Coolant filtration is an essential element in the rolling and forming of all metals. Primetals Technologies supplies the Schneider® Coolant Filtration system for aluminium hot and cold mills, steel, stainless steel, copper/brass mills and for 2-piece can-making plants.

The market leader in the design, supply and operation of mineral oil and emulsion coolant filtration systems, Schneider Filtration ‘know-how’ from Primetals Technologies will improve performance and product quality throughout the rolling and forming process.

The very high levels of filtration achieved for both mineral oils and emulsions when using the Schneider Coolant Filtration system maintains the coolant in ‘as-designed’ condition. The system extends the life of the coolant providing exceptional sheet surface and foil quality. Specific system design features and auxiliary components are unique to the technology.

Today’s modern semi-synthetic coolants require a different approach to coolant handling and filtration. Traditional methods do not meet the new demands for cleaner low smut sheets-, and for the conditioning of the emulsion to keep the coolant to its original design specification. Filtration to and below the oil droplet size is easily accomplished with specially designed filter cloth media for filtration using multiple layers of different media.

REFERENCES
Over 1400 Schneider Coolant Filtration systems are being used today to roll, Aluminium, Steel, Stainless Steel, Copper/Brass, Titanium, Zinc and similar metals. The Schneider system has become the industry standard in the rolling and can industry.

BENEFITS
• Improved filtration performance
• Improved product quality
• Patented green filter media is safe to handle, no dust hazard
• Reduced waste streams, zero waste available
• Eliminates coolant dumps
• Low operating costs
• Improved process performance
FEATURES

Filter Unit Filter Unit System and Process

Automatic hands-free paper/cake separation (patented), without rewinding Automatic filtration efficiency to below 10ppm
Hands-free automatic paper discharge, without attaching to mandrels Fully automatic (patented) Auto-Rate bodyfeeding according to rolling conditions
Requires much less manual work for the operator compared to other similar filters ‘Green’ filter media
No plate seals used that restrict paper use/thickness or cause leaks and risk of fire No additives removed by filtration
Automatic flow control, no air control balancing required Latest static reduction techniques – safer system
Full graphics touch screen, intuitive menu without keyboard System design for low conductivity oils, below 50 ps/m
Full display and data logging of system parameters Flow control by feedback with variable speed pumps or automatic servo valves
Monitoring and automatic control from real-time continuous particle measurement Patented filter media is safe to handle, no dust hazard
Integrated hydraulic power unit, no external supply needed Real time particle counter
Single level paper roll storage – easy roll change

BENEFITS

Results – Steel Results – Aluminium System Design

The following results are reported from a 4-hi single stand steel mill:

Coolant kept to design specification ‘No sludge’ tanks

Surface residual iron: 10-20 mg/m² 200ppm with specialized media Reduced waste streams
Residual iron in coolant: 60-80 ppm 100ppm with Acti-Cel C media Tramp oil to very low levels
Work rolls - finish: 25Ra Smoother rolls Eliminates coolant dumps
Roll changes: Reduced by 90% Indefinite long coolant life Removes metallic fines through SRC technology
Oil changes/dumps: none Increased roll life
Post roll cleaning: none Consistent coolant chemistry
No magnetic filters necessary

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