



Cleaning systems and –installations for cooling lubricants; mobile or stationary



Foreign oil separator FA 35
with telescopic skimmer for
emulsion maintenance



Opened cleaning
centrifuge RZS 60 with
rotor and pressuer pipeline



Cleaning centrifuge RZS 60 for
direct maintenance of the lubricant
in the production machine

is due to contaminated Cooling lubricant cleaning

Now as before, cooling lubricants are necessary for metal working. Irrespective of their character, they are subject to mechanical and thermal loadings as well as to intensive contamination. These extreme requirements reduce by means of increasing use – often unnoticed – the quality of the cooling lubricant. The contamination causes an intensive wear on the slide bars, reduces the lifetime of the tools and deposits within the production machine. These disadvantages can be minimized by appropriate filtering systems.

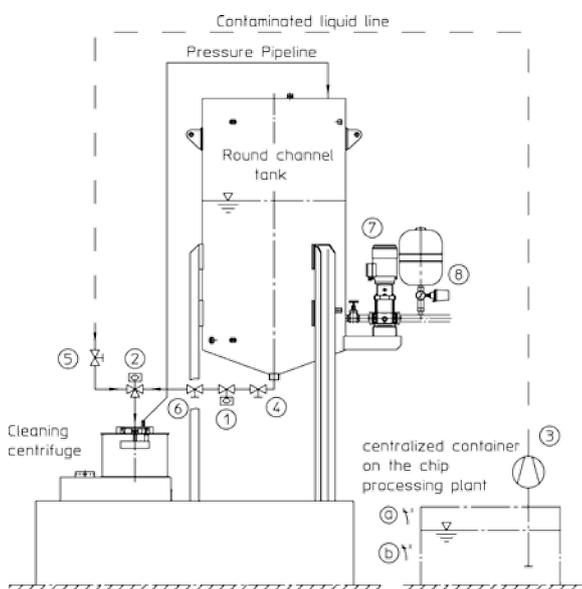
The different filtering systems will be divided in the groups: systems with filter aids and systems without filter aids. If you use systems with filter aids (filter cartridge, filter paper etc.), these will cause always additional operation costs to the normal operating costs for the new procurement and for the waste disposal. Concepts without filter aids cause only net operating costs. To the last mentioned procedures belong for example the permanent magnetic systems which can be used only against ferritic contamination and the procedures of centrifugal engineering which are suited for the removing of quasi all solid matter contamination. This engineering will be transformed consequently in our installations and possibly in the most simple way. The using center of gravity oil cooling lubricants. As the sketch shows hereunder, our stationary systems work according to the bypass principle with autarky control system and are therefore also suited for the retrofit of existing chip processing plants.

Our mobile aggregates work according to the same principle, however, in connection with the production machine.

In the sketch below, the cutting oil regained in a chip processing plant will be collected in a centralized contain-

er behind the chip centrifuge and will be precleaned by means of a mesh bottom from the most coarse contamination. The level sensors of the container operate the cooling lubricant-cleaning installation. The signal of the Max-sensor „a“ occasions the Sp-control system to close the stop valve „1“ on the round channel tank, to bypass the directional control valve „2“ and to start the pump „3“. The contaminated oil will be pumped to the cleaning centrifuge, there it will be precleaned and will be pressed with the peeling pipe of the centrifuge into the round channel tank. The Min-sensor „b“ stops the feed pump „3“, bypasses the directional control valve „2“ and opens the stop valve „1“. Now, the real cleaning cycle follows, the bypass-function has been initiated. By means of a tangential streaming the oil will be kept into motion in the round channel container, it flows in a circle. Through that the residual soil particles will be kept intentionally in suspense and the dirt sedimented will be collected in the center of the container. All residual particles will be supplied again by means of the central outflow connecting pipe to the cleaning centrifuge and there, they will be separated. This cycle will be repeated until the new reversing of the process described at first. This exchange cycle and the cleaning working cycles which will be repeated infinitely frequent, guarantee a high purity of the oil by minimized costs.

The expenditure of cleaning the centrifuge lasts about 5 min. The round channel container has a self-cleaning effect and is almost maintenance-free. By means of a connection in series of a magnetic separator, the lifetime of the centrifuge can be prolonged.



Technical Data

Standard indications		RZS 20	RZS 60	RZS 100
Rotational drum speed	rpm	4460	3620	3000
Separation factor	g	2000	1800	1800
Contents of the drum	dm ³	3,0	4,5	15
Mud volume	dm ³	1,5	3,0	10
Pressure of pipeline	bar	ca. 0,3		
Volume flow (by 1cSt)	l/min	ca. 35	ca. 90	ca. 150
Volume flow (by 21cSt)	l/min	ca. 20	ca. 60	ca. 100
Driving power	kW	0,75	2,2	4,0
Working voltage	VAC	400		

- 1 = Security stop valve
- 2 = Distribution valve prepurification/bypass
- 3 = Pump contaminated liquid
- 4 = Service valve
- 5 = Volume flow-control valve precleaning
- 6 = Volume flow-control valve bypass
- 7 = High pressure pump for central supply
- 8 = Pressure control module