the joint development of educational work by all teachers in universities, so that university students can experience the entire process and stage of ideological and political education in the school.

1. FEASIBILITY OF PROMOTING ADMINISTRATIVE MANAGEMENT IN SECONDARY COLLEGES OF UNIVERSITIES FROM THE PERSPECTIVE OF "THREE COMPREHENSIVE EDUCATION"

1.1 Secondary colleges are the fundamental units of educational and teaching management

In the process of implementing the concept of comprehensive education in universities, it is necessary to adhere to the concept of full process, full staff, and all-round education, ensuring that students are constantly learning and experiencing ideological and political content. Since the reform and opening up, the education and teaching management system in Chinese universities has undergone significant changes. Among them, the secondary management system within universities can not only help students achieve deeper education, but also is currently the main teaching management model advocated by universities. So, secondary colleges in universities are the foundation for cultivating talents, teaching management, and improving students' ideological and political literacy. Moreover, each secondary college has an independent and autonomous management model, which can not only create a good learning and cultural atmosphere for students, but also promote the continuous improvement of their comprehensive quality. Therefore, with the help of this environment, conditions, and foundation, universities can achieve better overall results and higher quality in the process of implementing the "three comprehensive education", and ensure the accuracy, timeliness, and criticality of the "three comprehensive education", laying a foundation for

the continuous improvement of students' ideological and political level.

1.2 The administrative management of secondary colleges is an important link in education

The educational concept of "Three Comprehensive Education" includes comprehensive education, which mainly refers to the scientific and effective use of various means, methods, and carriers by universities to achieve education work from various aspects, such as teaching, management, scientific research, etc., truly achieving comprehensive education in the "Three Comprehensive Education". As the main body for managing and educating students, secondary colleges in universities will directly face students in all aspects of affairs and content. Therefore, in the process of implementing the "three comprehensive education" education concept, it is necessary to strengthen the importance of education and teaching management in secondary colleges, such as conducting "three comprehensive education" education in administrative management, requiring secondary colleges to timely connect with other school level agencies and do a good job in various aspects of teaching management within the college. Make secondary colleges the hub of administrative management education for "comprehensive education", and promote close connections between colleges, schools, and students. At present, the education and teaching subjects in Chinese universities have undergone tremendous changes. Second level colleges are the key to implementing management and education in universities. It is necessary to start from the daily life and other aspects of students, so that students can understand ideological and political content from multiple dimensions and aspects. Therefore, second level colleges are an important link in implementing "comprehensive education" administrative management in universities.

1.3 Administrative personnel in secondary colleges are a key factor in educating students

In the process of carrying out the "three comprehensive education", universities should fully implement the educational concept of "all staff education". Not only should the education process fulfill the requirements of all staff education, but also gather the wisdom and strength of all employees to implement the work of moral education in universities from multiple aspects, laying the foundation for cultivating socialist successors, builders, and new era humanity. As an important link in implementing the "three comprehensive education", the management personnel in secondary colleges are also a key factor in implementation. Although administrative management personnel undertake specific tasks in the college, under the "three comprehensive education" concept, they have to undertake more work, and their responsibilities and functions are expanding. In this situation, the

professional ability and comprehensive literacy of administrative management personnel in secondary colleges are Personal qualities and other factors will directly affect the implementation effect of "three comprehensive education", and it will also allow students to intuitively experience the cultural atmosphere and teaching management status of secondary colleges, which has a great impact on the implementation of "three comprehensive education"[1].

2. THE PROBLEMS IN PROMOTING ADMINISTRATIVE MANAGEMENT IN SECONDARY COLLEGES OF UNIVERSITIES FROM THE PERSPECTIVE OF "COMPREHENSIVE EDUCATION"

2.1 The educational management concept and technology of secondary colleges are relatively backward

Against the backdrop of rapid economic and cultural development in our country, the management of education in universities also needs to keep up with the times and update and improve its concepts. However, currently, some secondary colleges still adhere to the principles of adhering to, respecting, and caring for students in their educational management. the influence of this management concept can greatly affect the ideological and political education of students. Therefore, in the process of implementing moral education, secondary colleges should actively understand the changing content of the times and transform their educational ideas and concepts. In addition, some administrative personnel lack understanding of the thoughts and behaviors of contemporary college students during the process of carrying out ideological and political education, leading them to rely mainly on their subjective experiences when dealing with certain affairs. This not only leads to outdated and outdated methods of ideological and political education, but also causes students to develop resistance, which has a great impact on the development and education of education work. In addition, various industries are gradually transitioning towards informatization, intelligence, and digitization. However, some secondary colleges in universities still rely mainly on traditional management methods and rarely use information technology for administrative management, such as online meetings within the college, transmission of archive information, and promotion of educational knowledge on the Internet. These are far from the digital and new media management needs of contemporary college students, resulting in the inability to achieve the expected effect of "comprehensive education"[2].

2.2 The administrative management system of secondary colleges is not perfect enough

At present, major universities are actively responding to the education concept of "three comprehensive education" proposed by relevant departments in

China, and fully implementing this concept and idea into university education and management. In addition, many implementation plans and management experiences have been introduced according to the requirements of "three comprehensive education". However, according to the implementation situation of secondary colleges, there are still some problems in implementation, supervision, and assessment. There are situations where the current situation does not match, such as poor integration effect, serious formalism, and poor policy implementation between traditional management mechanisms and "three comprehensive education" education management. In addition, for secondary colleges, administrative management work mainly focuses on enrollment, publicity, graduation, leaving school, internships, and other aspects. These work contents have a certain regularity, and have formed a complete process and system. Therefore, it is difficult to adapt to the development needs of the times, which is very different from the current stage of "comprehensive education"[3].

2.3 The role awareness of administrative personnel in secondary colleges is unclear

At present, in the process of implementing educational management and service education in secondary colleges of universities, there is a situation where their own role awareness is unclear. Administrative management personnel believe that they are only educational management personnel, and although they are also educators, it is difficult to understand the specific content of educational management and service education, resulting in impatience, inability to empathize, and inability to timely resolve conflicts between teachers and students in their management and service processes. This creates an disharmonious and unhealthy atmosphere for the secondary colleges, which has a significant impact on the implementation of the educational concept of "comprehensive education". In addition, there are also some administrative personnel who fail to solve problems in the management of teachers and students in a timely manner, such as neglecting, not asking, and accommodating, which can make it difficult to implement the management system of secondary colleges and result in poor effectiveness in promoting education work.

3. IMPLEMENTATION STRATEGIES FOR PROMOTING ADMINISTRATIVE MANAGEMENT IN SECONDARY COLLEGES OF UNIVERSITIES FROM THE PERSPECTIVE OF "THREE COMPREHENSIVE EDUCATION"

3.1 Strengthen organizational leadership and top-level design

In order to promote the better implementation of "three comprehensive education" education management in secondary colleges of universities, it

is necessary to comply with the policies, opinions, and requirements of relevant education departments to ensure the effective implementation of "three comprehensive education". Moreover, this can also achieve the mutual integration of party building work among various secondary colleges. In addition, universities also need to regularly organize teachers, students, and departments from secondary colleges to participate in ideological and political education. They not only need to work together to build an ideological and political environment, but also ensure the implementation of the educational concept of "comprehensive education"[4].

Secondly, it is necessary to gradually improve the requirements for the "three comprehensive education" construction based on the job requirements and characteristics of secondary colleges, and truly play the role of barriers in the administrative management process. In addition, universities should actively optimize the top-level design work of secondary colleges, such as optimizing talent cultivation models, operational mechanisms, etc., fully integrating the concept of full process, all staff, and all-round education in the "three comprehensive education" with administrative management, and building a good learning environment for students. Finally, in order to solve the complex problems and tedious content in the administrative management of secondary colleges in universities, it is necessary to strengthen attention to management departments at all levels and gradually improve the management system. This not only enhances the sense of responsibility of administrative personnel for "comprehensive education", but also enhances their consciousness and participation in "comprehensive education" education and management.

3.2 Improve the administrative management evaluation system

As a secondary college of a university, there are many aspects in the work process. It is not only necessary to face various people, but also to ensure the efficiency of each work content. For example, in the process of implementing the administrative education management work of "three comprehensive education", in order to ensure the educational effect and quality of "three comprehensive education", it is necessary to require the secondary college to develop a complete, standardized, and scientific evaluation system. To ensure the basis and organization of the "Three Comprehensive Education" education management work, such as improving the job evaluation system, refining assessment indicators, and regularly conducting mutual evaluation and self-evaluation of administrative management personnel, not only can the evaluation system and the "Three Comprehensive Education" education management work be effectively integrated, but also the situation of administrative management personnel can be

understood from multiple perspectives and aspects, laying the foundation for the effectiveness of the "Three Comprehensive Education". In addition, for some outstanding administrative personnel, spiritual and material rewards should be given. For some administrative personnel who perform poorly in evaluations, special attention should be paid to identifying the problems and requiring them to make timely improvements. Finally, some administrative personnel who fail evaluations and have issues with professional ethics and conduct should be severely punished to promote construction through evaluation. By continuously improving the administrative management evaluation mechanism of secondary colleges in universities, not only can it help them better implement the "three comprehensive education" management work, but it can also help secondary colleges gradually complete administrative management, personnel improvement, quality training and other content, laying a foundation for carrying out high-quality education and teaching work.

3.3 Enhancing the sense of identity of educational roles among administrative management personnel

As the basic unit for carrying out education, secondary colleges in universities are also the core of the entire ideological and political education. The administrative management personnel are the key factors in implementing ideological and political education and management education, which have a great impact on the implementation of education work. Therefore, based on this situation, it is necessary to strengthen the sense of identification of administrative management personnel with their own educational role. Firstly, in the process of daily management work, administrative personnel, due to their involvement in a lot of work content, must ensure their understanding of each work content and link in order to implement management work in various aspects, laying a foundation for ensuring the implementation of teaching, scientific research, and activity organization. In addition, the administrative personnel of the secondary college also need to do a good job in comforting various links and subjects. They not only need to scientifically and reasonably handle work problems, but also build a harmonious teaching atmosphere, laying the foundation for the "comprehensive education and management" of the secondary college [5].

Secondly, administrative management personnel should recognize their job responsibilities and fully exert their subjective initiative in carrying out "three comprehensive education" education and teaching. They should actively cooperate with the party organizations and full-time teachers of secondary colleges to jointly carry out "three comprehensive education" education. For example, through new media platforms, they can carry out online and offline "three comprehensive education" propaganda work.

During the implementation process, administrative management personnel of secondary colleges can, Not only should we actively communicate and exchange ideas with the new media department, but we also need to integrate ideological and political content, educational knowledge, and new media to build a new model of education. Moreover, secondary colleges also need to carry out educational and teaching training work, such as special lectures, exchanges, and typical demonstrations, to help administrative management personnel improve their abilities and levels, so that management personnel can truly play their role and value in the "three comprehensive education" education management work, laying a solid foundation for high-quality education work.

4 CONCLUSION

In summary, in this article, the author analyzes the necessity of promoting the administrative management of secondary colleges in universities from the perspective of "comprehensive education", which is the basic unit of education and teaching management, the basic unit of education and teaching management, and the key factor of education. Furthermore, the author points out that the educational management concepts and technologies of secondary colleges in universities from the perspective of "comprehensive education" are relatively backward, and the administrative management system is not perfect enough. Elaborate on issues such as unclear role awareness among administrative management personnel, and finally explore implementation strategies such as strengthening organizational leadership and top-level design, improving the administrative management evaluation system, and enhancing the educational role identity of administrative management personnel.

REFERENCES

- [1] Pan Liping A Study on the "Three in One" Model of Three Comprehensive Education in Zhejiang Universities from the Perspective of "Two Pioneers" Journal of Zhejiang Jiaotong Vocational and Technical College, 2022, 23(3):74-78.
- [2] Lei Lei, Deng Dun Exploring the teaching method of integrated traditional Chinese and Western medicine in obstetrics and gynecology based on the new concept of comprehensive education in universities Modern Distance Education of Traditional Chinese Medicine in China, 2022, 20(5):18-20.
- [3] Yang Zhihua, Gong Shenglan, Huang Shuanghong Practice and Exploration of Comprehensive Education in Applied Universities: A Case Study of Hunan University of Applied Technology Reading and Writing, 2021, 18(23):1.
- [4] Towards Linchuan, dragons soar Research on the Construction of the Three Comprehensive Education Mechanism in Universities Based on Moral

Education China Education Technology Equipment, 2020(4):61-62, 67.

[5] Wang Ruiqiang, Huang Lan A Study on the Practical Path of College Counselors Carrying out Extracurricular Aesthetic Education under the

Background of "Three Comprehensive Education" Research and Practice on Innovation and Entrepreneurship Theory, 2022, 5(5):53-55.

Reform of Classroom Teaching Mode for Collaborative Production and Education in the Course Group of Mechatronics Integration System Design in Applied Local Universities

Xiuhong Zhang

Taishan University, Taian 271000, Shandong, China

Abstract: With the development of the economy and the continuous improvement of social productivity, China's manufacturing industry, supported by economic and technological development, is gradually moving towards intelligent, green, and collaborative directions. At the same time, in the new development situation, the demand for talents in the manufacturing industry is increasing, and the requirements for talents are becoming higher and higher. For China's manufacturing industry, universities are the main source of talent, and the quality of education in universities often affects the quality of talent. Therefore, under new needs and requirements, universities should optimize their own teaching in combination with the development needs of local enterprises, and attach importance to the cultivation of high-quality talents. This article will analyze the classroom teaching mode reform of the collaborative production and education of the electromechanical integration system design course group in applied local universities.

Keywords: Applied Universities; Mechatronics Integration; Industry Education Collaboration

Against the backdrop of rapid development of science and technology, the production methods of the manufacturing industry have also been updated and developed. Under the strategic plan of "Made in China 2025", China's manufacturing industry is undergoing a transformation of production methods. In order for China's manufacturing industry to smoothly achieve the transformation of production methods and develop towards intelligence and efficiency, it needs the support of high-quality talent resources. High quality talents in the manufacturing industry are generally provided by universities. However, based on the current education situation in universities, there are still many shortcomings in the development of education, which affects the cultivation of high-quality talents. On the one hand, the knowledge system of classroom teaching content is aging and updating slowly, the lack of classroom

teaching process engineering makes it difficult to adapt to the current new talent needs. On the other hand, universities have not been able to carry out classroom teaching reform that integrates industry and education, and school enterprise collaboration in education. the teaching efficiency has not significantly improved, and it has not been able to meet the current industry's requirements for talent. Below, we will analyze the current situation of talent cultivation for engineers in the intelligent manufacturing industry and explore the reform of the classroom teaching mode for the electromechanical integration system design course group.

1. CURRENT SITUATION OF TALENT CULTIVATION FOR ENGINEERS IN THE INTELLIGENT MANUFACTURING INDUSTRY

1.1 The classroom teaching system is aging

Firstly, there is an aging knowledge system in current university education. the development of China's manufacturing industry is very rapid, and after the rapid development of manufacturing and industry in China, the manufacturing industry has entered the era of intelligence. the development of manufacturing industry can be said to be changing rapidly. However, the professional education content in current universities is relatively backward, and some professional content teaching still uses previous theoretical knowledge, For the current actual production, it is already relatively backward, and the teaching system of mechatronics system design course can no longer meet the needs of the current industry development. At present, many professional courses in universities also learn measurement methods and instruments, hydraulic and pneumatic components, and other content. These technologies are very rare in the current intelligent and digital production lines, and the technology has been updated and replaced. However, there is no new knowledge teaching in university professional teaching, which results in the content that students learn in school not matching the actual work content

in the future, Not only does it affect students' future employment, but it also affects the development of industries. In addition, there are still problems in the current teaching of mechatronics system design courses that are detached from actual production, the teaching cannot be combined with actual production, and the production scenarios created by teaching lack authenticity, making it impossible to achieve an integrated teaching of "teaching, learning, and doing". As a result, after studying in universities, students' professional abilities and qualities cannot meet the requirements [1].

1.2 The classroom teaching mechanism lags behind

On the other hand, the current classroom teaching mechanism for mechatronics system design courses is outdated and has not been able to achieve true integration of industry and education, and collaborative education between schools and enterprises. the education of Chinese universities has long been limited by traditional higher education mechanisms. In the process of teaching, the focus is on theoretical knowledge teaching, neglecting practical teaching for students, failing to align with current actual production work, and lacking cooperation with society, enterprises, and industries. In the process of teaching, most of the emphasis is on imparting theoretical knowledge to students, the teaching methods are relatively single, and students are in a passive position to learn in this teaching environment. Their practical and innovative abilities have not been effectively improved. However, the current new mechatronics knowledge system has strong applicability and comprehensiveness. If theoretical teaching is only regarded as the focus of teaching, the cultivated students cannot meet the requirements of the industry.

2. REFORM OF CLASSROOM TEACHING MODE FOR MECHATRONICS INTEGRATED SYSTEM DESIGN COURSE GROUP

2.1 A Teaching System for Intelligent Manufacturing Applied Innovation Talents Based on Engineering Ability

Firstly, the reform of the classroom teaching mode for the electromechanical integration system design course group should become an intelligent manufacturing applied innovative talent education system based on engineering ability. the construction of the teaching system should be based on the current industry needs and requirements, attach importance to the cultivation of students' engineering ability, and enhance their comprehensive professional literacy. On the one hand, outdated classroom teaching content should be updated, and universities should actively cooperate with enterprises to understand the latest production technologies and processes, summarize and extract advanced digital and intelligent production lines, equipment and processes, integrate advanced technical knowledge content into textbooks, and combine real and specific cases to enable students

to access advanced professional knowledge. On the other hand, in the process of teaching, it is necessary to attach importance to the development of practice and training, make up for the lack of practical cognitive ability of students, and use real engineering cases as materials to carry out simulated practical teaching [2].

2.2 A Curriculum Reform Model Combining Classroom Teaching with Production Practice

Secondly, mechatronics integration has strong professionalism. In order to deeply grasp its technical content, the integration of "learning, doing, and production" should be achieved in the process of teaching, and classroom teaching should be deeply integrated with production practice. Classroom course group teaching should focus on production practice, utilize the software and hardware resources of innovative enterprises that integrate industry and education, integrate practical production and product research and development into teaching, and enable students to "learn while doing" in the process of teaching, achieving a deep integration of theoretical knowledge and practice. Through this teaching method, students can correspond the basic principles they have learned with practical production, form technical thinking, and in the future, they can also apply their theoretical knowledge to cope with different production situations in the actual production process, greatly improving their practical and application abilities.

2.3 Extension of classroom teaching resources

Finally, classroom teaching resources should be expanded in an extended manner to enrich them. In order to cultivate comprehensive and practical talents, universities can treat workshops as classrooms, engineers as lecturers, and production equipment as training devices, so that students can truly be exposed to various aspects of the production process during the learning process. By directly conducting teaching within the enterprise, with engineers as lecturers leading students to learn theoretical and practical knowledge, true "face-to-face teaching" can be achieved. Students can truly "meet" with the production line, promoting deep integration of theory and practice among students. In order to achieve this teaching method, universities should actively carry out cooperation between industry and academia, and actively seek cooperation with enterprises.

3. CONCLUSION

In general, the reform of the classroom teaching mode for the design of mechatronics integrated system courses in application-oriented universities should reconstruct the talent cultivation classroom teaching system, focus on cultivating engineering abilities, reform the classroom mode, achieve the integration of "production, learning, and doing", and extend classroom teaching resources to allow the classroom to "enter" the production site, thereby cultivating high-quality talents that meet industry needs.

REFERENCES

- [1] Luo Guorong, Qi Jinfeng Research on the Innovative Talent Training Model for Mechatronics Integration Technology Majors in Vocational Colleges [J]. Guangdong Vocational and Technical Education and Research, 2023, (03):94-97.
- [2] Qin Liping, Wang Chao Analysis of the Achievements in the Construction of Mechatronics

Integration Technology Major in the Dual University Professional Group [J]. Journal of Wuhan Metallurgical Management Cadre College, 2022, 32(03):80-84.

The Translation Problems of Hotel Brochures in the Northern Zhejiang Province from the Perspective of Skopos Theory

Tong Wenjian, Gao Jinxia, Qian Xinyi, Yang Jun
School of Foreign Languages, Huzhou University, China

Abstract: With the development of tourism, the English brochures are provided in many hotels in order to adapt to the times and the needs of the market better. However, there are some translation problems in the brochures. Based on Scoops theory, this paper analyzes the English translation problems in some hotel brochures in the Northern Zhejiang Province, and discusses how to improve the translation quality of hotel brochures by improving the translation method.

Keywords: Translation Problems; Hotel Brochures; Skopos Theory

1. INTRODUCTION

In recent years, the tourism industry in the Northern Zhejiang Province has developed rapidly. During the “13th Five-Year Plan” period (2016 to 2020), the number of tourists in the region increased from 87.52 million to 112 million, and the total revenue of tourism increased from 88.2 billion yuan to 128.5 billion yuan, making tourism the second big industry that exceeds 100 billion yuan. Based on this situation, more and more hotels in the Northern Zhejiang Province have launched brochures in both Chinese and English, hoping to attract more overseas tourists and improve their images. However, the quality of English translation of hotel brochures varies, and there exist various kinds of translation problems. This paper discusses the problems existing in the C-E translation of hotel brochures from the perspective of Skopos theory and discusses how to improve them.

2. LITERATURE REVIEW

In 1978 The German translator Hans J. Vermeer first put forward Skopos theory in his paper Framework for a General Translation Theory to express the translation purposes. Skopos is the Greek word for “aim” or “purpose” and Hans Vermeer introduced it into translation theory as a technical term for the purpose of a translation and of the action of translating. He believes that the purpose of a text determines the translation strategies. He objects to the traditional equivalence-based theories, which speak of the source text, or its effects on the source

text reader, or the purpose of the source text author as a decisive factor in translation and raises the Skopos of the translation action to the center. Vermeer (2000) said, “translation is a human behavior”, “any behavior has a purpose”, and “translation is a purposeful behavior”. Therefore, translation is a discourse produced for a certain purpose and target audience in the context of the target language. According to Nord (2001), translation is a communicative activity, and “the translation purpose justifies the translation procedure and the end justifies the means”. And Bell (1989) states that translation is replacing a representation of a text of one language with a representation of an equivalent meaningful text in another language. In a word, according to skopos theory, the translation purpose determines the translation methods and strategies.

According to Vermeer, there are three rules in the Skopos Theory for translators to obey and there are Skopos rule, Coherence rule, and Fidelity rule. As Vermeer explains, the purpose of translation means translating process, translating result, and translation method. Coherence rule means that translators should consider the education background and actual state of target acceptors. the fidelity rule claims that the target text which translated from source text should be loyal to the source text. Of the three rules, fidelity rule is considered subordinate to coherence rule, and both are subordinate to the skopos rule.

In the 1990s, Skopos Theory was introduced to China. There is no doubt that Skopos Theory has brought a new perspective for translation studies. It has not only provided theoretical foundation for the translation practices, but also given the directive function on translation activities. Since then lots of reseaches have been done by applying it in translation and many academic articles have been published.

Zhu Wenfeng (2008) points out that the translation of the hotel brochures should not be always insisting on the equivalent of the words and sentences and the translation should meet the needs of the publicity materials. Guan Chunmei (2011) compares the

translation of Chinese and English hotel profiles through data analysis and puts forward corresponding translation strategies from the perspective of Skopos theory. Wang Shuang (2014) discusses the problems exist in the C-E translation of hotel brochures from the perspective of Skopos Theory. Tu Yangyang (2018) investigates 14 hotels in Fujian Province, makes an analysis of the hotel profiles and advocates adopting the Skopos Theory in the translation of hotel brochures. Ye Qin & Wang Jinxiang (2023) talk about the on-line C-E translation of Shangri-La Hotel in Hangzhou for the perspective of Skopos Theory.

3. ERRORS IN THE ENGLISH TRANSLATION OF HOTEL BROCHURES

Generally speaking, the quality of the English version of the hotel brochures has been improved in the recent years. However, there still exist various errors in the English translation of the collected hotel brochures, which is far from being satisfied and may bring about some misunderstanding.

3.1 Linguistic errors and solutions

Linguistic translation errors are the most obvious errors made by the translators, which are usually caused by the translators' carelessness, ill command of the source language and the target language, or other reasons (such as the mistakes in printing). For this kind of errors, they include mistakes in spelling, usage, expressions, and so on. And the following are some examples:

Example 1:

In the brief introduction of a hotel in Nanxun District, Huzhou, the opening sentences go like this:
"Dear Guest,
Welcome to XX Hotel."

It is obvious that there is room for improvement for the English translation. As we all know, countable nouns in English have singular form and plural form and generally speaking the singular form can not be used separately. So it can be improved as:

Dear Guests,
Welcome to XX Hotel.

Example 2:

In the brochure of one hotel in Anji County, there is the opening part like this:

"Dear Guests,
Thank you for chosen XX Hotel Anji."

There are two problems in the translation. the first one is about the usage of the word. Generally speaking, a noun or a gerund instead of the past participle should be used after a preposition. So from the grammatical perspective, the usage of the word *chosen* is not proper in the original translation. And the second one is about punctuation. In English, there should be a comma between a small place and a big one, like Beijing, China. So, a comma is omitted in the original translation between the word Hotel and Anji. Thus this sentence can be improved as:

Thank you for choosing XX Hotel, Anji County.

Example 3:

One of the hotel in Deqing County introduces its facilities in English online like the following:
"Fitness Centre located at 6F, where all facilities in the gymnasium are available for hotel guests 24 hours a day."

In the original translation, the article is omitted, the predicate is incomplete and the preposition is misused. Also some words are redundant. So the sentence can be improved as:

The Fitness Centre is located on the 6th floor, where all facilities are available for the guests 24 hours a day.

Example 4:

In a star-rated hotel in Huzhou, the introduction of the brochure during the Covid-19 contains some sentences like this:

"As you know during this special period, continue to wash your hands, wearing mask and not touching your eyes, nose... are one of many many import steps we have to take in our ever changing life style."

The translation seems a little out of order. From grammatical level, wearing mask and not touching your eyes, nose and we have to take can not be matched to the source text. From lexical level, the word import must be a mistake and it should be replaced by "important". And the phrase, continue to wash your hands, dose not convey the Chinese meaning faithfully. Moreover, the phrase "as you know" is redundant. Thus the sentences can be translated as:

During this special period, wash your hands frequently and wear a mask while going out. Please develop some good habits like not touching your eyes, nose, ... and so on.

Example 5:

In the brochure of the hotel in Changxing County, there is a sentence like this:

"Please kindly informed that hotel will conduct rooms renovation from 9th May 2022 to 9th August 2022, every day 9 am until 5 pm, the noise might caused. We apologized for any inconvenience which caused."

It is not difficult to find that this sentence is an imperative sentence, so it should start with a verb. But in the original translation, the verb is neglected, which makes the sentence have a grammatical problem. Besides it is customary in English to put the small time in front of the big one whereas the opposite is true in Chinese. the sentence, the noise might caused, also has errors. Firstly, a verb should be used after the modal auxiliary verb, might. Second, a conjunction should be used before this sentence to indicate its relationship with the previous sentence. However, this conjunction is missing. What's more, tense is also a problem as the past

tense makes the sentence both abrupt and unsuitable. So the sentence can be improved as:

Please kindly be informed that some rooms in the hotel will be renovated from 9 am until 5 pm during May 9th to August 9th, 2022, which might cause some noise. We apologize for any inconvenience caused.

3.2 Culture errors and solutions

Chinese and English are two different languages, so the customs and usage are different. For many foreign tourists, their knowledge about China is far from understanding everything they meet. So in the process of translating the hotel brochures, a translator is responsible for making the adjustment or explanation of specific terms in the Chinese culture, such as the names of historical people, the place of historic interest, etc. And the following example is from a hotel in Deqing County.

Example 6:

"In the west of Deqing stands Mogan mountain, one of the four major summer resorts. In the central part of Deqing lies the Xiazhu lake, which is the largest ecological wetland in Jiangnan."

Generally speaking, the English translation is good as the translator omitted many modified phrases of the Chinese version. However, it is not so good for the translation of "*Jiangnan*". Maybe in the cognition of the foreigners, it is a place similar to Deqing, or even a smaller place. Hence it does not consider the skopos rule. So it is better to translate it as "the southern of the Yangtze River".

4 CONCLUSION

Hotel brochures are regarded as the first card for the hotels as the guests can get to know their service and facilities by a glance. However, from analyzing the collected hotel brochures in the Northern parts of Zhejiang Province, there is still a long way to go in improving the quality of the translation. Many problems in the translation are linguistic errors while problems related with culture and other aspects are comparatively fewer. Therefore, the translator should pay more attention in the process of translation and adopt some appropriate translation strategies so that the readers can understand the hotel information much better and avoid misunderstanding.

ACKNOWLEDGEMENTS

This paper is partially supported by the Project of 202201125 of Huzhou University.

REFERENCES

- [1] Bell, R. T (1989). Translation and Translating: Theory and Practice. London: Longman, 1989.
- [2] Guan Chunmei (2011). Chinese-English Translation on the Star-rated hotel Brochures Based on Skopos Theory. Guide to Business, (21):102-103.
- [3] Jawad Kadhim Jabir (2006). Skopos Theory: Basic Principles and Deficiencies. Journal of the College of Arts. University of Basrah. No. (41).
- [4] Nord, Christiane (2001). Translation as a Purposeful Activity: Functional Approaches Explained. Shanghai: Shanghai Foreign Language Education Press.
- [5] Renuga Devi & Aditya Kumar Panda (2015). the Skopos Theory: A Heterogeneous Approach to Translation. American International Journal of Research in Humanities, Arts and Social Sciences, 9(3):281-283.
- [6] Tu Yangyang (2018). A C-E Translation Report on Fujian Hotel Profiles with Parallel Texts from Skopos Theory. Fuzhou: Fujian University.
- [7] Wang Shuang (2014). A Study on C-E Translation of Hotel Brochure from the Perspective of Skopos Theory. Changchun: Jilin University of Finance & Economics.
- [8] Vermeer, H. J (2000). "Skopos and Commission in Translational Action. " the Translation Studies Reader. Ed. Lawrence Venuti.
- [9] Xiaoyan Du (2012). A Brief Introduction of Skopos Theory, Theory and Practice in Language Studies, Vol. 2:2189-2193.
- [10] Ye Qin & Wang Jinxiang (2023). the on-line C-E translation of Shangri-La Hotel in Hangzhou, Literature and Art of the Masses, (14):108-110.
- [11] Zhu Wenfeng (2008). On the C-E Translation of Hotel Brochures from the Perspective of Skopos Theory. Guangzhou: Guangdong University of Foreign Studies.

Fault Analysis of Exhaust Valve of Ship's Main Engine

Peng Chen

College of Marine Electrical and Intelligent Engineering, Jiangsu Maritime Institute, Nanjing 200127, China

Abstract: Analyzing the faults of the hydraulic exhaust valve of the ship's main engine, the main influencing factors such as insufficient oil supply in the hydraulic system, abnormal operation of the air spring system, and oil leakage in the hydraulic system were identified. It was found that the abnormal noise of the exhaust valve was caused by the aging and failure of the high-pressure oil pipe and internal seals of the exhaust valve, resulting in excessive leakage and the failure and dirty blockage of the throttle screw at the top of the exhaust valve. Finally, the elimination method and daily maintenance points for abnormal noise of the hydraulic exhaust valve were proposed.

Keyword: Fault Analysis; Exhaust Valve; Ship's Main Engine

1. FAULT PHENOMENON

The main engine model of a certain wheel is MAN-B&W10L90MC, a DC scavenging diesel engine with a rated power of 43100KW and a rated speed of 82r/m, and a hydraulic exhaust valve. During the inspection by the engineer on duty, it was found that the exhaust valve of the NO. 3 cylinder of the main engine had abnormal noise, with a frequency consistent with the engine's speed. Additionally, the high-pressure oil pipe of the exhaust valve had a strong pulsation sensation, and there was oil leakage at the joint sleeve. After further inspection, it was found that the exhaust temperature of the cylinder was normal, and the pressure of the camshaft oil pump was normal. Although the exhaust valve had been working for 4000 hours, it had not yet reached the maintenance cycle. During the fault period, the sea was stormy and it was not possible to stop for inspection. After maintenance and use, the ship underwent maintenance as soon as it arrived at the port. It was found that the cam and air valve drive roller of cylinder NO. 3 were in good condition. the engineer replaced the sealing rings on the exhaust valve and high-pressure oil pipe thrust washer of this cylinder, and ultimately the exhaust valve of this cylinder returned to normal operation.

2. WORKING PRINCIPLE OF HYDRAULIC EXHAUST VALVE

The exhaust valve of the main engine of this ship is hydraulically driven, and the structural principle is

shown in Figure 1. the exhaust valve works by hydraulically opening and pneumatically closing. the hydraulic exhaust valve supplies oil to the hydraulic mechanisms of each cylinder through the camshaft oil pump through a check valve; the roller guide is in contact with the exhaust cam under the action of a vertical spring, ensuring that the roller on the roller guide moves together with the cam on the camshaft. the hydraulic cylinder on the camshaft is connected to the hydraulic cylinder on the hydraulic exhaust valve through a high-pressure oil pipe. the pressure oil comes from the main lubrication system and enters the cylinder through the check valve on the hydraulic cylinder. the oil leaked from the exhaust valve is discharged into the base of the hydraulic cylinder in the camshaft body through the connecting pipe.

When the roller driving the oil pump climbs on the upward surface of the exhaust cam, the exhaust cam pushes the piston driving the oil pump upward, causing the pressure inside the oil pump cylinder to increase and discharge liquid. Because the liquid is almost incompressible, the oil pressure discharged from the driving cylinder is almost simultaneously transmitted to the exhaust valve opening cylinder and continues to replenish the oil. the oil pressure in the valve opening cylinder and the replenished oil are pushed down by the piston at the top of the valve stem to push the exhaust valve down as a whole, and the piston of the air spring is driven down, causing the air pressure of the air spring to increase.

When the roller of the driving oil pump climbs to the highest point on the upward surface of the exhaust cam and starts to move up and down on the downward surface of the exhaust cam, the piston of the driving oil pump starts to move down, the pressure inside the driving oil pump cylinder decreases, and the oil in the air valve cylinder returns. the oil pressure inside the valve opening cylinder decreases and the oil returns to the driving oil pump. the exhaust valve is pushed up and closed by the higher air pressure inside the air spring, while being restrained by the oil pressure of the valve opening cylinder until the valve disc contacts the valve seat.

When the exhaust cam runs from the cam to the base circle, the oil pressure on the upper part of the hydraulic exhaust valve piston gradually decreases. Under the action of the pneumatic piston controlled

by compressed air, the hydraulic exhaust valve gradually closes. Compressed air is equipped with a check valve, a safety valve is installed on the lower side of the cylinder block, and is connected to the relief valve through a port. When the exhaust cam moves from the base circle to the cam, a high oil pressure is generated by the hydraulic drive pump of the exhaust valve driven by the camshaft, which acts on the hydraulic piston and opens the hydraulic exhaust valve. At the same time, due to the closure of the air supply one-way valve, the air in the buffer air chamber is compressed into an "air spring" to accumulate energy, preparing for the closure of the hydraulic exhaust valve. the hydraulic piston is equipped with a damper to damp the closure of the hydraulic exhaust valve and prevent knocking sound when the hydraulic exhaust valve is closed.

3. FAULT CAUSE

3.1 Insufficient fuel supply: This may be due to the presence of air in the oil, insufficient supply pressure, or high oil temperature. If there is air in the oil, adjust the closing pressure of the relief valve at the top of the hydraulic exhaust valve to be higher than the pressure of the camshaft oil pump to ensure normal bleeding of the camshaft lubricating oil. Now, the hydraulic exhaust valve of the new host has been changed to a throttle bolt type, $\Phi 0.77\text{mm}$ hole should not be blocked; If there is a certain amount of air in the lubricating oil, causing the pressure in the hydraulic system to form a vacuum, causing air to be sucked in from the vent valve, the exhaust system can be modified so that the vent valve is always immersed in the oil; To improve the bleeding situation of the camshaft oil main pipe, connect the camshaft oil main pipe to the bleeding pipe on the top of the sprocket box cover. the bleeding of the oil main pipe is through a throttling nozzle. When the main engine is in standby, the camshaft needs to be turned to release air from the hydraulic system. If the oil supply pressure is insufficient, adjust the lubricating oil pressure of the cam pump to 0.25-0.30Mpa. the oil temperature is too high, adjust the inlet oil temperature of the camshaft oil to 40-50 °C.

3.2 The air spring system is abnormal: it may have a high supply pressure, a faulty safety valve, or a malfunction. the gas supply pressure is generally maintained at 0.7 Mpa, otherwise the gas supply pressure is too high, causing the valve to be knocked when it is seated. Adjust the pressure of the safety valve to 2.1 Mpa, otherwise air leakage may occur.

3.3 Hydraulic system leakage: the oil cylinder on the camshaft and hydraulic exhaust valve side (due to the broken piston ring, the piston ring is severely leaking, and using an S-shaped lap piston ring can effectively improve the leakage). Confirm the tightness of all hydraulic pipeline joints in the hydraulic exhaust valve system. If the hydraulic pipeline is not installed correctly, it will cause a large amount of leakage on the joint surface between the hydraulic pipeline and

the driver cylinder. Due to the fact that leaked lubricating oil can flow into the drain hole in the driver through the gap between the hydraulic pipe and hose, the oil leakage cannot be seen from the outside and may be mistaken for correct installation. In view of this, it is necessary to carefully inspect the installation and fastening of hydraulic pipes, especially when disassembling hydraulic pipes. During installation, the size of the distance block in the hydraulic pipe and the end face of the hydraulic pipe should be carefully checked to ensure compliance with the drawings.

The valve seat of the cam side cylinder safety valve or the sealing between the valve and the housing, as well as the failure of the inlet valve stem or poor sealing of the check valve, require grinding or replacement. the hydraulic pipe joint is not tightened evenly or damaged, and needs to be tightened or replaced. the throttle piston at the top of the exhaust valve is blocked and the air outlet is blocked, which needs to be cleaned and opened.

4. FAULT ANALYSIS AND TROUBLESHOOTING

After a comprehensive inspection, it was found that there was a large accumulation of lubricating oil in the lower part of the pneumatic cylinder of the exhaust valve, and the appearance of other components was basically normal. the sealing between the pneumatic piston and the valve and rod mainly relies on rubber rings, while the sealing between the pneumatic piston and the cylinder wall relies on sealing components. the pneumatic piston and the cylinder wall are in relative motion, and slight oil leakage is acceptable, which can provide a certain degree of lubrication. However, if there is too much oil accumulation in the lower part of the pneumatic cylinder, as the liquid can hardly be compressed, when the exhaust valve is opened, the hydraulic system will produce a "knocking" sound due to the increase in pressure on the exhaust valve. If this situation persists for a long time, it may cause fatigue damage to the starting piston, servo device rollers, and exhaust cam. If the safety valve operates normally, its setting

5. CONCLUSION

In the main engine components of ships, the working conditions of exhaust valves are very poor and are prone to malfunctions, making them the focus of daily maintenance and management work for engineers. If there is a "knocking" of the exhaust valve, it can cause wear and tear on the exhaust valve and valve seat. In severe cases, the exhaust valve may break and fall into the cylinder, causing damage to the cylinder liner and piston, and even causing major accidents of damage to the main engine. the working condition of the exhaust valve affects the safety performance of the main engine, so the engine duty personnel should closely monitor its oil temperature, oil pressure, flow rate, etc., regularly dismantle and inspect the exhaust

valve, regularly clean the filter, check the sealing of the lubricating oil system, etc., improve management skills, and ensure the safety of ship navigation.

REFERENCE

- [1] Zhou Zhuojian Treatment of Slow Closing of a Certain Wheel Exhaust Valve and Analysis of the Main Engine Working Curve [J]. Navigation Technology, 2022(3):41-43.
- [2] Dou Tianjun Analysis of the SLOW DOWN Fault Caused by the Exhaust Valve Fault of the Main Engine [J]. Navigation, 2019(6):57-59.

- [3] Zhang Yulong Treatment and Prevention of Causes and Slow Closing of Exhaust Valve Knocking on a Main Engine of a Certain Ship [J]. Navigation Technology, 2019(4):76-79.

- [4] Sun Liyun Troubleshooting the short stroke of the exhaust valve on the main engine [J]. Navigation Technology, 2019(6):32-34.