

International Students Olympiad in Hot Bulk Forging Technologies, April 2017

Students of mechanical engineering are invited to take part in the International Students Olympiad in Hot Bulk Forging Technologies, which will take place in April, 2017 at universities around the world.

The competition between students will consist of the following parts: participating students will get a drawing of an axisymmetric part after machining and should design the hot forged part and die impression for the final forging and then determine the necessary technological chain for its manufacturing and then simulate the proposed forging process. Since this year students can choose alternative task for developing technological process of hollow aluminium profile extrusion. Simulation will be performed in QForm software for estimation and verification of the developed technology.

Organizers are asked to submit a competition entry with a list of applicant students. If the local organizer invites students from multiple universities then each university is limited to 3 participating students so if more are interested in participating, then each university must pre-select the 3 most qualified participants. If only one university is involved with a local organizer, then more than 3 students may participate. On the day of the event in April 2017 competing students should arrive to their assigned class room and each student will work on a personal computer with QForm simulation and CAD software installed and will have 6 hours to design the technology, to simulate it and to create a report using text editor such as Microsoft Word. Student reports should include calculations and justification of the proposed technology, applications and drawings in text file as well as the saved QForm FE-simulation file. Each report will have special random number to achieve fair and unbiased judging. The results will be judged by each Internal Committee member and by the Olympiad Operator. Winners will get diplomas and prizes. Then the 1st place winners from each country will move on to the International Committee judgment between countries where the three best student reports from around the world will get special diplomas and prizes.

The designed technology will be judged by following criteria:

- computation of the hot forging part drawing;
- justification of designed bulk forging technology;
- effectiveness and efficiency of the proposed technology based on the results of simulation in QForm. The optimally designed technology should provide no defects, complete filling of the die impression, consist of a minimum number of technological chain steps with high forging energy efficiency and high material consumption efficiency with optimal grain flow.

Basic language of the Olympiad is English. Each Organizer may use different languages for reports but the students' reports for International Committee judgment have to be translated into English.

Deadlines:

Competition entry from university: March, 2017

List with applicant students: March, 2017

Additional conditions:

All universities taking part in the Olympiad will get a free 3-month network QForm software license for 3 places to practice before the Olympiad by request. The universities will also get the solved example from the previous Olympiad for review as well as a training course of simulation in QForm.



AGH



International Committee

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