

## FAQ - Frequently Asked Questions guide

### 1) Is participation of Ph.D. candidates (graduate students) possible?

No. Only undergraduate students are invited to participate.

### 2) Organizers will send the drawing of the part after machining on the day of the competition. Students will have to appoint allowances, draft angles, fillet radiuses, land and gutter parameters etc. based on norms and prepare a drawing of the hot forged piece. Will the organizers send necessary norms, instructions or tables with tolerances?

No. Student can use the methods and norms which are used in their universities.

### 3) There are more than 3 students at our university who would like to compete in the Olympiad. What should we do?

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.

### 4) Students will have to design the drawing of the hot forged piece, create the 2D-geometrical models of the dies, to simulate the forging process and to prepare a report with calculations and simulation results. What software can be used?

Any available CAD-System can be used for creating of 2D-geometrical models.

There are also free alternatives available: for example - DraftSight:

(<http://www.3ds.com/products-services/draftsight-cad-software/free-download/>). 2D geometry for simulation has to be saved as dxf-files.

Any office software can be used for creating of reports. The report has to be saved as DOC-file.

It is very important that all students use the same software for FE-simulation so QForm software has to be used for simulation of the forging process. Each student can very quickly learn how to simulate the forging processes in QForm.

### 5) Can students install the programs on and use their own personal laptops?

Yes, if it is more comfortable.

### 6) Can you send me an example of task for students?

An example of a report from the previous Olympiad will be sent to all registered participants.

### 7) What material model (flow stresses etc.) do the students have to use in simulation?

We will provide Olympiad students the necessary models. The flow stress is from TU Bergakademie Freiberg, Institut für Metallformung (Germany) that has a vast experience in experimentation of deformed materials and definition of flow stresses.

### **8) Is a computer performance important for simulation?**

No. Computer performance for 2D-Simulation in QForm V8 is not very critical. 2D simulation with default FE-mesh parameters and time step size can be completed on a modest computer in just a few seconds.

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### **9) Will students be allowed to use additional literature during students Olympiad?**

Yes. The students can use any books and online materials.

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### **10) Who controls and accompanies the students during Olympiad?**

One representative of the Organizer University and one independent representative from QuantorForm Ltd. or other university will oversee students at the Olympiad.

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### **11) How will the Olympiad proceed?**

- On the day of the Olympiad, the University-Organizer will get the task from the Operator, QuantorForm Ltd.;
- The students will have 4 hours for Olympiad task execution. At the end of Olympiad, students have to turn in their reports to Organizer;
- The Organizer has to send all reports in one email to QuantorForm Ltd. So that the Operator will get an archive with works from all Organizers and will be able to control the checking procedure;
- The Organizer has to check all reports with help of Operator or other universities and decide the winners (three first places) in the country;
- Only the best work (first place) has to be translated in English and sent to Operator. Operator will also get the best works from other countries for review;
- The international committee will decide the international winners of Olympiad.