Research on the Construction of Aviation Materials Industry College under the Background of New Engineering

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Abstract. The construction of new engineering is the direction of my country engineering education reform based on the new requirements of my country's strategic development, the new situation of international competition and the new requirements of Lide Shuren. An important carrier of the docking industry chain, aviation materials are an indispensable part of the aviation industry. This paper takes the College of Aeronautical Materials Industry under the background of new engineering as the object, and takes the College of Materials Engineering of Xi'an Aeronautical University as an example to study its construction content such as talent training mode, in order to provide reference and reference for the school to carry out the construction of new engineering.

Keywords: New engineering, Aeronautical materials, Xi'an Aeronautical University, Industrial college.

1. Introduction

The construction of new engineering is a major action plan to continuously deepen the reform of engineering education from the perspective of serving the national strategy, meeting industrial needs and facing future development in response to the challenges of the new economy. The construction of new engineering has the characteristics of reflecting the characteristics of the times, new and rich in connotation, multi-disciplinary integration, multi-subject participation, and wide-ranging involvement [1]. Industrial colleges refer to the establishment of a number of colleges with distinctive features and close ties with the industry in order to cultivate high-quality applied talents, compound talents and innovative talents who adapt to and lead the development of modern industries, focusing on applied colleges and universities. Industrial colleges that are jointly built, managed and shared by multiple entities such as industry enterprises [2].Through this platform, the school has established a closer cooperative relationship with scientific research institutes and enterprises, implemented a targeted and diversified talent training model, built enterprise workshops, R&D laboratories, and service centers into high-quality practical teaching bases, and transformed university engineering The center, key laboratory and scientific research platform have built an important platform for enterprise technology development, and truly realize the seamless connection between industry and enterprise needs and school teaching and scientific research and talent advantages, and build a new model of talent training that matches the teaching and scientific research process with the production process of enterprises and social employment positions. Xi'an Aeronautical Institute is a full-time general institution of higher learning with a focus on engineering and coordinated development of multiple disciplines. The school insists on the integration of production and education, school-enterprise cooperation, and collaborative education as the inevitable way to cultivate applied talents. According to the needs of Shaanxi's regional economic and social development and the development of local aviation industry for professional structure and talent specifications, according to the school's training orientation of applied talents, and relying on the background of our school's aviation characteristics, we will focus on highlighting applications, strengthening capabilities, focusing on innovation, and highlighting characteristics. In principle, this paper proposes to build an aviation material industry college under the background of new engineering, and conduct research on the school's talent training mode and curriculum system construction, in order to provide reference and reference for the school to carry out the construction of new engineering.

2. Research status and background

At present, the research on industrial colleges in my country is still in an exploratory stage, and the research on aviation materials is even less. According to the literature, in the new economic era, the aerospace materials industry college is a domestic and foreign material professional industry-education integration and school-enterprise cooperation. This new organizational form has not yet reached a certain theoretical consensus on the basis and law of its emergence, operation and development. At the same time, researchers are less involved in the research on the connotative development of the Institute of Aeronautical Materials Industry. Under the background of new engineering and production, there are certain deficiencies in the College of Aeronautical Materials Industry, such as the low level of teachers, insufficient participation of enterprises, and weak training ability of students. The School of Materials Engineering of Xi'an Aeronautical University was established in 2015. Since the establishment of the school, the school has attached great importance to the development of industry-university-research work under the background of new engineering, and has always strengthened the construction of social practice bases and practice bases. relatively fixed practice base. By carrying out employment and entrepreneurship competitions and vocational skills training, creating an atmosphere of employment and entrepreneurship, helping the majority of young students to establish a correct concept of career choice and improve their employment skills. At the same time, social practice is incorporated into the talent training program. Social practice credits are included in the formulation of talent training programs. According to the different grades of students, the corresponding teaching practice content is arranged. The School of Materials Engineering of Xi'an Aeronautical University can well implement the school's school-running orientation, establish a university based in Shaanxi, and serve aviation for development. Taking advantage of the unique industrial advantages of Xi'an Yanliang National Aviation High-Tech Industrial Base, focusing on serving the national strategy, Shaanxi regional strategy, facing the aviation industry and solving local economic and social development. Facing the aviation industry, a "five-in-one" talent training model with strengthening capabilities as the main line has been constructed, with the talent training goals of "highlighting applications, strengthening capabilities, focusing on innovation, and highlighting characteristics", and established a system based on industry-education integration and school-enterprise cooperation. Talent training mode innovation experimental area. The college currently has three university-level scientific research platforms: the Absorber Materials and Stealth Technology Laboratory, the New Materials Research Institute and the Materials Testing Center (with CNAS qualification). Establish school-enterprise cooperation with Xi'an Haosen Precision Casting Co., Ltd., Xi'an Kangben Materials Co., Ltd., Xi'an Jiaye Aviation Technology Co., Ltd., Shaanxi Aviation Precision Alloy Co., Ltd., Xi'an Alco Composite Materials Research Institute and other enterprises, and establish mutual research and development center. It can be seen that it is feasible to set up an aviation material industry college in the material engineering college of Xi'an aviation college, and it also meets the needs of the development of Yanliang aviation base. In short, as an application-oriented undergraduate college, the construction of an industrial college can not only meet the needs of industry-education integration, school-enterprise cooperation, and transformation and development, but also meet the national engineering education certification standards. At the same time, it can also break through concepts and innovate operations Mechanism and training mode.

3. Construction of Aviation Materials Industry College

Based on the practical and theoretical basis of the existing talent training model of the School of Materials Engineering, combined with the needs of the aviation material industry, a new material industry school construction model with multi-party collaboration and combination of virtual and real is proposed. The Aeronautical Materials Industry College is guided by the industrial needs and takes the professional direction as the breakthrough point. On this basis, starting from the cooperation with enterprises, comprehensively analyzes the influencing factors of the cooperative enterprises and the

Aeronautical Materials Industry College, and determines the suitable one for Xi'an Aeronautical Institute. cooperative mode. Determine the professional attributes of the Aeronautical Materials Industry College, strive to establish an Aeronautical Materials Industry College with the characteristics of Xi'an Aeronautical Institute, ensure the multi-party collaborative training of applied talents, and realize the deep integration of industry and education.

4. Conclusions

This paper takes the establishment of a new material industry college in the School of Materials Engineering of Xi'an Aeronautical University as the research object, focuses on the integration of production and education and school-enterprise cooperation, aims to cultivate applied talents, and adapts to the talent needs of the aviation material industry as the scope. Combined with practice and other methods to carry out research. The research of the Institute of Aeronautical Materials Industry can innovate and improve the multi-party collaborative education mechanism and improve the teaching quality of materials majors. It can continuously improve the training objectives of our school to cultivate applied talents, and accelerate the cultivation of applied technical talents. It can provide guarantee for the supply of qualified professionals for aviation material enterprises, and at the same time provide a valuable reference for the training mode of cultivating "innovative, compound, and applied" high-level skilled talents.

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