

## ■ Metal working using cooling lubricants



## ■ The Task

The manufacture of metal and hard metal tools involves the use of cooling lubricants during the working of the metal. For the safety of both man and machine the resultant emissions, aerosol mist and soiling from residual metal have to be reliably separated and disposed of by separation systems. To recover costly cooling lubricant and return it to the machine and to reduce the load on the pipe system and the filter system it makes economic sense to deploy a preliminary separation system. The costs of maintenance in conventional separation systems are out of all proportion to the benefits.

Herding® separation systems (dust collecting system with sinterplate filter elements and preliminary separator) provide guaranteed clean air return and recovery of cooling lubricant.

As a complete system solution it is recommended that the new Herding® DeltaForce filter system be used, since this also filters the impurities in the separated cooling lubricant, then cleans it and prepares it for reuse.

## ■ The Solution

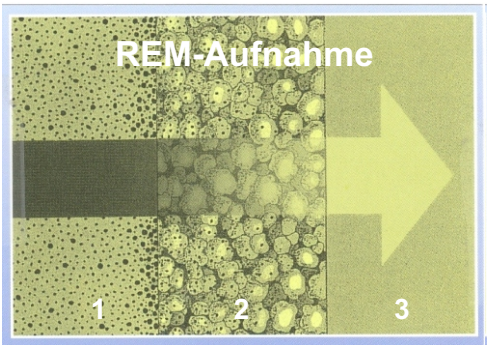
### Herding® complete system solution for cooling lubricant separation

- ⇒ Compact, rigid body, hence no flexing work in the filter medium
- ⇒ Constant air extraction rate thanks to sequential cleaning during extraction
- ⇒ Maximum convenience for the operator thanks to automatic controls
- ⇒ Compact, rigid body with a life expectancy of up to 10 years guarantees trouble-free operations
- ⇒ Clean air return in accordance with the German "TA-Luft" directive on air, hence savings on energy costs in winter
- ⇒ Washable, regenerable and recyclable filter elements
- ⇒ Recovery of cooling lubricants thanks to the complete system solution with DeltaForce

### Used in the manufacture of:

- ⇒ For exchangeable tools for metal working (drilling, milling, etc.)
- ⇒ Engine frames and camshafts in the automotive industry
- ⇒ Valves and fittings, coupling systems, screw connections, threaded inserts

Materials processing description of deep-bed filtration in the filter medium



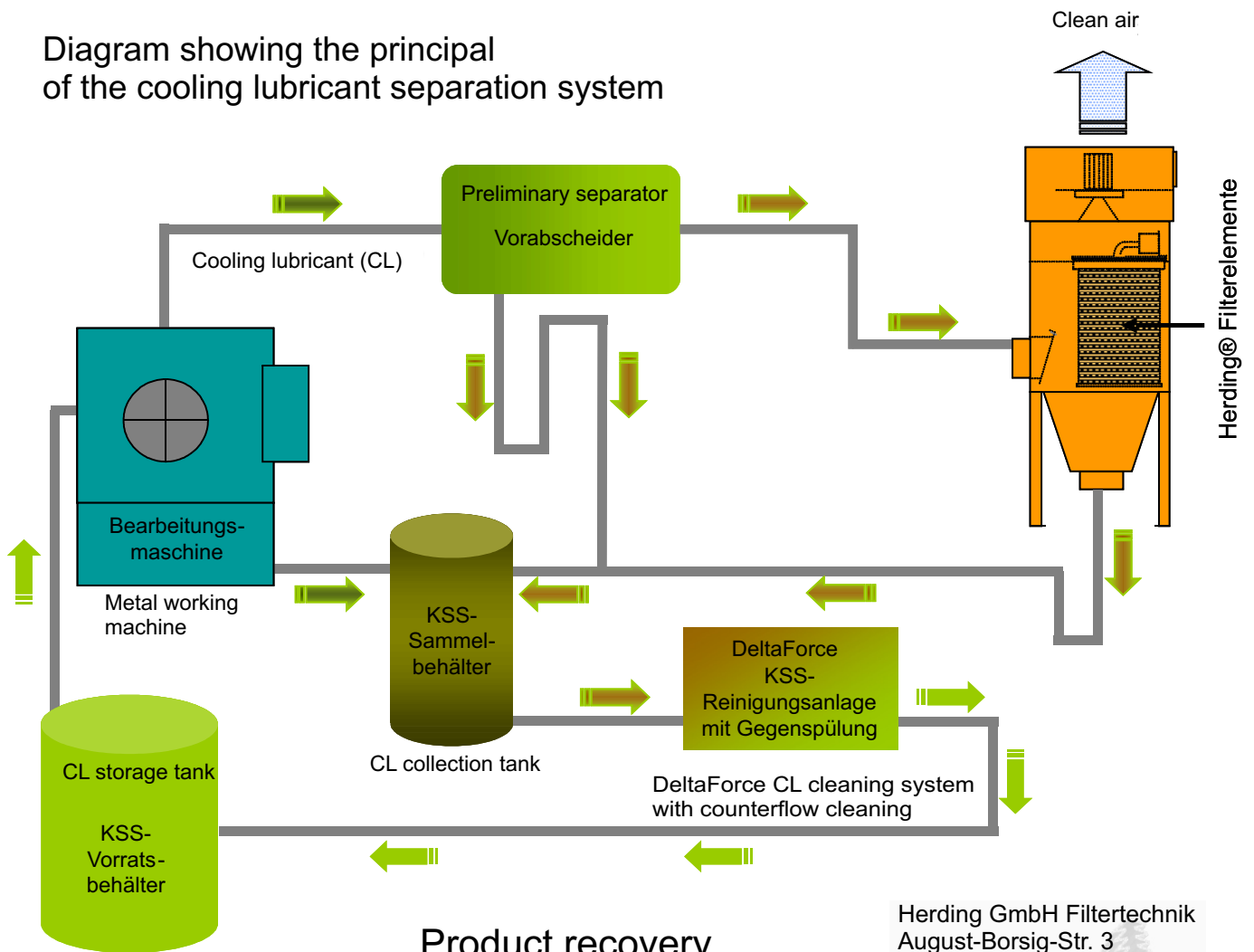
The aerosol mist/vapor is separated from the air containing raw gas in the deep part, in the open pores of the filter medium

Clean gas discharge via channel on the inside of the filter elements

Cleaning is by means of differential pressure-controlled pulses of compressed air against the inflow

- 1 Raw gas inflow from outside (deep-bed filtration)
- 2 Separation of the aerosol mist/vapor in the pores
- 3 Discharge of the cleaned gas

Diagram showing the principal of the cooling lubricant separation system



Product recovery

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