Chemical Leasing – Business Model for Sustainable Chemicals Management

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Chemicals ...

- Worldwide more than 100,000 chemicals are in use
- Organic solvents damage the atmosphere
- Chlorinated hydrocarbons damage the atmosphere
- Cyanides and toxic metals (chrome, cadmium) endanger human health
It is recognized that the poor management of chemicals adversely affects human health and the environment, compromising disproportionately the urban and the rural poor, particularly women and children.

Need for sustainable chemicals management: one of the solutions
CASE STUDY IN SERBIA
KNJAZ MILOŠ

THE BIGGEST PRODUCER OF MINERAL WATERS IN SERBIA (250.000.000 liters)

FOUNDED: 1811
With sales of $6 billion and more than 26,000 associates, Ecolab is the global leader in cleaning, sanitizing, food safety and infection prevention products and services. They deliver comprehensive programs and services to foodservice, food and beverage processing, healthcare, and hospitality markets in more than 160 countries.
Chemical Leasing Project

Dry lubrication on the PET bottles packaging line 3, with possibility of implementation on another line, too.
Unit of payment:

*Number of working hours of the konveyor* **not** kilograms of chemicals

Changes:
Replacement of chemical, new equipment
Situation before Chemical Leasing

In order to have smooth move of bottles down a packaging Conveyor, it has to be lubricated. Before chemical leasing Knjaz Milos used lubricant (P3)LUBOKLAR GP - Ecolab) which has to be dissolved in water and sprayed through nozzles on the conveyor.
In order to apply new chemical, it was necessary to install different kind of nozzles and dosage system. It was finished in the beginning of October.
Situation after the Chemical Leasing Model implementation – benefits

Environmental benefits:

• Water is not used for the lubrication process (consumption will be reduced for 1500 m³ yearly);
• Sodium hypochlorite is not used for water pretreatment for the line PET 3 (consumption of active chlorine will be reduced for 7.5 kg yearly);
• Consumption of chemicals for waste water treatment will be reduced (can not be quantified as waste water treatment is done by Public Utility);
• The chemical for lubrication with dangerous characteristics is replaced with eco friendly one;
• Consumption of chemicals for lubrication is three times less than before ChL
Savings

Costs (EUR)

Before Chl

After Chl

Before Chl

After Chl L

Chemical Leasing
• CONTEXT
• CHEMICALS
• PRINCIPLES OF CHEMICAL LEASING
• CASE STUDIES
• SUSTAINABILITY CRITERIA
• CONCLUSIONS
Continuous improvement of environmental and health issues

Monitoring and systematic recording

Risk prevention or reduction

Transparent risk allocation and fair sharing of economic benefits

Avoidance of substitution by substances with higher risks

Improved energy efficiency

Chemical Leasing Sustainability Criteria
Thank you for your attention!