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The Benefits of Removing Oil from Water

OILSKIMMERS, INC.®
The Oil Removal Solution Experts®

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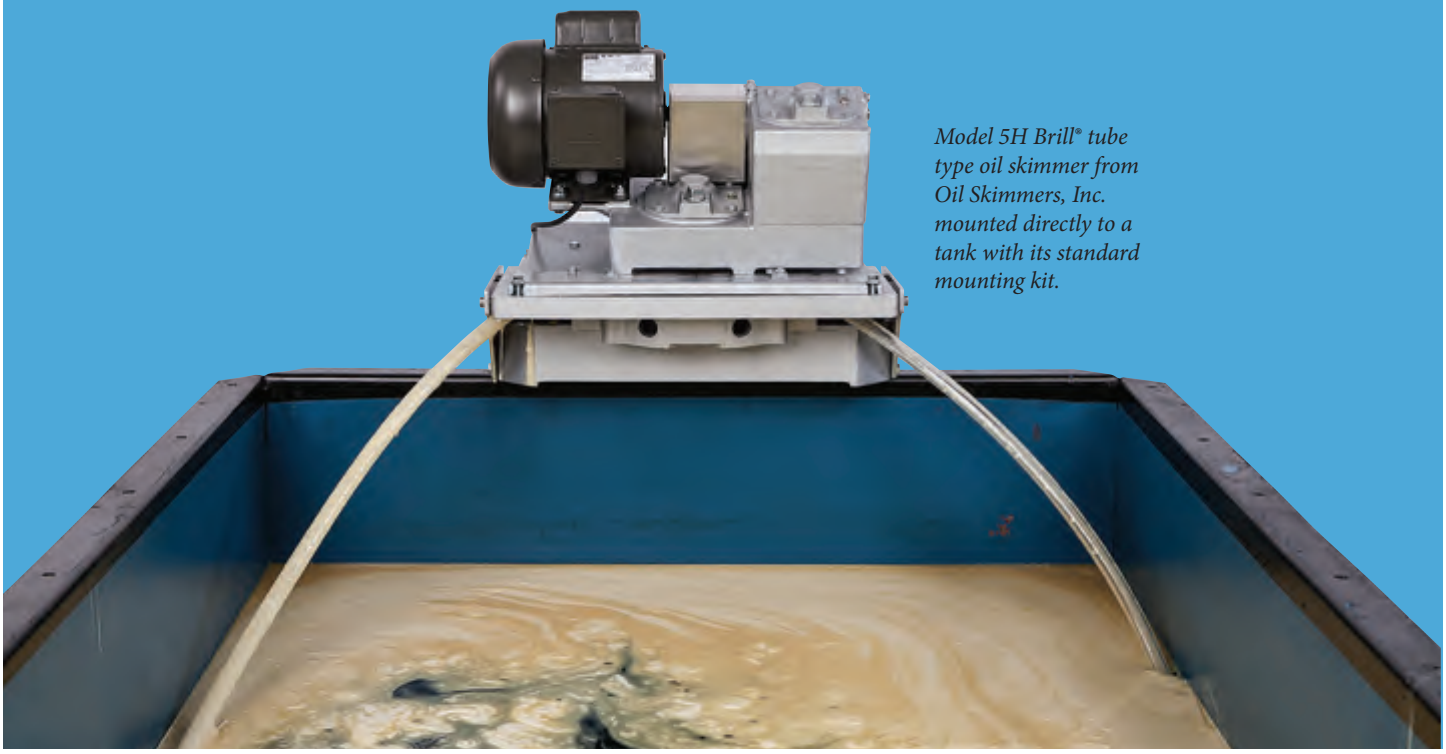


Model 5H Brill® tube type oil skimmer from Oil Skimmers, Inc. mounted directly to a tank with its standard mounting kit.

Why is Removing Oil from Water Important?

In just about every industrial process on earth, whether it's making steel or cosmetics, food processing, mining, railroads, or construction, water plays an important part of a company's operations. Similarly, in most, if not all of those same industries, oil plays some kind of role. It may be lubrication oil, fuel oil, or the process itself may consume or produce oil - such as in chemical plants and oil refineries. Chances are, at some point, water comes into contact with oil.

In today's world, the environmentally and economically conscious seek to recycle and reuse both water and oil. The very first step in any recycle or reuse process is to separate the oil from the water.

Model 1H Brill® tube type oil skimmer from Oil Skimmers, Inc. shown with adjustable frame mount.

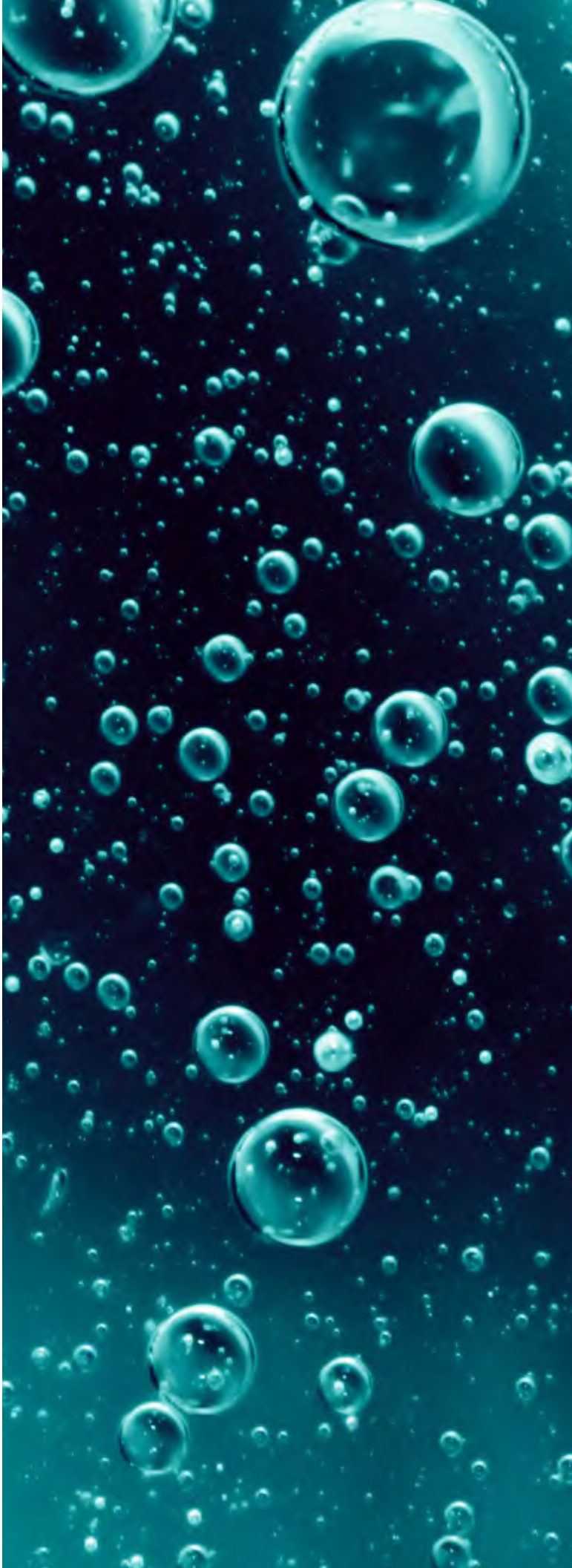
Removing oil from water, whether process water or wastewater – is important for a number of reasons and can offer significant benefits such as:

- reducing costs
- generating new revenue
- enhancing environmental responsibility
- providing safer work environments
- improving overall operations

It is important to remove oil as close to the point of origin as possible (where oil enters the wastewater stream). Why?

First, removing oil before the wastewater stream "mixes" with oil-free water will greatly reduce the scope and associated costs of down-the-line wastewater treatment equipment. Oil tends to foul downstream filtration equipment. The more the oil mixes with water, the bigger the scope of the eventual recycling task.

Second, removing oil early in the process, before it can combine with other contaminants in the waste stream, allows it to retain its value for recycling and reuse within the facility, or for sale to oil recyclers.



Manufacturing

For manufacturing companies, water is typically used throughout the manufacturing process as part of the product, to cool or wash down machinery, or clean parts, for example. During these processes, water often mixes with oil. This oil can come from the process, the machinery used, or in some cases, carried in on the finished product itself.

Power Generation, Oil & Gas, & Railroad

For companies in industries like power generation, oil and gas production, railroad, or transportation, used water often results in a waste solution that may encompass a variety of substances – from lubricant or hydraulic oil, to crude oil, fuel and more. Regardless of whether a facility reuses the water or sends it to a treatment plant, if oil is present, it must be removed.

What is Oil Skimming?

Oil skimming is the process of removing oil from the surface of water.

Oil skimming is one methodology of removing oil from the surface of water. There are a number of oil skimming devices and technologies depending on the type and the scope of the challenge – from large systems used on the ocean, to small units found in a local machine shop. Some skimmer designs feature rotating drums, discs, belts, ropes, or floating tubes to which oil adheres. Others float in the water and feature a central overflow weir. Depending on the application, some are more effective or efficient than others, but all are designed to remove the oil from the surface of an oily water mixture.

The Model 7V Brill® tube type oil skimmer from Oil Skimmers, Inc. features a 1" diameter floating collector tube, epoxy coating, and variable speed control.

The ORTS® is a complete oil removal and transfer system. Comprised of Brill® tube type oil skimmer, decanter, oil storage tank, transfer pump and controller.

Fully enclosed & gasketed, the ESS (Enclosed Skimming System) is protected from the elements, and vapor sealed to contain VOCs.

01

Oil Removal Benefit No. 1

Reduces Costs

Opportunities to reduce costs by using skimming technology to remove oil from water include:

- Increasing the potential to reuse water for production processes
- Reducing overall water consumption by extending the life of process water as well as coolant fluids
- Extending the life of, and reducing the maintenance required for, water and coolant filtration equipment
- Reducing the amount of chemicals needed to treat process water or wastewater
- Reducing costs associated with wastewater disposal

Cost-Reduction Success Story

Steel Manufacturing

A steel manufacturer with a 148” plate mill and 86” hot strip mill saved approximately $400,000 per year by using an Oil Skimmers, Inc. oil removal system to recover 15,000 gallons of high-grade lubrication oil each month that was mixing with the cooling water.

02

Oil Removal Benefit No. 2

Generates New Revenue

Often, oil recovered by skimming holds significant dollar value and can be sold for profit:

- High quality waste oil can be cleaned and recycled into new petroleum products
- Industries that produce biodiesel, soap or animal feed may be consumers of reclaimed oil

New Revenue Success Story

Food Production

A producer of canned meats uses a Brill® tube type oil skimmer in its water pre-treatment system to draw off the fat generated during the cooking process, resulting in the recovery of 10,000 pounds of waste oil per week. The company is able to sell the skimmed oil to a reclaimer and earns $2,500 to $5,000 a month.

03

Oil Removal Benefit No. 3

Enhances Environmental Responsibility

Removing oil from process water and wastewater helps companies employ cleaner operations and reduce pollutants in the water. Additional benefits include:

- Saving on overall water consumption and usage, as less water is needed and wastewater can often be reused following oil removal
- Reducing or eliminating the need to use water treatment chemicals
- Enhancing the ability to reuse and/or recycle skimmed oil
- Helping address environmental concerns regarding oil-related contaminants
- Aiding in meeting established environmental standards and regulations, such as reducing the discharge of conventional pollutants (EPA) in wastewater as well as other industry-specific regulations

Environmental Success Story

Oil and Gas

By using a skimmer as the centerpiece of their oil removal systems, a petroleum specialty products distributor reduced the amount of oil in its wastewater by about 99%, meeting state guidelines and avoiding costly penalties. The company was able to meet state compliance thresholds each month, beginning with its very first test. Failure to comply would have meant the loss of its operating permits, forcing the company to shut down.

04

Oil Removal Benefit No. 4

Provides a Safer Work Environment

When left to linger, oil can trap anaerobic bacteria in wastewater or process water.

Using an oil skimmer can:

- Diminish the opportunity for bacteria to grow on stagnated oil which will minimize foul odors and skin disorders resulting from the bacteria

- Create movement on the surface of the water as it removes oil, both of which reduce the opportunity for bacteria to grow on, and under, the surface of the oil

Safer Work Environment Success Story

Metal Machining

One metal machining company used an oil skimmer to remove oil from the water it used to cool its grinders and saw a substantial decrease in the number of grinder operators suffering from dermatitis.

05

Oil Removal Benefit No. 5

Improves Overall Operations

Delivering numerous advantages to production and wastewater treatment processes, oil removal systems employing oil skimmers bring various improvements to overall operations, including:

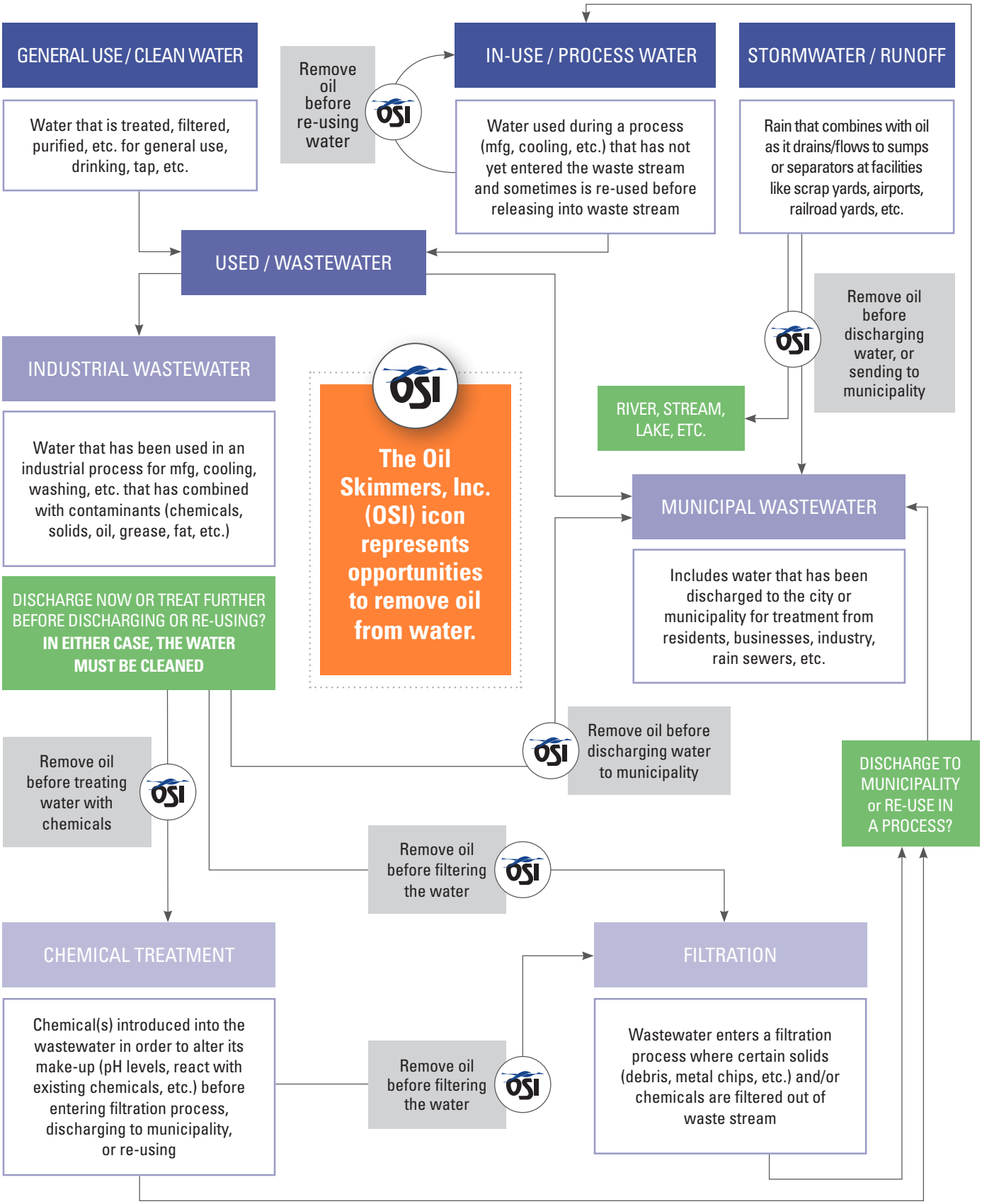
- Extending the life of process water, which reduces maintenance and service needs associated with make up and discharge
- Improving the efficiency of parts washers. Removing oil extends the life of wash water, and cleaner parts make for higher quality painting, coating, or treatment downstream
- Removing contaminants that affect longevity and performance of coolants, and shorten tool life in machining operations
- Preventing clogged spray nozzles and filters
- Improving overall wastewater treatment system efficiency, which decreases maintenance and treatment costs

Operations Improvement Success Story

Power Plant

Months after installing an oil skimmer, a large power plant realized a substantial decrease in maintenance costs for in-house and contractor labor needed to regularly clean the sump and oil water separator - and on replacement parts for monitoring equipment. Since then, the plant has saved approximately $30,000 to $40,000 annually.

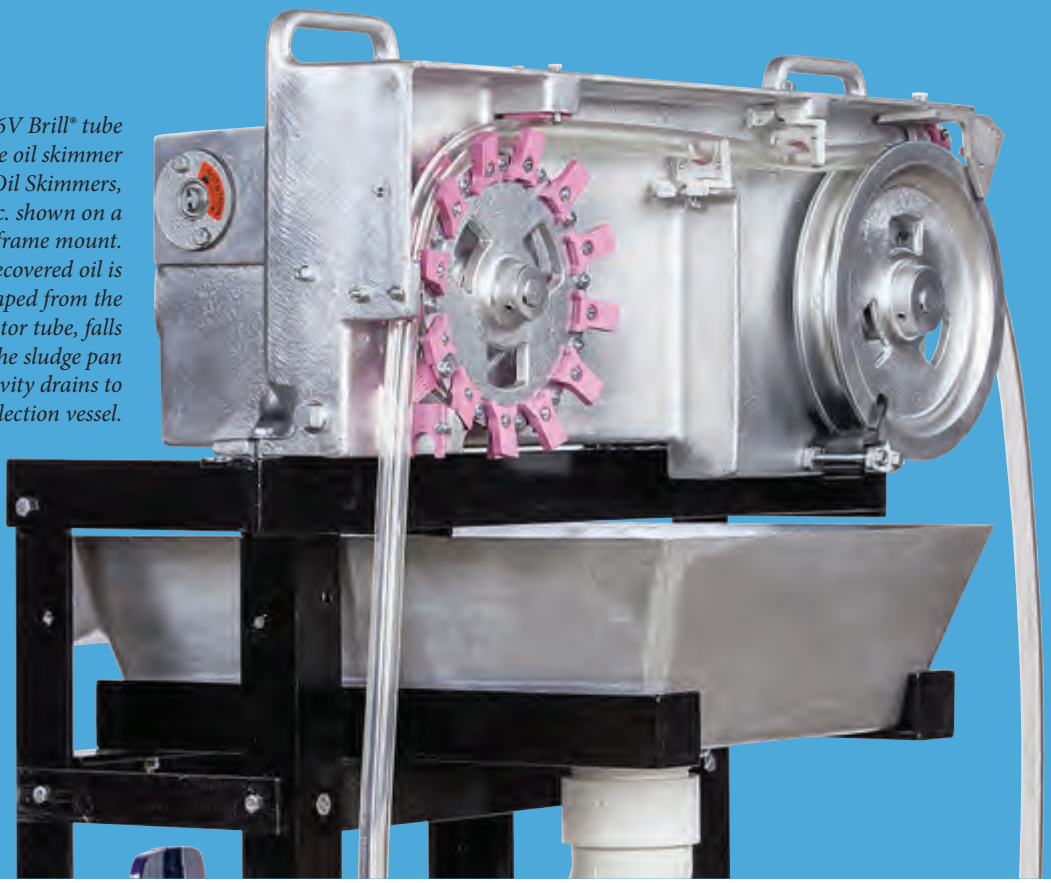
THE JOURNEY OF WATER - OPPORTUNITIES TO REMOVE OIL



Oil Skimmers Prove Their Worth

Regardless of the industry, oil skimmers have proven their worth when it comes to removing oil from wastewater in a variety of demanding applications. Designed to improve overall operations while reducing costs, increasing revenue, aiding with environmental compliance and helping provide a safer work environment, a quality tube-type oil skimmer offers continuous operation for an efficient, cost effective oil removal process.

At Oil Skimmers, Inc., our oil skimming solutions are custom engineered to meet a facility's specific oil removal needs. From the basic to the complex, we've developed complete waste oil recovery solutions for facilities both large and small that offer superior performance and deliver a near-immediate return-on-investment.



Model 6V Brill® tube type oil skimmer from Oil Skimmers, Inc. shown on a floor frame mount. Recovered oil is scraped from the collector tube, falls into the sludge pan and gravity drains to a collection vessel.

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About Oil Skimmers, Inc.

For 50 years, Oil Skimmers, Inc., has provided oil skimming solutions for more than 35,000 applications in 119 countries. This breadth of experience has made us the leader in designing and delivering oil removal solutions for even the most diverse and demanding applications. With Oil Skimmers, Inc., you are not only guaranteed the very best in oil skimming technology, you are also provided superior customer service. We meet with our customers, visit their facilities, and we make it our mission to help solve their issues, address their challenges and devise solutions that will meet their individual needs.

Contact Oil Skimmers, Inc.

Find out how an oil removal solution from Oil Skimmers, Inc., can reduce costs, increase revenue, aid with environmental compliance, help provide a safer work environment, and improve overall operations for your company. Contact us today to learn more:

3F Series 360-degree floating weir oil skimmer from Oil Skimmers, Inc. features an adjustable overflow weir. Oil is drawn into the center and pumped to a collection vessel. Show with debris screen.

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