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THE ANALYSIS OF THE FIRST INTERNATIONAL ENGINEERING MECHANICS CONTEST (ASIAN REGION)

The First International Engineering Mechanics Contest (Asian Region) was successfully held at Hohai University, Nanjing, Jiangsu from January 21 to 24, 2019. In this paper the concept of the International Engineering Mechanics Contest (Asian region) holding and results of such first International Engineering Mechanics Contest are provided.

Keywords: Mechanics Contest, Asian Region, Hohai University.

Introduction. Mechanics is the traditional dominant discipline in the Russian Federation, and the main mechanics courses in China mostly follow the mechanics curriculum system of the former Soviet Union. The International Engineering Mechanics Contest held in Gomel for 15 consecutive sessions, Belarus, was co-sponsored by a number of universities of the Russian Federation. More than 200 students from more than 40 famous international universities from Russia, Belarus, Poland, Ukraine, Turkmenistan, China and other countries compete each year.

The contest includes the competition in engineering mechanics (in statics, kinematics and dynamics). Participating in this contest is of great significance for strengthening the contact and communication between undergraduate mechanics course teachers and international famous universities, and expanding the international visions of students. From 2019, the International Engineering Mechanics Contest (Asian region) has been held in the Hohai University, China.

The Concept of Asian contest. Before discussing the concept of the International Engineering Mechanics Contest (Asian region), there should be presented the history of the International Engineering Mechanics Contest in China. To the best of our knowledge, in 2014, it was organized the first team who attended the International Engineering Mechanics Contest which was held in Gomel. In that contest, there were only two teams from China: the first one was from Hohai Uni-

versity and the second one – from Shanghai University. That is the first time when the students from China attended this International Engineering Mechanics Contest. From then on, students from Hohai University attended this contest every year. And totally, the students from Hohai university have four gold medals until now. However, there were only several teams from China.

In order to enable more colleges and universities in China to participate in this competition, and to exchange the level of teaching in international platforms the teachers from Hohai University suggested to hold the Asian region contest. Through friendly consultations, the organizer of the competition, Belarusian State University of Transport, has authorized Hohai University to organize the International Engineering Mechanics Contest (Asian region) in 2018. The Asian region competitors are awarded separately according to the proportion of the participating teams, and the winning university is eligible to participate in the International Engineering Mechanics Contest held in Gomel.

In order to organize the Asian contest, there was invited Professor Si Yuan who is the head of the Teaching Steering Committee of Basic Mechanics Course of the Ministry of Education of China and the vice-president of Tsinghua University, as one of the directors of the Contest committee. Hohai University also invited a group of teaching experts on mechanics, such as President Ye Zhiming, Professor Zhou Youhe, as vice directors and the committee members. The first competition in the Asian region was warmly responded by universities all over the country, with more than 300 students from 48 universities applying for the competition. Among them, there are ten universities of 985 projects and fourteen universities of 211 projects. In addition, there are two colleges and universities from the China Taiwan region. The first International Engineering Mechanics Contest (Asian Region) was held at Hohai University, Nanjing, Jiangsu from January 21 to 24, 2019.

The features of the Asian region Contest. The Asian contest keeps the same type [1] as the one organized in Belarusian State University of transport which consists of the individual engineering mechanics (including statics, kinematics and dynamics) contest and the “Brain-ring” one. The language of the contest problems is English, and the solution to the problems is also required in English.

The contest is divided into individual and team contests. The students should answer eight problems in individual contest, including two statics problems, two kinematics problems and four dynamics tasks for which 4 hours are provided. In the team contest, the team is composed of three students and they need to solve 30 blank-filling questions, including each ten questions of statics, kinematics and dynamics separately. The competition time is one hour, and 3 team students should cooperate with each other.

Number of Participants and Awards of the Asian region contest. The number of students and supervisors should be equal or less than nine and equal or more than three for every university. All students are required to participate in the individual contests. Team contest is for a team of three participating students and

it is encouraged to have a mixed team of students from different universities. There are individual awards, team awards and group awards in the contest.

The individual award is ranked according to the results of the student individual contests. And the special prize, first prize and the second prize are set up according to 10 %, 20 %, and 30 % of the total number of students participating in the contest. The team award is according to the overall team results ranking. About 10 %, 20 % and 30 % of the total team number are awarded by the special prize, first prize and the second prize correspondingly. The group award is ranked according to the total results of the top 3 students of the participating schools. And about 10 %, 20 % and 30 % of the total number of participating universities are usually awarded by the special prize, first prize and the second prize.

According to the ranking of group awards, no more than 6 universities are usually recommended to participate in the International Engineering Mechanics Contest held in Belarusian State University of Transport, Gomel, Belarus. And after the first international engineering mechanics contest (Asian Region), Hohai University, Huazhong University of Science and Technology, Southwest Jiaotong University, Nanjing University of Aeronautics and Astronautics, and Lanzhou University were recommended to attend the international contest which was held in April of 2019 in Belarusian State University Transport.

Conclusion. Participating in the Asian contest is of great significance for the strengthening of the communication between undergraduate students and the academic staff. Furthermore, it will promote the creation of the "double first class" initiative in China.

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АНАЛИЗ ПЕРВОЙ МЕЖДУНАРОДНОЙ ОЛИМПИАДЫ ПО ТЕОРЕТИЧЕСКОЙ МЕХАНИКЕ (АЗИАТСКИЙ РЕГИОН)

Первая международная олимпиада по теоретической механике для Азиатского региона была успешно проведена в Университете Хохай (Нанкин, провинция Цзянсу) с 21 по 24 января 2019 года. Описана концепция проведения состоявшегося конкурса, а также представлены результаты Первой международной олимпиады по теоретической механике для Азиатского региона.

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