



WIAP®

MEMV®



Metall entspannen mit Vibration

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Petition of the WIAP AG-Ltd-SA - energy efficiency **More than 400 times less energy consumption at 12 tonnes** **component.**

Saving energy affects all areas of society. In particular, here the industry is challenged to use all measures, both technical and organizational nature effectively that are possible. But actually putting business, industry and politics to all measures that are technically feasible at present?

There are numerous ways to save with the use of the appropriate modern technology vital energy. For example, Germany produces a large amount of current with combustible fuels. Switzerland also produced by nuclear power plants (NPP) about 40 percent of electricity. Both ways are worth looking into for the future and be deemed fairly serious. There are, however, to reduce the energy consumption as in certain industries much other ways.

An enormous amount of energy saving with vibration instead of heating

In industry, it has long been state of the art that welded workpieces for further processing - mostly because of delay problems - in an oven at about 500 ° C to 600 ° C are heated. The example applies to a commercially available steel. A generally accepted rule is that a component per 20 mm thickness should

keep the temperature in the oven for about an hour. So often two days up to 1 week or more have correspondingly larger parts, depending on design, store in the oven to achieve the desired result. Such an industrial furnace is comparable to a commercial oven - the workpieces are maintained at a suitably high temperature in the furnace. Here should be done slowly, both the heating and cooling; otherwise the danger that back tension enter into the workpiece increases. is crucial for industrial users to remove this component stresses, so it does not warp often very expensive workpieces during further processing. High accuracy losses with corresponding financial risk are the result.

This has often been applied process requires enormous amounts of energy. To reduce this energy consumption significantly, there is an effective technical solution in the recent past. This makes it possible to heat instead of the workpiece to relax with vibration. The method is now known as MEMV - metal relax with vibration. This technology can achieve the same goal as the time- and energy-intensive heating in industrial furnaces. The energy savings is enormous compared to the heating method: With a 12-ton roller there are roughly 460 times less energy consumption for the same result!

Measurements demonstrate the advantages of high-precision technology
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The WIAP AG-Ltd-SA relaxed metal using the vibration technology successfully for many years. In 2014, the Swiss company launched intensive investigations in addition to achieve even better results with new and improved methods. Hundreds of hours of measurements were carried out during the expansion process - with very promising results. Since then, three patents were filed that explicitly refer to the Metal relax with vibration as a replacement technology for the energy-intensive stress relieving. Among other things, the energy consumption for the vibration technology is extremely low. Because the workpieces are brought to vibrate in a natural resonance, this then generates most of the excitation by the natural vibration.

Many companies know the procedure by now. Since the benefits of this high technology initially but often used on its own, especially economic interests, companies like to keep this knowledge to themselves. Not infrequently, significant competitive advantages are thus achieved. Even more sensitive industries, such as the defense industry, expressed for some time strengthened interest in the technology. Among other tubes for ammunition or projectiles must be highly accurate - and stay accurate! This important requirement can be especially meet with the fact that the pipes are treated before finishing using the vibration relaxation.

Saving energy benefits everyone

Energy efficiency is an issue that affects all of society. Therefore, it makes sense that not only the defense industry or few companies benefit from the knowledge, but many other industries - and thus the entire population, because a lot of energy can be saved ultimately as the end user. For this reason, we submit this petition. are in the industry for decades both expensive and extremely energy-intensive annealing furnaces in use. To recoup this, put many companies also on wage labor. The company justified this often so that their stoves can be utilized for cost reasons. This, however, vast amounts of energy are wasted.

With the use of modern method MEMV - metal relax with vibration or a replacement of the old technology, the necessary expenditure of energy at a suitable location can be substantially reduced. This saves valuable resources a, protects critical the environment and is the population at all levels benefit.



Figure 1: This 12000 KG roll-tension annealing requires 935 KW / H



Figure 2: And she's verzundert after-tension annealing



Figure 3: The roll vibrate according to the system WIAP

MEMV needs 2 KW / h. Ie 400x less

Energy and transport also falls away.

1. We ask and ask the legislation: It should be adopted both a national and international rule which dictates that stress relief applies only in cases where the vibration relaxation is not possible. Reason: To relax a 12,000 kg heavy roller, are necessary with the stress relieving about 937 kW / h. A 12,000 kg heavy roller needed for the same result with the vibration Relax kW / h. This means 468 x less energy!
2. record that schools MEMV in Learning Program. Ie textbooks are adapted.
3. record MEMV universities into teaching program
4. That the German-language literature MEMV receives.
5. That further state research for MEMV is arranged.
6. That standards are not hindered. Supposedly can patent legally protected not be normalized. Ie that something is patented, may be normalized especially something that has to do with the energy savings.

We ask the government to implement this petition and thank you in advance.

With kind regards

WIAP AG Ltd SA

Fam. Widmer

signature



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