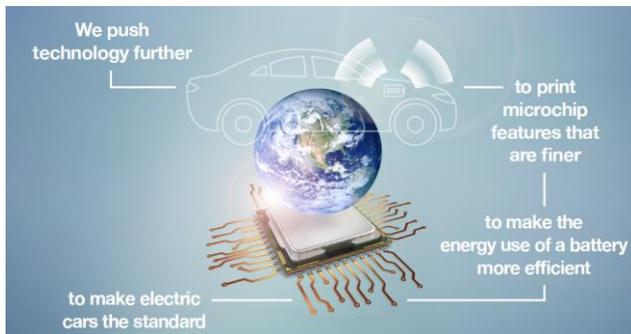


GRADUATION ASSIGNMENT:

Investigate using Electromagnetic pump to transport liquid Tin



Background information

The latest generation of lithography machines use light in the extreme ultra violet range. To produce the Extreme Ultra violet light, a high power laser is shooting at small liquid Tin droplets which emit EUV light. This process takes place at low pressures inside the vacuum chamber. Remnants of these droplets, need to be removed from the system.

Your assignment

Your assignment is to investigate the possibility of transporting the liquid **Tin** (under **vacuum** condition) using ESM pumps.

General picture of your task is :

- Asses different possible methods and hardware layout to do the task.
- Planning the experiments and conceptual design of the test set up.
- Building the test set up and running tests. This step might require some iterations using different hardware designs and configurations.
- Analyze the results and demonstrate pro and cons of different methods
- Document and present the findings.

You'll be working in close collaboration with experienced architect(s) and experts on answering questions and helping you to realize the design. Your mentor will support you for your technical and also operational challenges.

Your profile

You are a master student in the following studies:

- Mechanical engineering who is graduating in the field of Thermo-fluids
- Applied Physics, who is graduating in a field compatible with fluid dynamics.
- Chemical

You have good communication skills in English.

This is a graduation project for 5 days a week with a duration of minimum 8 months.

Please keep in mind that we can only consider students (who are enrolled at a school during the whole internship period) for our internships and graduation assignments.

What ASML offers

Your internship will be in one of the leading Dutch corporations, gaining valuable experience in a highly dynamic environment. You will receive a monthly internship allowance of 500 euro (maximum), plus a possible housing or travel allowance. In addition, you'll get expert, practical guidance and the chance to work in and experience a dynamic, innovative team environment.

ASML: Be part of progress

We make machines that make chips – the hearts of the devices that keep us informed, entertained and safe; that improve our quality of life and help to tackle the world's toughest problems.

We build some of the most amazing machines that you will ever see, and the software to run them. Never satisfied, we measure our performance in units that begin with pico or nano.

We believe we can always do better. We believe the winning idea can come from anyone. We love what we do – not because it's easy, but because it's hard.

Students: Getting ready for real-world R&D

Pushing technology further is teamwork, and our R&D team is more than 5,500 people strong, with major sites on three continents. Dozens of diverse, interdisciplinary teams work in parallel to meet a challenging development schedule.

In such an environment, your colleagues may be sitting next door, or they could be thousands of kilometers away in a different country, or even working for a different company.

An internship at ASML is your opportunity to get to know this world of industrial-strength R&D and get a feel for that excites you most. Will you design a part of the machine, or make sure it gets built to the tightest possible specifications? Will you write software that drives the system to its best performance, or work side-by-side with the engineers of our customers in a fab, optimizing a system to the requirements of the customer?

How will you be part of progress?

Field: fluid dynamics

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