

Sustainability that pays off.

LISSMAC – ecological and economical floor cutting – a fully integrated system

LISSMAC

UNS BEWEGEN IDEEN

Preservation of resources due to minimal water consumption, as well as application of environmentally friendly drive technology, recycling of cutting/cooling water sludge through waste water treatment, recovery of raw materials, and reuse of cutting/cooling water, are all important factors that have been taken into consideration by LISSMAC in the development of our economical and ecologically sustainable floor cutting system.

Challenges with regards to sustainability:

- Efficient use of water
- Reduced consumption of fossil fuels
- Increased overall and energy efficiency
- Reduced exhaust fumes, pollutants, and sludge
- Reuse of recycled water

Initial situation:

Floor cutting processes have traditionally used too much water. Drive and exhaust technologies are frequently chosen by their minimum requirements, not taking into consideration their future-orientation with regards to environmental sustainability. The resulting cutting- and cooling sludges (that would actually be recyclable) are generally not collected and recycled, but are released into the environment. Economic argumentation supersedes ecological concerns.



Floor cutting systems that are energy efficient and preserve scarce resources

The solution – sustainable technology/sustainable projects/sustainable service; LISSMAC has developed a system solution in accordance with the following ecological aspects:

- a specially designed saw blade and flange spraying system reduce the use of cutting/cooling water to a minimum
- the cutting/cooling sludge is almost completely swept up and collected
- the employed drive technology is not only fully compliant with EU emission standards step IIIB and US EPA Tier 4, but represents the most advanced and progressive drive motor technology in the field today. It uses a small amount of energy and resources, while featuring

extremely high efficiency and low fuel consumption

- an additional exhaust gas drying device dries the joint completely
- the collected cutting/cooling sludges are routed via a peristaltic pump into a mobile waste water treatment system, which separates the water from the filter cake
- the raw material water becomes a renewable resource and can be reused indefinitely as cutting/cooling liquid within the floor cutting system

Sustainability strengths: Floor cutting system

The drive technology used in our floor cutting systems features resource saving low energy diesel motors, with low

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fuel and operating costs, integrated exhaust gas treatment systems, and are highly efficient.

Water extraction

The used cutting/cooling water dispensed at the joint during floor cutting, which would normally get released into the environment, is collected by a secondary aggregate efficiently integrated into the drive system. A hose pump routes the collected sludges into the mobil waste water cleaning system.

Waste water cleaning/raw material recovery

The integrated waste water treatment system allows for the recovery and re-use of the cutting/cooling water that is collected as sludge during the floor cutting process. The separated remaining rest material in the form of filter cake can easily be discarded.

The recovery of raw material, as well as the reduction of waste materials, both in volume and weight, reduce the disposal costs to a minimum.



Mobil waste water treatment system for resource recovery, as well as reduction of waste products

Relevant BLUecoMPETENCE topics:

The described innovation...

- improves energy efficiency
- preserves scarce resources
- minimizes emissions
- creates sustainable mobility
- avoids or reuses waste products
- reduces life cycle costs
- raises quality of life

The inventor:

Ecological and economical floor cutting – a team project! Throughout the years LISSMAC has created an ecological and economical floor cutting system, in response to the various market requirements, requests of communities, specifications of environmental protection and conservation organizations, as well the legislative norms and guidelines.

Short company profile:

Name: LISSMAC Maschinenbau GmbH

Headquarter's: Bad Wurzach

Year established: 1979

Number of employees: 260

Solutions: LISSMAC offers systems solutions in the business divisions/ markets of Construction Technology, Metal Processing, Material Handling, as well as Plant Engineering.

International presence: Production in Bad Wurzach (Germany) and Beckum (Germany), subsidiaries in USA and China, global distribution partners

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Facts:

Savings in concrete numbers:

- The employed drive technology is designed to provide optimum efficiency of the entire system while using a minimum of fuel, resulting in low operational costs
- The recycling process of cutting/cooling water saves up to 50% of fresh water
- The primary resource recovery reduces disposal costs of sludge to a minimum

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