



Coolant Recycling 101

Introduction

The efficiency of manufacturing relies on two things: expert employees and equipment longevity. One way to ensure that one half of this equation remains strong is through coolant recycling.

In this eBook, you will learn:

- What is Coolant Recycling?
- How to implement Coolant Recycling in your facility
- Which Coolant Recycling option is best for you



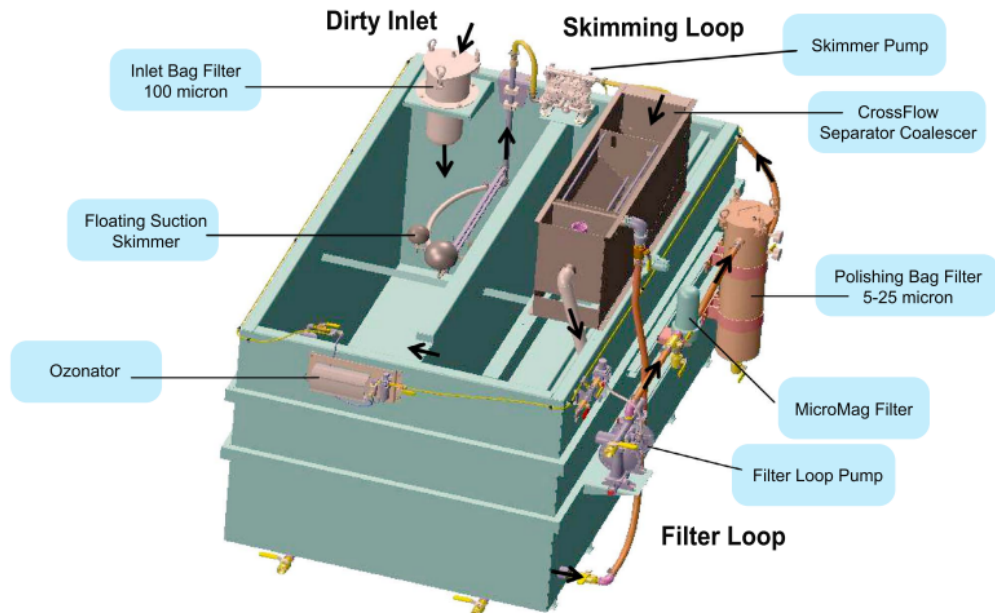
Table of Contents

TABLE OF CONTENTS

1. Introduction
2. What is Coolant Recycling?
3. Why Coolant Recycling?
4. Selecting a Coolant Recycling System
5. What is SmartSkim Coolant Recycling?
6. Aerospace Case Study
7. Golden State Case Study

What is Coolant Recycling?

Manufacturing processes are inundated with lubricants and other industrial fluids. Managing these industrial fluids can result in extensive fluid costs and environmental maintenance. One way to mitigate these concerns is through coolant or fluid recycling.



Coolant Recycling Process

1. Dirty fluid flows through an inlet by a sump sucker, drum, vacuum, or a manual process.
2. Large debris and particles sucked in is grabbed by a strainer.
3. Once the large debris is removed, the surface is skimmed by a floating suction skimmer that directs the fluid through oil and water separators. This will remove both non-emulsified oils and gross solids.
4. Finally, the clean treated fluids will gravity flow from the separator into a clean tank.
5. It includes a magnetic filter and filter bag to supply coolant back into your operations.
6. Your coolant is now available for reuse.

Why Coolant Recycling?



"It is easy to install and operate the equipment. The equipment was installed in June and at the close of the month of December **there was a saving in 6 months of \$127,787, a monthly average of \$17,541."**

- R Sanchez, Maxion Wheels

Reduce fluid purchases, including coolants, cleaners and other industrial manufacturing chemicals **up to 65%**

Reduce costs related to the disposal of waste coolant and other industrial chemicals **up to 90%**

Extend the life of tooling, pumps and other valuable production equipment because of cleaner fluids

Enhance the work environment and worker safety by removing contaminants from fluids

Greatly reduce the man-hours spent managing coolants

Safeguard employee health, safety and morale due to reduced dermatitis, misting, smoke, bacteria and odors

Selecting a Coolant Recycling System

"The equipment is almost maintenance-free, no moving or sensitive control parts, making it easy to operate. Training only requires 2-4 hours to understand its operation and operate."

R Gomez, American Axle and Manufacturing



Attributes

- Designed for easy installation
- Minimal maintenance resulting with little to no downtime
- System typically has a payback of 9 to 12 months
- System is adaptable to your operations - small, medium or large
- Calculated waste reduction is typically 80-90%
- Proven control of coolant concentration levels

SmartSkim CoolantLoop Recycling

SmartSkim's CoolantLoop Recycling System is a decades-proven, multi-patented technology that meets and exceeds the recommended system attributes. Tramp oils, solids, and bacteria all are removed by the following features harmoniously working together.

- Dual compartment processing tanks can help you store dirty and clean coolant
- Floating suction skimmer assists in removing tramp oil
- Oil separation technology removes non-emulsified oils from valuable water-soluble coolant solution
- Additional filters aid in removal of any smaller particles
- The ozone generation effectively kills bacteria and odors from the environment
- Sentry retrofit components available to improve efficiencies and outdated systems regardless of the system brand



CASE STUDY: Aerospace UPECA



Senior Aerospace UPECA is an engineering solutions provider who produces products for structures, fluid conveyance and gas turbine engines. They were looking to reduce their dirty coolant disposal costs before they go to high.

They found their solution through purchasing two SmartSkim CL1200, one for the aluminum production line and the other for the titanium production line. Once installed, they saw a rise in annual savings for coolant purchases, annual savings in disposal costs, and a significant increase in tool life.

"All Systems are doing great and working well! The sump-cleaner is an extremely effective system which makes it easier for us to suck out within 10-15min on our tanks during our cleaning and also can be pumped back easily."

S. Sugumaren

Assistant Maintenance Manager- Senior Aerospace UPECA

SmartSkim CoolantLoop Recycling

Sentry CoolantLoop Recycling Systems come in a variety of scalable sizes for a multitude of operations. In order to select your correct size, your team needs to identify the available space and coolant needed to clean. Other factors include the amount and size of sumps as well as disposal costs.

These factors should help you select the right equipment for your needs from below. If not, don't hesitate to [contact our team](#) and have them assist with the calculation.

Standard CoolantLoop Systems				
Model	Tank Size (gal) Clean/Dirty Side	Length (inches)	Width (inches)	Height (inches)
CL400	400 total	63	65	76
CL800	400/400	72	77	83
CL1200	600/600	101	77	83
CL2400	1,200/1,200	104	140	84



Regardless of equipment size, all SmartSkim CoolantLoop equipment requires the following:

- 30 PSI of clean, dry plant air as the system uses approximately 5-15 SCFM of air
- 120V outlet, but has an option of 240 available upon request
- 3/4 inch NPT water line at 40 PSI for coolant makeup proportioner
- Regular maintenance for maximum success

CASE STUDY: Golden State Engineering



Golden State Engineering is an Aerospace Screw Machine house. They want to stay ahead of regulations and reduce emissions to provide a safe working environment without breaking the bank.

They found their solution through the SmartSkin CL800 CoolantLoop Recycling System that removes the non-emulsified tramp oils and removes particles through filtration systems. The system infuses ozone into the coolant while it is circulating to kill bacteria that is created with the presence of tramp oils.

They reduced 50% of coolant and disposal costs, reduced emissions and improved safety.

"I've reduced my coolant costs by half, my disposal costs by half, and even my water bill has gone down. I've gone the last two months without even buying coolant at all. Our SmartSkin's ability to filter the coolant has surpassed our expectations."

J Neal

Facilities Manager- Golden State Engineering

SmartSkim by Sentry Equipment

Sentry Equipment's best-in-class manufacturing backs SmartSkim products. With their Quick Response Manufacturing processes, quality material, and top of the line welding facilities, your facility can be assured that your CoolantLoop system will be the highest quality.

Each CoolantLoop system is backed by technical and sales experts with over 35 years of industrial fluid experience. Ensuring that you will have quality equipment now and in the future.

Our team will even visit your facility and your team to discuss the best options and possibilities and get the process started!





SmartSkim



A SENTRY EQUIPMENT PRODUCT

Find more information on CoolantLoop and other SmartSkim products by visiting our website.

[LEARN MORE](#)

