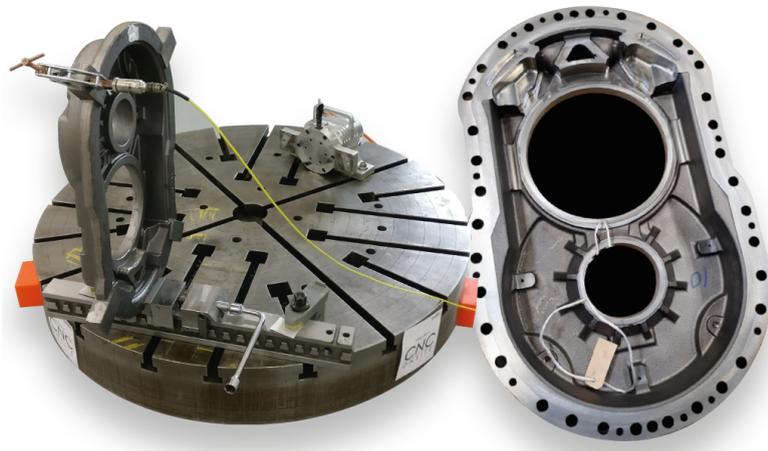


Danish Advanced Manufacturing Research Center



Stress relief of materials with vibrations.

DAMRC is continuously working with further develop in using vibrations for stabilization treatments of parts (VSR) and it is convincing results that appear on different materials and shapes.

On a series of parts with heavy stresses and high parallelity requirements, 12 hours of machining and 4 changes of fixing were required to comply with tolerances. By vibrating the items before machining, it was possible to reduce the working time to 5 hours in two fixturing.

	Uden VSR	Med VSR
0,3 – 0,4	12,3	
0,03 – 0,07	5	

1.8 ton CO2 emissions saved - in two hours



New results document competition competitive method of saving energy

In collaboration with ELFORSK, DAMRC has also evaluated vibration bias (VSR) versus traditional annealing to document the energy consumption on a wide range of items in different materials and sizes.

The results were convincing - with VSR replacing thermal treatment it saves between 72 and 100% energy. In a specific case, a welded construction of 18 tons of VSR was treated and compared to traditional heat treatment, 32GJ of energy were saved, which corresponds to a saved emission of 1.8 tons of CO2. This shows that VSR technology has the potential to save money, time and energy, especially for parts over 100 kg.

If you are interested in learning about your options for using VSR, contact us at mail@damrc.com or visit the Spånligaen, where we are going to demonstrate the technology.

Nye medlemmer



East Metal supplies high quality steel components to wind turbine manufacturers. By outsourcing production to East Metal, wind turbine producers have achieved lower fixed costs and greater flexibility in production. East Metal's membership of DAMRC has, among other things, been based on investigating the possibilities in using vibration to remove internal stress in very large parts.



BUSINESS REGION MIDTVEST

Business Region Midtvest is a collaboration between the municipalities of Herning, Holstebro, Ikast-Brande, Lemvig, Ringkøbing-Skjern, Skive and Struer. The goal of the cooperation is to strengthen growth, create new jobs and attract skilled labor to the area. On this mission, the DAMRC technology center for industrial production plays a central role in strengthening the area's production companies, thereby ensuring continued growth and employment in central and western Jutland.



100 years ago Christian Nielsen started the company Strandmøllen A / S in Denmark. Since then, Strandmøllen has produced and marketed gases for all industries.

Strandmøllen has been a fund- owned company since 1967. This means that the company has a solid, long-term and economically strong owner.

In addition to its own production of gases, the company collaborates with domestic and foreign producers about new products and market areas. In this connection, they see a big potential in collaborating with DAMRC.

Sanistål

Sanistål has highly specialized knowledge of products for the cutting industry. With this knowledge, they offer consultancy services in cooperation with DAMRC. They just started working with DAMRC to go from being a supplier to being a partner for their customers.



Since 2013, more than 60 companies have improved their productivity by 30% or more through collaboration with DAMRC – are you to be the next? Give us a call or send us an email and let's take a non-binding dialog about how we can help you further ...



January 17-19, you will be able to see the latest technologies for metal working - machines, tools, software, refrigerants, lubricants and more. The Spånligaen is a collaboration of companies covering the cutting industry - all the way around. Our common goal is to develop the technology for metal machining.

During the exhibition, different teams demonstrate various aspects of the machining process. Come and meet the experts who cover all aspects of the metal machining. We are looking forward to show you how to improve your productivity and competitiveness.

[sign up here](#)

New employee

Nikolaj Vadstrup Pedersen has been employed as student worker



Aarhus University in Herning on 3rd semester. Previously, Nikolaj was educated as EUX industrial techniques from Grundfos.

New student

Iñigo Aseginolaza is a new student at DAMRC. He is from the Basque Country in northern Spain. He is in the 4th year of Mechanical Engineering at Mondragon University and will write his final project at DAMRC in the period 18th of 2017-30th of June 2018. The project will focus on "Non-Fluid Alternative cooling in Robotic Machining".



Access knowledge about new technologies and help to implement them

Are you living in Region CenterDenmark and do your business have the potential to develop new smart products, services or processes, or do you lack knowledge about Industry 4.0 technologies?

Are you living in Region CenterDenmark and do your business have the potential to develop new smart products, services or processes, or do you lack knowledge about Industry 4.0 technologies?

Then you have the opportunity to collaborate with the leading knowledge institutions in the region. DAMRC is the facilitator of the Industrial 4.0 development program that aims to strengthen growth and innovation possibilities among SMEs in Central Denmark Region.



You can get

- Assistance for the composition of a concrete project (an innovation cooperation), consortium creation and application to the program.
- Access to the necessary knowledge and expertise to develop and validate innovative prototypes on Industry 4.0 products, services and processes.
- Cooperation with knowledge institutions. and other companies.
- Support for implementing concrete innovation cooperation.

All you have to invest is your own time.

It is open for applications until April 2019 so do you want to hear more about your options, so contact the following DAMRC employees

Charlotte F. Ilvig, chi@damrc.com, +45 2030 4599
Leo Ravn-Nielsen, lrn@damrc.com, +45 6165 6620.

You can read more here: <http://eng.au.dk/en/research/research-programs-and-centers/au-manufacturing-technology-program/industry-40/>

The partners of the program are:

European Union (European Regional Development Fund), Region Mid Denmark, Aarhus University, Business Region Aarhus, Business Region Midwest, Growth House Midtjylland, Danish Material Network, Innovation Network for Biom.



We offer a wide range of courses, practical as well as theoretical. Similarly, we offer technicians, engineers, operators and students specialized courses. Most of our courses are conducted in Danish, but of course we are able to do it in English. Contact us for further information.

DAMRC wish you
a Merry Christmas and a Happy New Year.



The DAMRC office is closed Dec. 23. 2017- Jan. 1. 2018



Our mailing address is:

[*mail@damrc.com*](mailto:mail@damrc.com)

[*www.damrc.com*](http://www.damrc.com) / [*www.damrc.dk*](http://www.damrc.dk)

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