



## INTERNSHIP / MASTER THESIS

# New Vulcanizing Technology for High-End Wafer Fabs

Are you looking for an opportunity to write your thesis in an industrial environment or obtain valuable industry experience, during or after your technical education? Here is one of many interesting topics we have on offer. We are also very open to your own ideas in order to create a matching opportunity for you at VAT.

Innovation has always been the driving force at VAT since the company was founded over 50 years ago. This has made us the world leader in vacuum valves and vacuum sealing technology. This pioneering spirit motivates us daily to meet our customers' requirements with enthusiasm. Together with our employees we stand for passion, innovation and quality. VAT is headquartered in Haag (Switzerland) and employs approximately 2 000 people worldwide. It has production centers in Haag (Switzerland), Penang (Malaysia) and Arad (Romania) as well as a production facility in Xinwu (Taiwan). With our customers mainly being situated in the United States and Asia, this provides a great opportunity to start an international career.

### What you will explore:

Vulcanized gates and seals are the standard sealing system in today's high-tech semiconductor fabs for the manufacturing of microchips (Intel, Samsung, etc.). VAT is the market leader in this field. The bonding technology shall be improved to adapt to increasing market requirements in terms of sealing performance, corrosion resistance and production cost. You will study the rheology and flow characteristics of elastomer compound and optimize the vulcanization process to form a mechanical bond to metallic parts. The developed knowledge will then be applied and tested on real valve parts. You will produce prototypes in our manufacturing department and verify the performance in our vacuum test laboratory.

### What we offer:

- Practical experience in the growing semiconductor industry and in a global environment
- Support by and coordination with experienced scientists
- Fast-paced and international work environment
- Content & scope of this thesis may be discussed and defined in further details

### What you will need:

- Chemical / Material engineering background
- Knowledge in surface preparation (*e.g.*, milling, laser, coatings...) beneficial
- Willingness to learn and apply new concepts
- Proactivity

### Are You Ready for the Challenge?

Then we look forward to receiving your **electronic application sent to Robert Spasov or Stefano Caimi.**

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