

EMAS at a German SME

10 Years of EMAS – A Success Story

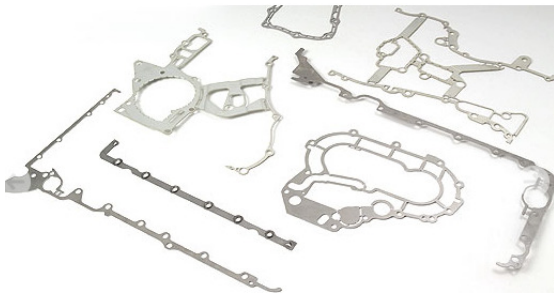


Kölle GmbH
WERKZEUGBAU
UND STANZEREI

Kölle GmbH Werkzeugbau und Stanzerei

- SME, metallprocessing, located in Vaihingen/Enz (Stuttgart), Germany
- 120 employees (subject to fluctuations, currently 104, thereof 70 blue collar)
- Approx. 18 Mio Turnover
- Main Products

Stamped Parts



Heat Shields



Rotatary Tubes & Misc



Tools



Environmental Data (as of 2016)

- Processing of aluminium (1,258 to, thereof 77% recycled), steel 0,332 to, thereof 71% recycled) and stainless steel (0,487 to, 46% recycled) → recycling due to scraps (leftovers being punched out)
- Consumption of lubricants for machines / production processes: approx. 11.000 litres (+9% → statistical noise, stable consumption despite increase of business)
- Recycling of oil-in-water emulsions / slag approx. 2432 litres (-42%)
- Recycling of packaging, cardboards, papers and wraps approx. 10.000 kg (-60%)
- Recycling of oil 1000 litres (-34%), 1 to of oiled filters/cloths (-62%) and 14 to of wood
- Consumption of 861.000 kWh, thereof produced 475.000 from renewable energies, of which 111.000 kWh from solar panels on premises (-9%, +140% use of renewable energy)
- 425.000 kWh of heat consumption distributed over 5 buildings (+32% → corrective actions being taken)

For more stats, please refer to www.koelle-gmbh.de/downloads - Umwelterklärung (environmental statement)

Figures of reduction refer to base data in 2010

Environmental Management – Main Activities

Required by Law and Regulations

- Organisation of proper recycling / disposal of metals, fabrics and lubricants including the documentation / proof of elimination / compliant disposal
- Tracking of all known and applicable laws and regulations (law roster & Umwelt online – Kölle is situated in a Wasserschutzgebiet – Water Protected Area)
- Monitoring relevant data (such as noise emissions etc)
- Managing the upkeep/inspection of all relevant machinery and installations (such as filters, oil traps, sewage systems, machines subject to UVV (German Accident Prevention Regulations), oil tanks, heating etc.
- Managing the upkeep and regular inspection of work health & safety hazards related topics
- Reporting work health & safety related incidents

As for Kölle, the environmental management includes that of energy management ISO 50001

Environmental Management – Main Activities

Required by EMAS / ISO14001

- Keeping track of all environmental related data incl. mapping of all emitters / consumers of energy (ISO/EMAS) and consumption thereof (EMAS for Environmental Statement)
- providing reports of environmental related data to top management (ISO/EMAS) and making it available to the general public (EMAS requirement only)
- Monitoring legal requirements & state of system by Third Party (EMAS supervisor registered by public authority – advantage over ISO14001)
- Formulating objectives & targets for constant improvement on a regular basis and subjecting them to a constant improvement scheme (based on PDCA – stricter requirements for EMAS, hence more effective)
- Strong employee involvement (EMAS requirement, hence inclusion of work safety & health related topics)
- Regular internal audits to monitor the system's state (ISO/EMAS: EMASeasy & Eco-mapping as possible methods)
- Managing the supply chain (ISO/EMAS)
- Managing other interested parties (ISO/EMAS - such as neighbours etc.)
- Managing/reducing environmental related risks (ISO/EMAS – flood risks maps etc.)

Environmental Management (EM) – in a Nutshell

- EM seeks to help organisations minimise their negative impact on the environment
- EM seeks to help organisation comply with applicable laws, regulations and other environmentally oriented requirements
- EM seeks to reduce the risks stemming from possible environmental transgression
- EM seeks to continually improve all of the above
- Both EMAS and the current ISO14001 seek to integrate the management systems with that of quality (ISO 9001 and 50001 most notably)
- EMAS allows a better understanding of the organisation due to more detailed reporting rules
- EMAS allows performance to be compared with other entities (benchmark)
- EMAS, being issued by a political body, facilitates financial support from other related bodies such as national or regional national agencies etc.
- Given the stricter requirements, EMAS is a comprehensive and demanding premium label – theoretical disadvantage is its being relatively unknown outside European markets, but ISO14001 is an integral part of EMAS – so far, no negative feedback from overseas customers.

EMASeasy™ – a short introduction

- New methodology
- It seeks to reduce cost and effort by offering hands-on tools and methods
- High involvement of staff
- Simple to understand and easy to implement
- Making use of simple methods and forms to help organisation introduce an Environmental Management System

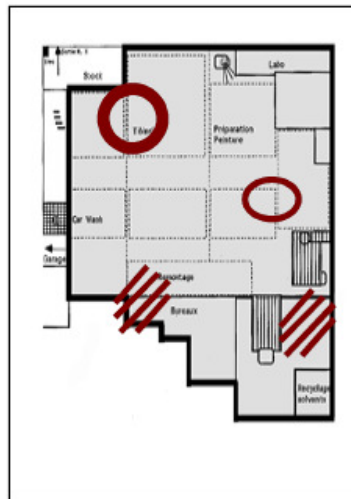
Main approach

- Mapping the company and auditing the organisation with ECOmapping™
- Creating FLIPO charts to find and evaluate environmental aspects
- Set corrective measures, targets and dates and list them into an action plan
- Analysing Input-Output → basis for Environmental Statement
- Mapping the processes and formulate objectives / targets
- Devising an Environmental Policy + Programm
- Creating environmental statement and have it validated by AMAS accredited environmental verifier

Ecomapping®

- Methodology developed by Heinz-Werner Engel in 1996
- Strong visual approach
- Other staff can be easily included without the need of costly training
- Site of deviations easily identifiable

Die Ecomaps



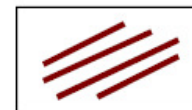
Symbole & Wertung



Dringend
Sofortiger Handlungsbedarf
(Erhöhtes Risiko, Rechtsverstoß
beseitigen ...)



Achtung
Handlungsbedarf /
Verbesserungspotenzial
(Umweltzielsetzungen)

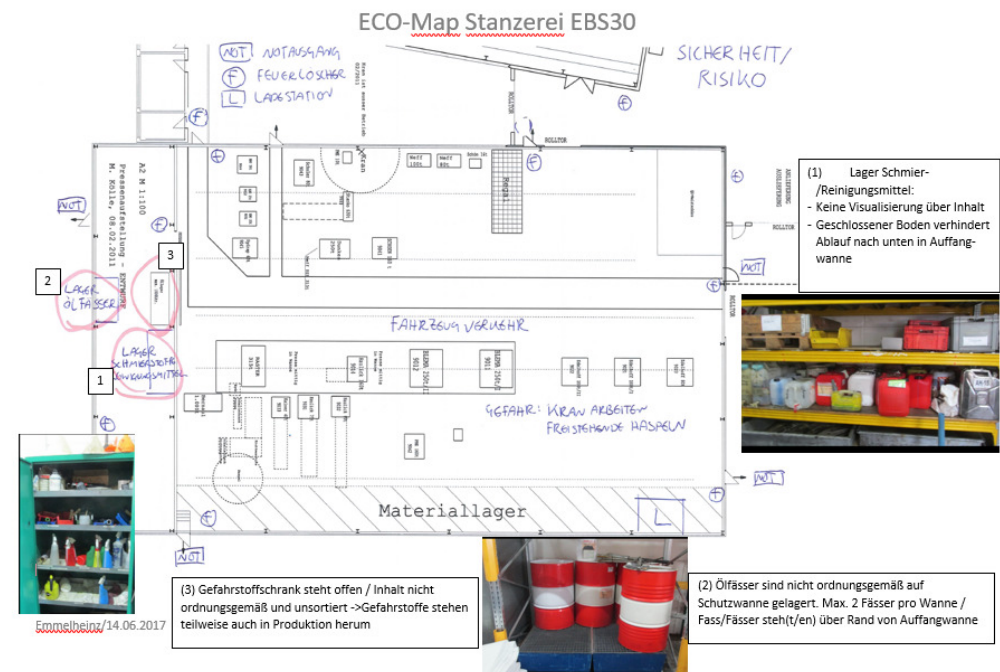
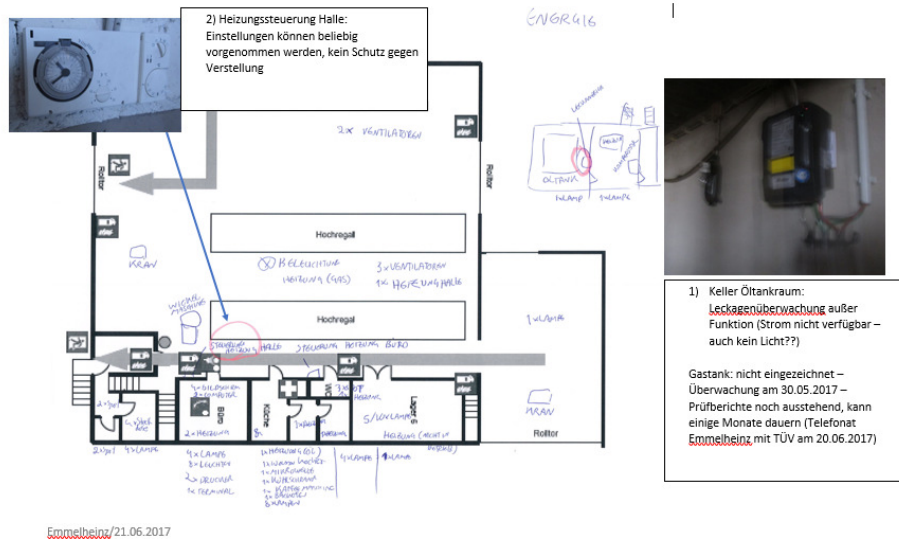


Wichtiger Umweltaspekt
Im Auge behalten
(Kontrollroutinen
einrichten.....)

ECOMapping cannot
substitute a system audit

Examples from Kölle GmbH (1/3)

ECO-Maps Energie Lager-Tafinger Straße 5 21.06.2017



ECO map warehouse and production – showing areas of improvement

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Excerpt of Input / Output Analysis

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em, 17.05.17

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Als Maßnahme wurde letztes Jahr eine Arbeitsanweisung erstellt, um sicherzugehen, dass die Deckenventilatoren bei eingeschalteten Heizstrahlern in den Fertigungs-, und Lagerhallen eingeschaltet werden, um die Luftzirkulation nach unten zu ermöglichen und zu verhindern, dass die warme Luft nach oben entweicht. Die betroffenen Mitarbeiter wurden benachrichtigt. Die technischen Möglichkeiten einer technischen Kopplung werden zurzeit geprüft. Des Weiteren empfehlen wir eine Sensibilisierung der Mitarbeiter, da die Änderungen in den bereinigten Verbräuchen sich weitestgehend auf das Heizverhalten der Mitarbeiter zurückzuführen lassen, da die technischen Rahmenbedingungen (Isolierung) seit 2015 gleichgeblieben sind. Da wir mit der temperaturbereinigten Formel eine Möglichkeit haben, die Temperaturschwankungen weitestgehend herauszurechnen, wird vom UMB die Empfehlung, diese Kennzahl als Basis für die zukünftigen Betrachtungen heranzuziehen.

M. Tetzner

Mohd EnnuBeng

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Excerpt of (hazardous) substance roster – keeping track of all substances in use at Kölle and their possible impact on health, fire prevention and requirements of handling

Example of Internal Objective Report – in this case on the reduction of heat waste

Challenges, Experience and Outlook

- Audits with ECOmapping: better involvement of staff without the need of external, expensive training
- Audits with ECOmapping: people are reluctant to start from scratch each year
- Environmental Statement: better overview of consumption and potential for improvement
- Environmental Statement: higher accuracy due to validation by accredited verifier
- Law roster: better counselling by EMAS verifier who is legally accredited
- Integration of management systems: challenge due to transition to ISO9001:2015 / IATF16949:2016 in 2018
- reduction of cost due to lower consumption of lubricants and other substances
- Better metrics – for example heat waste by relating kWh consumption to average outside temperatures