

CHALLENGES and EXPERIENCES during IMPLEMENTATION of EnMS in Refractory Industry

Experience of VARDAR DOLOMIT

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Dolomit



EnMS was implemented in more than 10 companies as part of the project

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- * Project Title: “Catalyzing market transformation for industrial energy efficiency and accelerate investments in best available practices and technologies in the FYR Macedonia”
- * Implemented by: **UNIDO** (United Nations Industrial Development Organization) and **REC** Republic of Macedonia
- * Funded by: **GEF** (Global Environment Found)

Company profile

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- * Company name: VARDAR DOLOMIT
- * Country: Republic of Macedonia
- * Type of industry: dolomite based refractories
- * No. of employees: 89
- * Annual production: 30 000 tons of refractories
- * 29,47 GWh annual consumption of fuel oil (heavy+light fuel oil)
- * 3,29 GWh annual consumption of electricity

Barriers before starting with implementation of EnMS

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- * We don't need system to save energy – we already are efficient enough
 - * Positive examples of implementing ISO 50001 worldwide
- * Fear of change!
 - * Employees who are not afraid to change the way of their work are usually the most valuable employees. This is ideal opportunity to identify them

Barriers during implementation of EnMS 1/2

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- * Employees are not aware about importance of energy management
 - * Chance to explain what you are occupied with
- * Different sectors in the company do not communicate often so employees don't have feeling that they belong to same team.
 - * Organizing team building events. Employees will be happy to know that implementation of energy savings changes made some positive changes in their social life

Barriers during implementation of EnMS 2/2

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- * Not all Energy Team members were happy for being part of it, because they don't want to get more obligations
 - * Being part of this team is not must but matter of Honor
- * We don't have enough money and time for this
 - * There are lot of possibilities for energy saving even without need of investment
 - * We have the support of top management, so they will provide us with the necessary resources

Main benefits from implementing EnMS

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- * Organizational benefits
 - * Get Energy Policy in place
 - * Energy savings Awareness
 - * Reduced risk of not fulfilling legal requirements regarded to energy
 - * System approach to energy saving projects
 - * Identified energy allocation per production lines

Main benefits from implementing EnMS

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- * Operational benefits
 - * Improved operational control
 - * Improved reliability
 - * Transfer from corrective to preventive maintenance
 - * Higher priority to Critical Operational Parameters
 - * Better trained and more competent employees

Main benefits from implementing EnMS

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- * Business benefits
 - * Energy cost savings
 - * Reducing energy usage
 - * Improving company sustainability and productivity
 - * Better company reputation

Achieved results during the first year – energy costs savings

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- * With implementing EnMS we are able to calculate our exact electricity needs
- * Good understanding of needs allow us to pick the electricity supplier with contract that fits the best with our consumption
- * Result of the above mentioned fact is that we get electricity price reduction of 30%
- * That is 70.000 EUR annual electricity cost reduction
- * This amount will be reinvested in energy conservation projects for 2017

Achieved results during the first year – energy savings

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- * On one SEU's where our efforts were focused we achieve up to 15 % savings
- * On total electricity consumption we have 1.5% savings which is 49 MWh only with **low** or **no cost** activities
- * For next year we plan to extend our activities to conservation of fuel consumption which has most intensive energy impact

Achieved results during the first year – non energy benefits

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- * Due to better operational control we found irregularities in the temper oven at an early stage thus avoiding fire hazards
- * Capability to calculate exact production price due to good allocation of energy usage
- * With regression models for calculating the EnPI's we are able to predict our future energy consumption
- * Bigger energy awareness of employees

Barriers at the moment

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- * Energy manager don't have enough time to fulfil all obligations
 - * If you want something done you will find way, if you don't want to you will find excuse
- * Employees are not competent enough to fulfil new obligations
 - * There are people who work in the company long time and they don't get any training for years. You'll be surprised how one trivial training can build their confidence and motivation for work.
- * Changing of People Behaviour Reality or Science fiction
 - * One of biggest energy saving potential in almost every company is changing people behaviour

Thank You for your attention!

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