

ANDRITZ separators for coolants and washing liquids management



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In the metalworking industry, there is an increasing need to comply with environmental legislation and to deal properly with industrial fluids in order to improve plant operating conditions overall and be more competitive. ANDRITZ SEPARATION helps you to develop innovative solutions for the disposal and recovery of industrial fluids by providing a wide range of separators for liquid/solid and liquid/liquid/solid separation. Our concentrators guarantee efficient cleaning of industrial fluids, reduced operating costs, and a lower environmental impact.

Coolants management

Coolants are water-based emulsions used to keep cutting tools cool during machining work for metal removal (milling, turning, grinding, deep drilling, lapping, and so on.). The progressive accumulation of contaminants in the recirculated coolant contributes towards the rapid wear on the cutting tool and on the machine tool itself. At the same time, contaminants (metal particles, tramp oil, dirt, etc.) may be deposited on the parts manufactured, with unexpected consequences in the subsequent manufacturing steps. Another negative effect of contamination with tramp oil is the risk of anaerobic bacteria growth in the collecting tank, emitting unpleasant smells and causing allergic skin reactions among the machine operators.

Our separators can remove such contaminants efficiently. Contamination takes place during operation, and the fluid is then collected in different tanks or in a centralized collecting tank. Maintaining a low level of contaminants in the coolants will result in a longer lifecycle by up to 4 or 6 times compared to the service life achieved with alternative systems (skimmers, paper band filters, lamella separators, etc.). Reducing the amount of waste coolant contributes towards reducing disposal costs and also the environmental impact.

New metalworking technology requires greater care

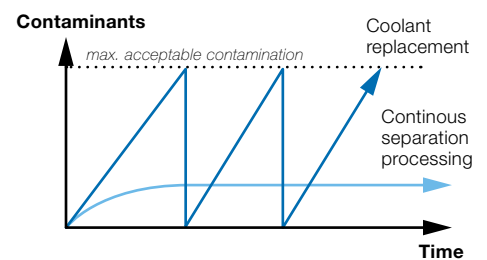
By introducing high cutting velocity and in cooperation with cutting tool manufacturers, machine tool manufacturers have developed high-performance equipment that reduces machining time. In order to achieve this, the coolant is fed into the tool shaft at very high pressure and reaches the cutting area through the hollow cutting tool. As a result, a new, high-pressure fluid cooling system has been introduced. In this new generation of machine tools, high coolant quality is more important than in traditional machine tools. Clean coolant ensures a 30% longer lifetime for tools and protects high-pressure pumps against unexpected breakdowns.

Why change?

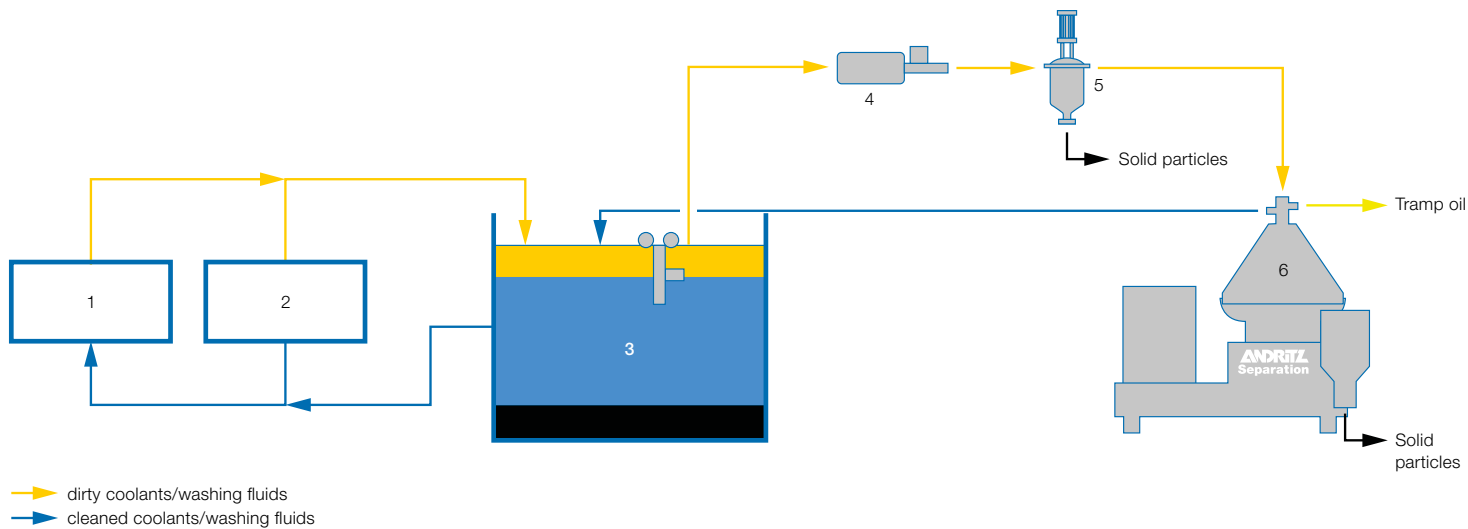
Very fine metals particles are unlikely to be removed by traditional systems, like paper band filters, lamella filters, skimmer filters, magnetic filters, and automatic filters. ANDRITZ Frautech separators can remove all metallic particles measuring up to 2-3 micron. In addition, all of the tramp oil contained in the coolant and washing fluid can be removed entirely in our centrifugal separators.

Washing fluids management

Before painting or other surface finishing, every manufactured part requires a washing stage in order to remove oil, grease, and solid particles. To maintain the maximum washing capability of the fluid and the washing system itself, contaminants must be removed constantly. Even if the washing system operates by immersion or by fluid spraying using water-based or solvent-based solutions, our separators can clean the washing fluids efficiently, enhancing the quality of the washed parts. Maintaining a low level of contaminants in washing fluids will increase the service life of the equipment by up to 10 times. Prolonging the lifetime will reduce the disposal costs and also the environmental impact.



▲ Continuous cleaning

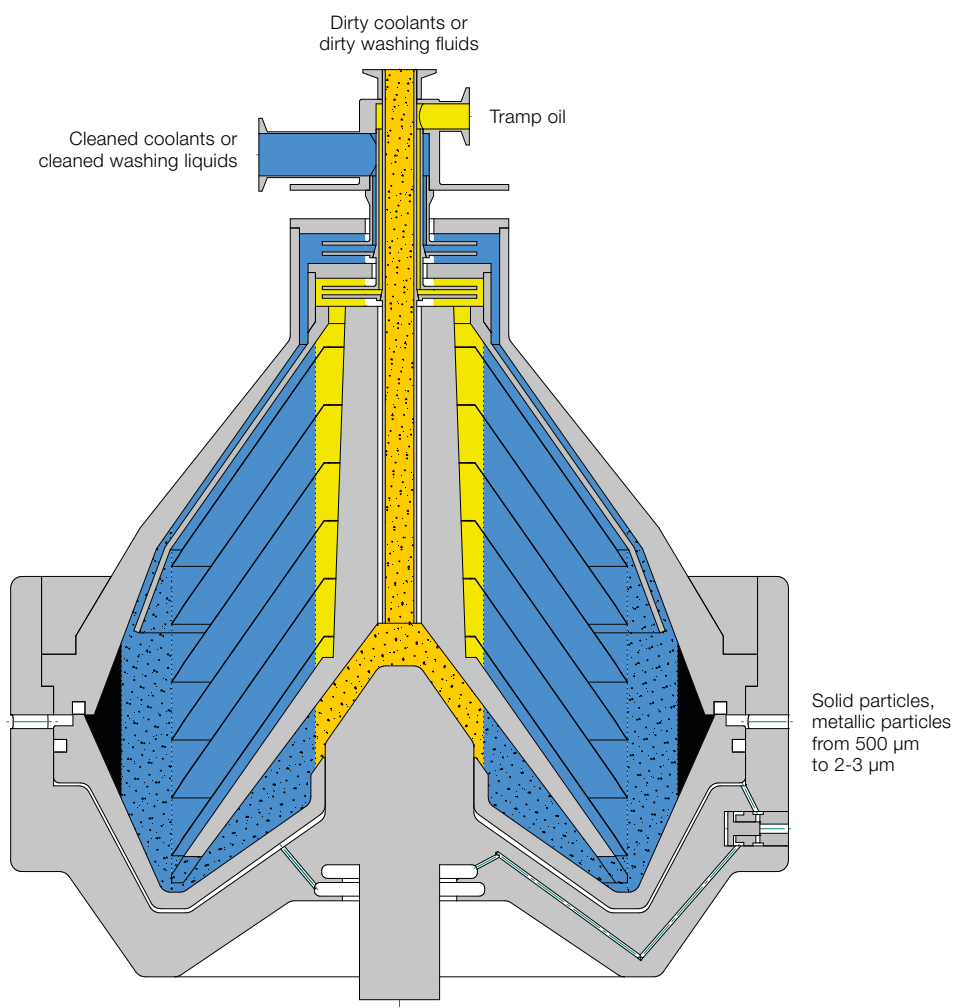


▲ 1.2 Machine tools or washing machines, 3. Centralized tank, 4. Pump, 5. Prefilter, 6. Separator

Centrifugal systems operate in by-pass mode with a collecting tank. Experience has shown that good coolant quality is obtained if the tank has a capacity equal to 20 times the hourly flow rate of the separator.

Your benefits

- Longer service life of cutting tools, machine tools, pumps, and washing systems
- Higher surface quality of manufactured parts
- Reduced maintenance
- Less consumption of coolant and washing fluids, saving on costs for fresh fluids
- Coolants and washing fluids are always clean and maintain their characteristics and chemical properties due to lower oxidation and acidity
- Self-cleaning separators do not require operator supervision
- Reduced downtimes
- Healthier workplace
- Reduced disposal costs
- Continuous processing
- Optimum performance with minimized footprint



Separator type	Model	Coolant flow rate (l/h)	Washing fluid flow rate (l/h)	Motor (kW)
Solid bowl	CN10 EMO	800-1,300	800-1,300	1.8
Solid bowl	CN31 EMO	1,500-2,500	1,500-2,500	4
Self-cleaning	CA21 EMO	1,500-4,000	1,500-4,000	4
Self-cleaning	CA40 EMO	4,000-6,000	4,000-6,000	11
Self-cleaning	CA41 EMO	4,000-6,000	4,000-6,000	11
Self-cleaning	CA70 EMO	8,000-10,000	8,000-10,000	15
Self-cleaning	CA71 EMO	8,000-10,000	8,000-10,000	15
Self-cleaning	CA151 EMO	16,000-20,000	16,000-20,000	22

Fields of application

- Treatment of coolants
- Treatment of washing fluids

Scope of supply

- Skid mounted separator, concentrator version
- Control panel
- Suction device
- Feed pump
- Self cleaning separators include: automatic prefilter, flow meter, sludge tank, sludge pump, piping, and control valves
- All parts in contact with the product made of stainless steel
- Steel base where all components are pre-assembled and tested for plug and play



▲ CA21 EMO complete system

AFRICA

ANDRITZ Delkor (Pty.) Ltd.
 Phone: +27 (11) 012 7300
 Fax: +27 (86) 636 2122
separation.za@andritz.com

AUSTRALIA

ANDRITZ Pty. Ltd.
 Phone: +61 (3) 8773 4888
 Fax: +61 (3) 8773 4899
separation.au@andritz.com

EUROPA

ANDRITZ Frautech S.r.l.
 Telefono: +39 (0445) 57 5695
 Fax: +39 (0445) 57 6723
separation.it@andritz.com

SOUTH AMERICA

ANDRITZ SEPARATION Ltda.
 Phone: +55 (47) 3387 9110
 Fax: +55 (47) 3387 9103
separation.bra@andritz.com

ASIA

ANDRITZ Singapore Pte. Ltd.
 Phone: +65 (6512) 1800
 Fax: +65 (6863) 4482
separation.sg@andritz.com

CHINA

ANDRITZ (China) Ltd.
 Phone: +86 (757) 6663 3419
 Fax: +86 (757) 6663 3448
separation.cn@andritz.com

NORTH AMERICA

ANDRITZ SEPARATION Inc.
 Phone: +1 (817) 465 5611
 Fax: +1 (817) 468 3961
separation.us@andritz.com

andritz.com/separation