

SHAKER

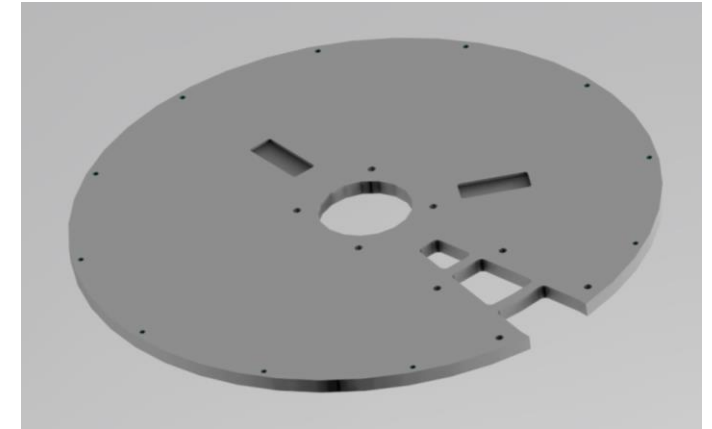
A new alternative for Vibratory Stress Relief and Residual Stress Detection

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Successful R&I in Europe
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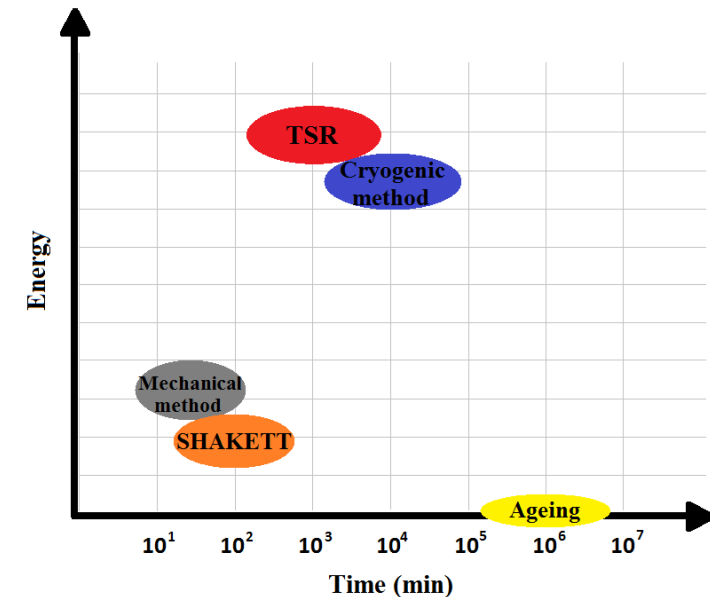
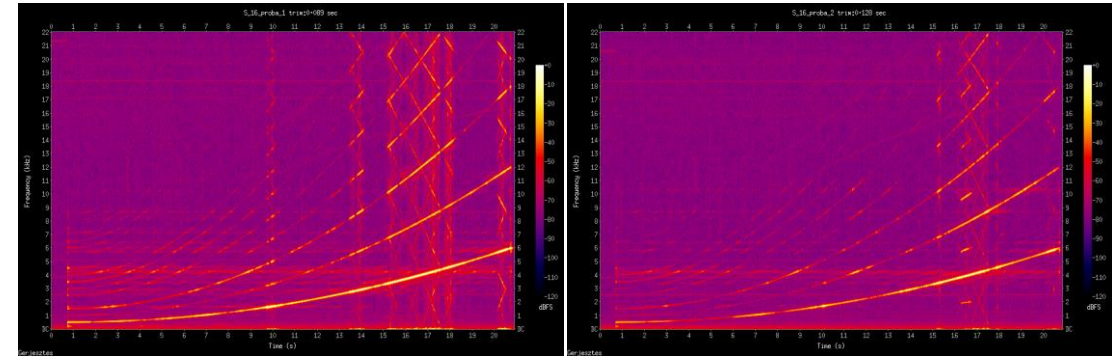
Introduction

- A problem with our own production – deformation after or even during machining
- Castings and welded structures (e.g. EN-GJL-300, S235JR)
- Standard solution: Thermal Stress Relief (TSR) or
Less known alternative: Vibratory Stress Relief (VSR)
- Two successful R&D projects:
2016-2018: „Research on vibratory stress relief processes and integration into technology. Development of VSR equipment”
2021-2023: „Development of residual stress reduction and diagnostics for treatment of precision metal casting parts”
- Shakett is a brand name created by T.E.T.T. Engineering Ltd. which includes the company’s VSR equipment and software



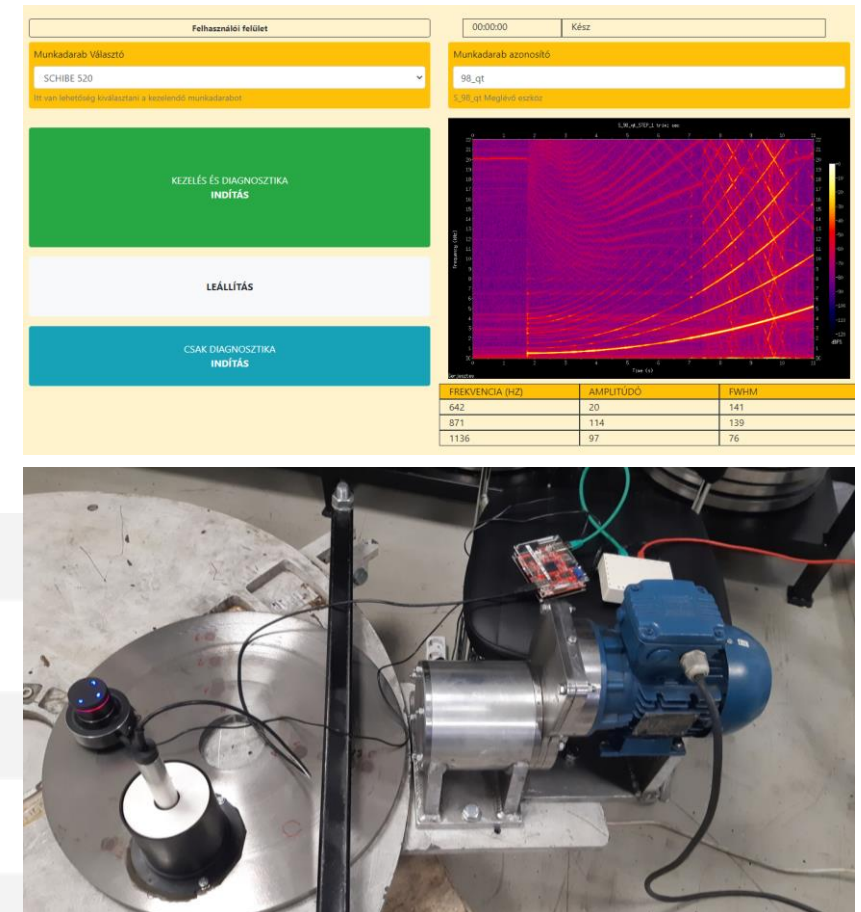
Shakett diagnostics and VSR technology

- Shakett includes a new diagnostic system based on acoustic methods (with measurement images) and an optimised VSR technology
- Software: beta version, online platform, developing with artificial intelligence (AI), user-friendly interface
- Results: natural frequencies, classification (good, medium, wrong or bad), automated VSR
- Advantages of Shakett:
 - Experienced support and advisory team
 - Developed for industrial environment
 - Time-saving and cost-saving
 - Energy-efficient and eco-friendly



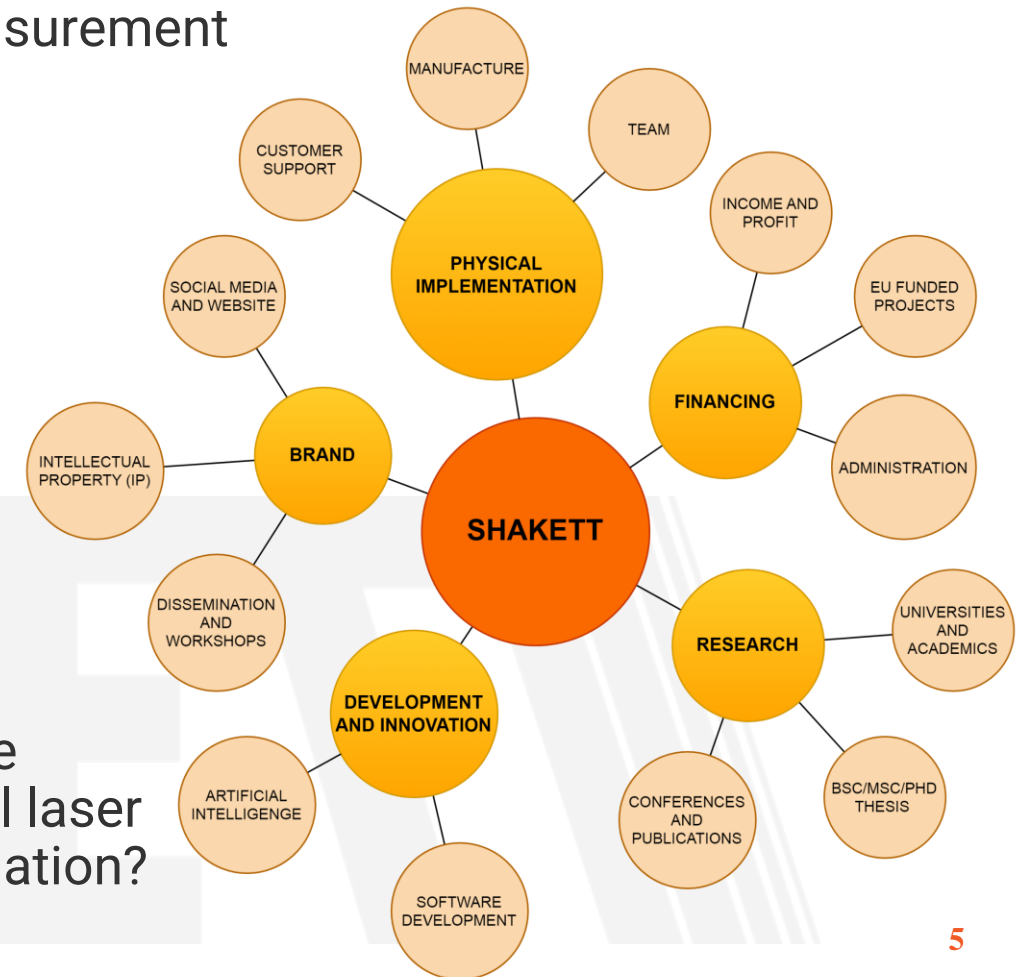
Future possibilities

- Further developing of the technology – return on the time and money invested:
 - Existing technology can be used immediately
 - In the case of new kind of parts, castings and processes – six months or or possibly year
- Our aim is to fully develop a complex system that can be universal in the terms of different parts. We consider it necessary to test and even simulate as many types of geometries and materials as possible
- We have worked with several companies in the past (foundries, manufacturers, etc.) and we are still open to different collaborations in the future



What we are looking for?

- New project ideas in the topic of residual stress measurement and detection:
 - X-Ray Diffraction (we have one)
 - Acoustic/Ultrasonic methods
- New collaborations and consortia:
 - Machinery and parts manufacturers
 - Foundries
 - Investors
 - Resellers and distributors
 - Universities and academics
- A potential question: what can we do with an additive manufactured part (direct metal printing/direct metal laser sintering or metal injection molding) to avoid deformation?



SHAKETT

If you are interested, please feel free to contact us for more information

or visit our websites:

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