

# AEROVIT

## MEMBER COMPANY PROFILE

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Soot blowing specialist company Aerovit is based in the outskirts of Horsens, Mid-Jutland, Denmark, and here I meet with managing director of the company Mr. Søren Amby who offers a short guided tour of the premises and the factory where the Aerovit products are produced.

### THE PRODUCTS

Aerovit is a system for soot blowing with shock waves. The system operates on pure compressed air ensuring a continuous cleaning of all kind of boiler systems. In a fraction of a second 400-600 liters of air are under high pressure blown through a special valve, the process of which generates a very powerful pressure blow that is led into the boiler construction. The blow eliminates sediments in boiler pipes and boiler compartments in the area in front of the system. The system has an internationally patent.

A continuous cleaning of the boiler results in a proven higher efficiency and numerous stoppages for boiler cleaning can be avoided. Thus oil consumption on supplementary energy supply will be reduced due to less cleaning stops. Since the manual boiler cleanings will be less the working environment will improve as the manual cleaning task is a hard and health threatening task. The fuel consumption is smaller per produced MW and thus CO2 emissions will be lower. And the investment is expected to yield interest in 3-24 months' time.

Aerovit operates with very high power in the shock waves. The product is delivered with efficient soundproofing of the system and, finally, the product is delivered with a patented cooling system that ensures functionality at high temperatures and at a corrosive environment.

What makes the company unique is the fact that they have taken out a patent on the cooling of the valves as well as the soundproofing system so that the valves can be placed in all kinds of areas, and according to Søren Amby potential customers are often referred to a plant close by the factory as reference plant. This Aerovit system dates back to 1992, proving that the product really is a durable one. However, the company has also just developed a brand new valve unit. Up until now they have been using a basic type valve which was modified and patented. But now the company has its own valve where everything is integrated.

Aerovit is supplying primarily to boiler producers all over Europe, but in the recent years they have also supplied to the marine market and installations with catalyst technology. Last year the company witnessed its largest turnover ever, and the company has expectations of an even better result this year. (At present they are counting on an order corresponding to half a year's revenue.) So things are looking very good for Aerovit indeed.

## THE CASE OF THE OIL REFINERY ORLÉN LIETUVA

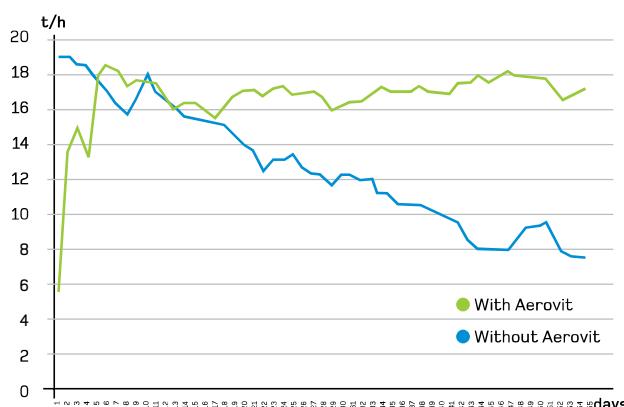
Last year the company was contacted by the Latvian oil refinery Orlén Lietuva, who sent Aerovit an unsolicited email in which they asked if Aerovit would carry about the task for them.

### *The situation before the Aerovit installation*

Orlén Lietuva Refinery has two boilers which were losing a considerable amount of heat due to catalyst dust build-up in the tubes. After two months of operation the boilers tubes were fully covered by catalyst dust, but the refinery's own technicians were not able to stop the boilers for manual cleaning as this would mean that the whole refinery would have to shut down.

## WITH OR WITHOUT AEROVIT

The diagram shows the steam production of one boiler: after a manual cleaning session the steam production is about 19t/h and after two months it is only 7.5t/h.



The final result of the dust accumulation process is a critical reduction of the steam production, which after two months of operation decreases to 15t/h for both boilers.

### *The situation after the Aerovit installation*

Aerovit was installed in April 2011 on both boilers with immediate results. The steam production of each boiler remains stable around 17t/h, which means 34t/h for both boilers. The refinery therefore gained 19t/h for both boilers. In order to produce these 19t/h of steam on an oil boiler, Orlén Lietuva should use around 11.6 mio. liters of oil/year. The payback time for this project was only 3 months.

The numerous Aerovit installations worldwide have proven considerable energy and fuel savings for the customers, and thus considerably reduced emission of soot particles and CO<sub>2</sub> to the environment.



## AEROVIT RUSSIA, UKRAINE AND BELARUS

Aerovit A/S has delegated the responsibility for the development of the Aerovit system in Russia, Ukraine and Belarus to the company Era-Power LLC, which is partly Danish, partly Swedish and partly Russian owned.

The task of developing these countries is enormous and the challenges can be seen as insurmountable, but Director Erik Rasmussen has with over 8 years of experience in Russia created a good base in collaboration with DBDH through joint export promotion, and has thus achieved a good impact towards the Russian authorities and created awareness about the technology behind Aerovit.

The expectations for these markets are high due to the need for efficient energy utilization. The Russian Government has through legislation created a pressure on the individual regions to effectively improve energy efficiency. Furthermore, it has been decided to attempt to exploit the resources available in addition to gas, namely mazut (heating oil), coal, bio fuels, and combustible waste. These boilers therefore have the company's attention and Era-Power LLC hopes to contribute to a, compared to today, significant improvement of the utilization of the calorific value of these fuels and benefit the environment as well as the Russian population. The large economic savings that are achieved by using the Aerovit system will be used directly for the reduction of the tariffs that the district heating consumers currently pay for the heat.

In addition to Russia Era-Power LLC works at present to establish subsidiaries in both Ukraine and Belarus which are also largely deselecting expensive gas for other fossil fuels, wood chips and waste, all of which fit the Aerovit system perfectly.