ASML brings together the most creative minds in physics, electronics, mechatronics, software and precision engineering to develop lithography machines that are key to producing cheaper, faster, more energy efficient microchips. The machines need to image billions of structures in a few seconds with an accuracy of a few silicon atoms. So, if you're an internationally driven team player who enjoys the company of brilliant minds, who's passionate about solving complex technological problems, you'll find working at ASML a highly rewarding experience. Per employee we're Europe's largest private investor in R&D, giving you freedom to experiment and a culture to get things done. Join ASML's expanding multidisciplinary teams and help us to continue pushing the boundaries of what's possible.

ASML is currently looking for talented Master students of Mechanical engineering (materials engineering) for an international internship position in the Netherlands:

Internship

Research the strength of glued connections

Background information

ASML makes high tech lithography machines for semiconductor industry. There is a continuous need for faster and more accurate machines, which results in a usage of more and more advanced materials. Stages and frames are more and more made of ceramics and zero expansion glasses. One of the biggest challenges is to connect parts together with high strength and stability. Gluing is one of the most frequently used bonding techniques. One of the main challenges is to accurately predict strength of a glued connection. Difficulty is that its failure criterion is not always known and can depend on the exact design, connected materials and application.

Assignment

You will develop a failure criterion to predict the strength of glued connections used by ASML. In order to develop the criterion, you will analyze and experiment with the several glue connections, the exact design and the connected materials. Your task will be to develop a mechanical reasoning for this failure criterion, which is suitable for practical application in the daily design and analyses activities of ASML.

Requirements

The traineeship at ASML is open to Master students of Mechanical Engineering (and/or materials engineering). Experience with: Finite Element Analysis, preferable ANSYS Mechanics of ceramic materials mechanics of glued connections. Result oriented/down to earth. Good communication skills and knowledge of English, verbal and written. Proactivity, independent attitude, as well as high motivation to excel is necessary. It concerns a graduation assignment for at least 6 months, 5 days a week.

Application

All candidates that are interested in the traineeship position at ASML must demonstrate their knowledge, capabilities and motivation. In order to be admitted into the selection procedure please send, us via e-mail, the following documents to support your application: (info@flowwest.com)

- A letter of motivation
- An curriculum vitae
- Copies of relevant B.Sc. diplomas and transcripts
- Copies of relevant M.Sc. diplomas and transcripts

Deadline for all applications is 1 July 2011.

Benefits

Internship allowance of max 500 euro plus a possible housing allowance of 230 euro per month.
Excellent guidance and an opportunity to work in and experience a dynamic innovative environment.

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Company information

ASML is the world's leading provider of lithography systems for the semiconductor industry, manufacturing complex machines that are critical to the production of integrated circuits or microchips. Headquartered in Veldhoven, the Netherlands, ASML designs, develops, integrates, markets and services these advanced systems, which continue to help the customers - the major chipmakers - reduce the size and increase the functionality of microchips, and consumer electronic equipment. www.ASML.nl

Flow West Flow West is a Dutch company that specializes in providing human capital solutions to the Dutch academia as well as the industry. One of the goals of Flow West is to connect top international students, researchers, and engineers with the Dutch employers in the academia and the industry. www.flowwest.com