



## MASTER THESIS

# Optimal Planning of Tests under Efficient Usage of Preliminary Knowledge

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:*

Standardization and acceleration of product qualifications is key in order to assure fast product developments with high quality. Preliminary knowledge about lifetime of sub-components is an important aspect, because this leads to a reduction of test amount and effort.

- Characterization of major failure modes for system reliability estimation
- Modelling of failure modes and prove by experiment
- Focus on fatigue and random failures
- Definition of ideal sample size under consideration of benefit and cost

### *What you will need:*

- profound knowledge in mechanical engineering
- Knowledge in accelerated testings such as HASS, HALT or ALT
- Programming skills as an advantage

### Are You Ready for the Challenge?

Then we look forward to receiving your **electronic application sent to André Gahler**.

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