

Thor's Hammer Cast in Steel 2021



Questions:

What defines something as a Thor's Hammer?

As in past Cast in Steel competitions, one of the tasks of the competing team is to explain design decisions in the technical report. Each team is expected to make their own version of Thor's Hammer. Include how the options were investigated and what determined the attributes of their entry in the report.

Why an upper weight for the hammer of 6 pounds and 20 inches?

Thor's Hammer is a one-handed hammer and 6 pounds is near the upper limit of one-handed hammers. The 20 inches length also makes this limited to a one-handed hammer.

What tests will be used to evaluate the entries for performance?

Like past competitions, the tests are not disclosed so each entry needs to be capable of any task that would be typical for a Viking Thor's Hammer.

Is the definition of Thor's Hammer limited to Viking mythology or could it be defined by the Marvel Comic design or other representations?

Each team is free to use whatever definition that they choose. Students need to explain their rationale and the design will be tested for performance. The hammer needs to be capable of ordinary tasks.

Why are there so few requirements and guidance on the testing?

The Cast in Steel competition is designed to allow teams to creatively produce innovative designs using casting processes and, to produce a unique and capable item.

Hints:

The comic version of the Thor's Hammer has a large head but a 6 pound limit makes a solid hammer head smaller. This can be overcome with an innovative casting design. The hammer head could be hollow with adequate thickness on the faces or it could be a truss structure between the two faces with rings for the handle. The hammer head could be completed by casting in a lighter metal or using some other filler to get the design appearance.