

# STEAM UP AUDIT OUTCOMES

Newsletter January 2018



# STEAM UP

This Newsletter is addressed to decision makers and technical staff of industries that use steam systems for their energy demand. It is the third issue of the STEAM UP project that aims to achieve radical improvement of energy efficiency in industry. The project is undertaken by Austria, the Czech Republic, Denmark, Germany, Greece, Italy, Spain and The Netherlands and co-funded by the European Horizon2020 programme.

---

## Audit experiences

In the last newsletter we had an article about in-depth steam energy audits. In-depth steam audits are aimed at detecting possibilities for improvements in the steam production, distribution and end-use, with the aim to increase the energy efficiency, overall energy management and to contribute to CO2 mitigation. Energy audits constitute a tool that, together with the companies policies and energy programmes, provide insights to the management team to take decisions on operation changes and investments.

Meanwhile 75 audits were carried out at companies in all our partners countries. Apart from the audit results and recommendations we were curious about the experiences of the people involved. In this newsletter you can read about it in a selection of interviews. On the Steam Up websites the fact sheets of the 75 Audits will be published.

Michiel Steerneman, Project coordinator



STEAM UP  
[www.steam-up.eu](http://www.steam-up.eu)

twitter

LinkedIn

---

## Steam Up in-depth audit at Covillasa - Spain

### What is your name and what is your function in your company?

Ismael Acebo, Plant Manager at the Spanish fruit processing company Covillasa.

### How did you learn about the Steam Up Project?

I heard about the Steam Up Project in a training session that took place at the Food Industry Association dedicated to energy saving in Food industry.

### What made the company decide to join the Steam Up project by having a steam audit carried out?

The concern for over ten years with regard to the need to improve the innovation, technology and energy savings in our processes. It was time to pay serious attention to our concerns and see what could be improved.

### Was it easy to get the management involved to have the audit carried out?

This management is being represented by myself. In the modern industry, a plant manager cannot be remote to energy efficiency issues. He needs to know about both all the processes and management issues.

### What was the outcome from the audit? Was it surprising to you?

The result was very positive. It is very convenient to receive the experience from external experts on top of our own knowledge. The audit provided in a relevant analysis resulting in a new steam generation facility. More specifically, it gave deep insight about what the renovation meant seen through the eyes of an external steam expert. This audit was the base for the execution project that is presently being developed.



## STEAM UP AUDIT OUTCOMES

Newsletter January 2018

---

### **What were the steam expert's recommendations?**

The main recommendations focussed on making the energy losses visible and whether there should be proceeded with a renovation of the old inefficient equipment and/or be invested in a new system, understanding the industries wishes. It also showed the several options in renovating the energy systems.

### **Are they implemented yet and what where the earnings for the company? Not only in energy terms but also when it comes to e.g. production, operation security, safety, maintenance, etc., the so called NEBs.**

We are halfway at present, ending the design phase and with the target to end the installation by June 2018, considering the processes and equipment recommended by Escan Energy Consulting. The deep renovation includes a new economizer, condense recovery, purges vessel, feed water vessel and a new boiler with O2 control.

The main NEBs considered are improved steam quality and improved sterilization.

### **Has a strategy plan been made to implement the recommendations?**

Yes, we made a plan which started right after the summer and will end by June 2018, including the renovation of the boiler room and improvement of some elements in the distribution system and consumers.

### **Would you recommend a steam audit to other companies using steam and if yes, why?**

Yes, we absolutely would recommend a steam audit like this, as this audit system can detect issues that are not possible to indicate with own knowledge and resources, and in usual production time.

---

## Steam Up in-depth audits at...

### Skiern Papirfabrik A/S - Denmark

Another interview was done with Søren Skærbæk who is energy and environmental manager at Skjern Papirfabrik A/S. He learned about the Steam Up Project through information received from AURA Rådgivning, the Danish Steam Up partner. After a meeting the Skiern Papirfabrik realised there were possibilities to save energy, but how exactly was not fully clear at that point. Positive was the interest and cooperation of the management for a Steam Up audit. The outcome was a detailed calculation on the potential amount of energy reduction: 1000 MWh/year. And a reduction of approximately 1300 ton of feed water. The suggested solutions to reach these reductions were primarily found inside the company and are presently being implemented. Søren Skærbæk says an audit like the one carried out always gives unexpected outcomes a company can benefit from.

### HAK - the Netherlands

Mr. Frans Kuijpers, head quality control, environmental and energy department and Mr. Teus den Uil, manager technical department, say their company HAK is of the 1000 participants of the long term agreements on energy savings in the Netherlands. This means that every 4 years the company is obliged to make an Energy Efficiency Plan with the goal to have yearly a 2% improvement of the energy efficiency. Steam Up partner IEE, HAKs energy consultant, came with the possibility to carry out a Steam Up Audit. "Because steam is one of the major energy consumers and very important for our production process, we decided to participate in the Steam/Up project", Mr Kuijpers says. "In our company we have a high degree of cooperation and all decision makers are involved in the plan making process. The managements interest in and concern for energy is a normal for us".

The outcome of the audit resulted in recommendations with regard to a lower O2 percentage (to control is an easy and low cost saving opportunity), pressure and temperature reduction and reducing the losses, (check, control and improvement of the) isolation, replacement of the boiler, use of waste heat blow down, but also adjustments to the maintenance and engineering processes and recommendations with regard to the monitoring and organisational aspects.





## STEAM UP AUDIT OUTCOMES

Newsletter January 2018

The positive point of the HAK enterprise is that they already made yearly Energy Efficiency Plans and the new measures will be part of the next plan. "Mr. Kuijpers and Mr. den Uil say it is very important to involve experts on several level to support the company in their ambition to save energy. "External advisors encourage us to take a different look at the potential of energy saving, which is always a gain."

### Minerva SA - Greece

Fotis Panayiotopoulos, working as energy manager at Minerva SA in Greece says he was informed about the Steam Up project by a partner who participates in the Steam Up project as a steam expert. He said the most important reason to join was the fact it perfectly fits in the company's policy to aim for reduction of energy losses. Therefore it was also easy to get the management involved. The outcome of the audit was not very surprising, however still interesting. NEBs that affect the operation security, maintenance and general safety are together with the energy benefits anchored in a strategy plan as part of the annual investment plans for the enterprise, however the most expensive ones with a long payback period are still under consideration. Fotis Panayiotopoulos says he definitely would recommend a steam audit to any enterprise using steam, as it certainly helps to record and reduce the energy losses of the steam systems of the enterprise.

### Fahren-Gärtner GmbH - Austria

In Austria one of the audits was done at Fahren-Gärtner GmbH. Mr. Gerald Heerdegen, CEO and owner of the enterprise says he was approached by the companies energy consultant Sattler Energie about a Steam Up audit and the possibilities and advantages of participation. Sustainability is anchored in the companies vision and the production of steam needs a lot of energy. "That was the reason why we decided to join the audit and to really get to know the state of our needed energy in comparison to benchmarks."

He explains the entire management stand behind the sustainable company goals as a need in today's economic and ecological practice. The outcome was a clear basis for decision-making to invest in heat recovery systems, energy efficiency of the heat consumer appliances as well as in a new combined steam and transfer oil system. It showed, that the old steam generator mostly operated on part load and therefore, had a bad efficiency just as the transfer oil system. "We knew that we could reduce the primary energy input a lot but not exactly how much. The outcome was a little surprising, especially the high amount of reducible energy input."

The recommendations for the company were to invest in a new combined steam and heat transfer oil system to power the heat consumer appliances. This way, the heat for the heating processes and domestic heating can be produced more efficiently and the steam generator works under better conditions. A heat recovery system for the hot waste water, including a hot water buffer tank, was also recommended to preheat the fresh water. To manage the new systems, the Steam Up experts suggested to implement an automatic control system.

Meanwhile a new steam generator was installed. Mr. Heerdegen explains: "In combination with the heat recovery a 28 m3 buffer for hot water and the new control system, we save around 50% of heating oil for the processes and 50% of the district heating consumption for our domestic heating. Furthermore, we do not need a boiler attendant, the preheating time was reduced, the operation security rose a lot and the position of the heating system was also changed, to minimize the distribution losses. In addition, we would like to draw your attention to the fact, that the public reaction is very positive. We got a lot of good press and we gave proof of our sustainable company goals. And, all recommendations were put into a strategy plan." To the question whether he can recommend a Steam Up audit to other companies Mr. Heerdegen says: "Absolutely, and we should have done it much earlier to save a lot of energy!"



STEAM UP

[www.steam-up.eu](http://www.steam-up.eu)

LinkedIn

Twitter