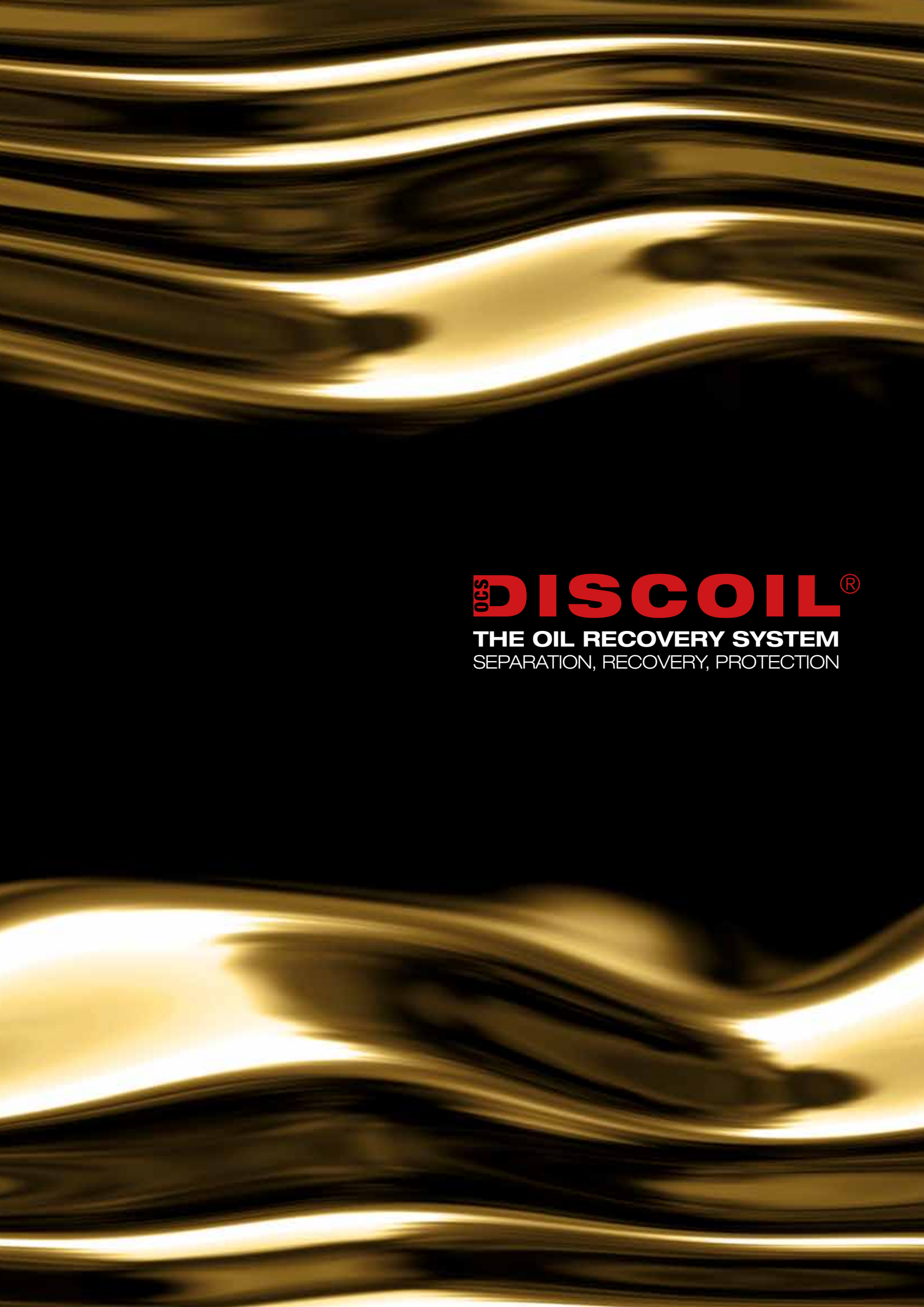

OCS DISCOIL®
THE OIL RECOVERY SYSTEM
SEPARATION, RECOVERY, PROTECTION

THREE WORDS FOR ONE GOAL

Separate *DISCOIL separates floating oil from water, rendering two important services:*

Recovery *the recovery of hydrocarbons which can be reused in production, and the cleaning of water, to permit disposal according to current regulations.*

Protection *DISCOIL's final goal is thus, by nature, to protect the environment.*

DISCOIL, MULTIPLE ADVANTAGE PLUS ONE: **O.C.S.' EXCLUSIVE EXPERIENCE.**

Problems are inevitable when oil and water mix.

A question of environmental protection but also of industrial performance and optimisation. O.C.S. DISCOIL is based on a physical principle, that of fluid adhesion to solid surfaces, that does not require the use of chemical agents and guarantees efficient and long-lasting results. For this reason, O.C.S. Discoil provides all the guarantees required in terms of practicality and economies of scale.

O.C.S. Officine Costruzioni Speciali's mission is essential and consolidated in over 40 years of experience.

First of all, offer "personalised" solutions. This means that each creation, each machine, takes into account the special situations and context in which it will work. Knowing that each condition requires targeted and appropriate solutions, both when applying newly conceived projects and when adapting existing systems.

Another important O.C.S. goal is product quality. A global strategy. That ranges from material selection to robust machine construction. Each problem has a solution, to respond with quality and efficiency.

DISCOIL is practical and efficient because

- **It recovers** all floating hydrocarbons
- **It has high oil recovery capacity** (from 3m3/h to 300 m3/h)
- **A low percent of water** (about 2%) remains in the recovered hydrocarbon
- **It is safe** since it can be installed in environments classified as potentially explosive

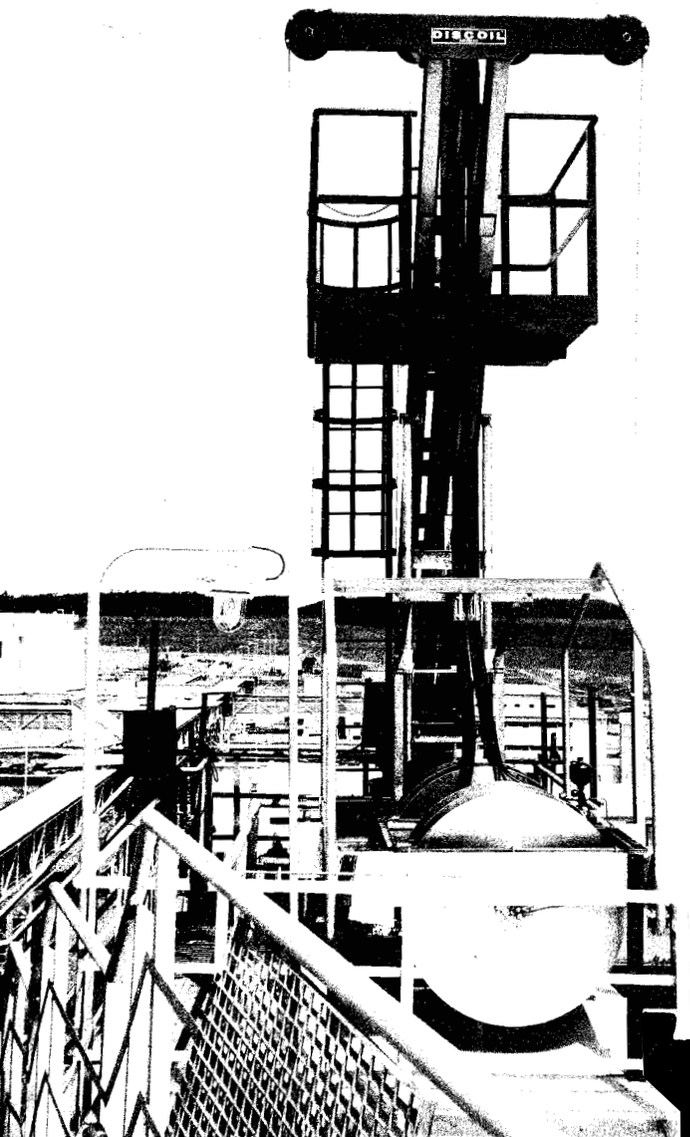
DISCOIL guarantees economic returns because

- **Its cost is offset from the value** of recovered oil
- **it works indipendently** even 24/7) with low maintenance
- **it is simple and robust**, made of resistant and reliable materials that guarantee long-term use
- **It is guaranteed by focused and accurate design** and continuous and qualified service

DISCOIL protects the environment because

- **It does not create emulsions** when recovering oil from water
- **he high percent of recovered hydrocarbons** about 98%) permits reuse in industrial processes without additional treatments
- **Lowers fume emissions in the air** due to continuous and efficient tank cleaning

THE DISCOIL PRINCIPLE: ATTRACT AND SEPARATE FLOATING OIL **AND RECOVERY PROFITS**



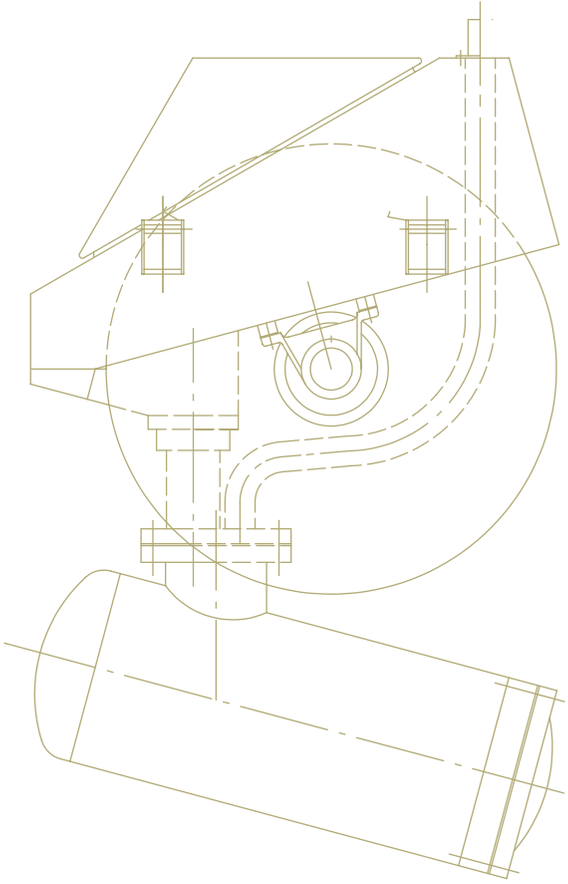
Where can it be used
DISCOIL can be used anywhere water needs to be treated.
Specifically in::

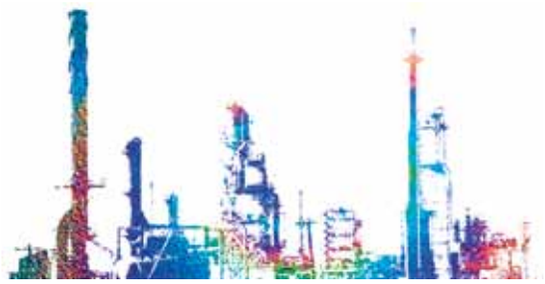
- **Refineries**
- **Coastal petroleum product terminals**
- **Petrochemical plants**
- **Steelworks (Still mill)**
- **Power plants**
- **Petroleum jetties and pumping stations**
- **Ballast water plants**
- **Mechanical industries.**

How is it installed
There are two types of DISCOIL applications:
Fixed installation
he machine is supported and operated on a metallic structure generally attached to the side tank walls and equipped with catwalk and service platforms to permit maintenance.
Installation with variable level water
A floating platform can be anchored by mooring cables or attached to the tank with vertically sliding guides.
A vertically sliding system normally adopted in tanks can be used where, for space reasons, floats cannot be used, or in deep tanks or chambers where maintenance personnel access is discouraged.

How much space
Here are different DISCOIL models according to the type of use. The machine size is set by the number (from 4 to 10) and diameter (from 760 to 1200 mm) of the discs.

Construction material
DISCOIL materials vary according to the hydrocarbons to be recovered and the hostile nature of the environment where it will operate. Specifically, the machine can be constructed of painted carbon steel or stainless steel or duplex and special attention is also devoted to rubber parts that are selected according to the application.

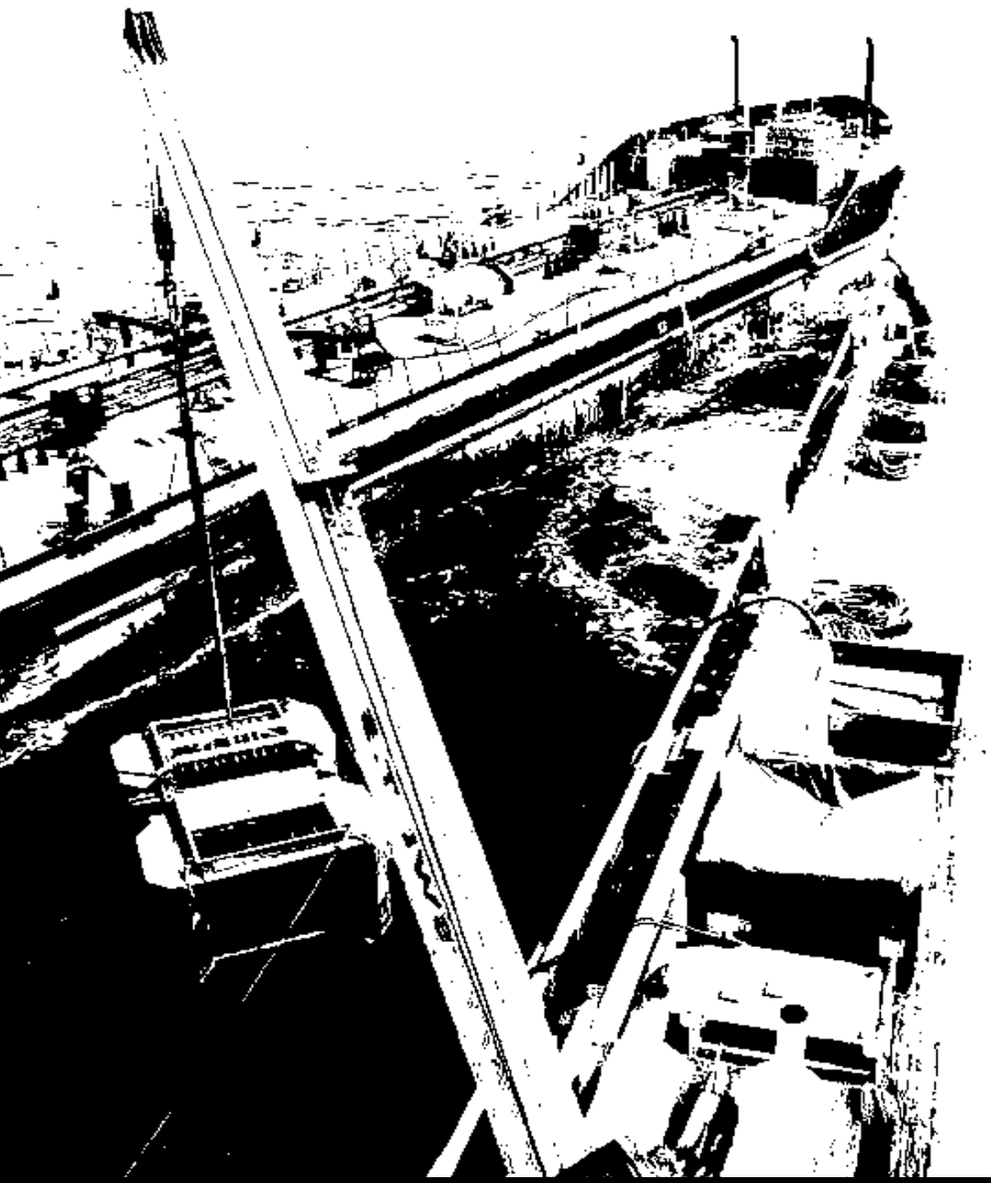




One method, one operating mode
Discoil works by exploiting the physical principle by which oil adheres to metallic surfaces.
The stainless steel discs that characterise the machine are vertically positioned and partially submerged in water. They attract the hydrocarbons to be recovered during rotation. The "scrapers" are self-centring, resistant to various types of products and able to automatically compensate for wear.

"Clean" work
DISCOIL separates oil from water. This process is mechanical, without using chemical substances and without creating emulsions.
DISCOIL is a "clean" process that returns hydrocarbons ready to be reintroduced to the production process.
Oil flows into a primary collection tank (part of the machine) and is then transferred, by a drain pump or by fluid pressure, to a storage tank.
In special conditions, "free oil drain" by gravity is also possible.
Recovered substances, reintroduced in production, provide fast pay-back time helping to generate profits and thus repaying an investment of a lifetime.

THE VALUE OF DISCOIL:
DIRECTLY PROPORTIONATE TO ENVIRONMENTAL PROTECTION



FLOAT DISCOIL comprises floating oil skimmers operated in the open sea. It is an automatic device intended for “emergency” situations, used to recover hydrocarbons that float in the open sea but also in ports and along coasts. FLOAT DISCOIL can be efficiently used in rivers and lakes.

FLOAT DISCOIL is an adaptable and practical device

- limited size and weight
- easy to handle during operating phases
- easy to transport (even by small boats)

FLOAT DISCOIL is made up of

- a main floating unit that includes one or more batteries of stainless steel discs
- a drain pump
- a hydraulic generator (driven by a diesel motor or the ship's hydraulic system)
- flexible oil hydraulic hoses
- discharge hose

FLOAT DISCOIL is suitable

as an emergency unit to be kept on board ships, petroleum terminals, ports, rivers, lakes or along coasts, to quickly meet the emergencies following hydrocarbon pollution.

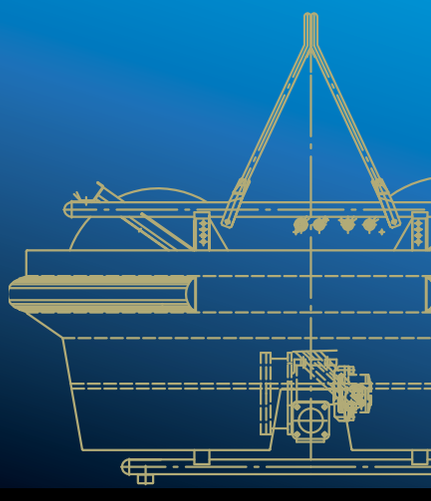
ECOIL

These are autonomous boats used to collect floating petroleum spills.
These boats, constructed under the supervision of International Shipping Boards and Registries, are able to recover, store and transfer significant quantities of oil spills to tankers.

Recovery capacity is between 80-100 and more m3/h according to the size and number of installed discs.

These boats are controlled by crew and even work at night with the boat moving (forward or aft) or idle.

Ecoil also recovers floating solid waste using a skip installed at the bow and operating without the use of floating barriers.



DISCOIL STYLE:
UNIQUE DESIGN:
UNIQUE SOLUTIONS FOR EVERYONE

Design is a concept.
Which, in the case of O.C.S. DISCOIL, was created and developed over more than forty years in the field under different conditions and locations.

Continues development work and environmental considerations have led us to regard each design as unique. What remains constant, even in different applications, is the method, which follows a logical development process.
It starts with the in-depth knowledge of the work environment by acquiring documentation and keeping in constant contact with operators. Then the problem to be faced is accurately and specifically defined, comparing it with other "cases" in terms of both typical and exceptional features. Thus, operating philosophy, methods, instruments, technical criteria and equipment for the intervention are proposed.

All this began in the seventies.
Then, O.C.S. (Officine Costruzioni Speciali S.p.A.) created a water processing plant for a steel plant that had a problem: freeing water from floating oil.

A mechanical layout was chosen, a solution which was gradually consolidated over time, introducing increasingly more appropriate systems and machines to resolve the main purpose of separating water from hydrocarbons.

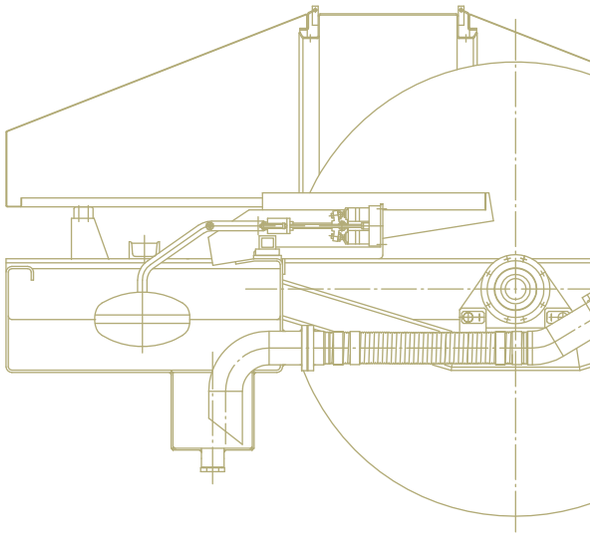
O.C.S. and DISCOIL can resolve various and multiple problems, ven in situations with the risk of chemical corrosion (solvents, chloride), mechanical abrasion (sand, metal particles and abrasive materials) and critical temperature situations (due to the weather, cold or hot climates). The decision to diversify work, techniques and equipment is never standard, but based on the needs that arise from the different types of problems.

Specifically, O.C.S. is attentive to materials, from paint to the type of rubber used, and components.
In fact, when the environment creates corrosive, abrasive and wear conditions that are the variables taken into account when constructing a Discoil machine.

For O.C.S., even knowing where to place DISCOIL in the water processing system is an important parameter.
Fixed platforms, vertical slides or other custom structures allow DISCOIL to perform routine daily operations even in hard to reach sites.

This design flexibility makes DISCOIL a machine suitable for new installations but can also adapt to existing plants.

DISCOIL
A BRAND THAT ENCOMPASSES O.C.S. TECHNOLOGY.



LONG-LASTING GUARANTEE

Purchasing an O.C.S. machine or system means you'll never be alone.
In fact, the company guarantees long-term service; service that does not end with the sale.

Solution
This simply means the will and ability to face unforeseen and sudden problems that may arise,at machine installation or during operations.

Maintenance
Essential service that requires know-how and skill, that protects plants and equipment and guarantees good machine use and operation in the long-term.

Re-adjustment
Situations change, needs alter, even operating conditions can vary: O.C.S. machines and systems are sufficiently flexible to continuously adapt.

Training
A good machine may require a skilled operator. If required, O.C.S. can always provide professional training facilities.

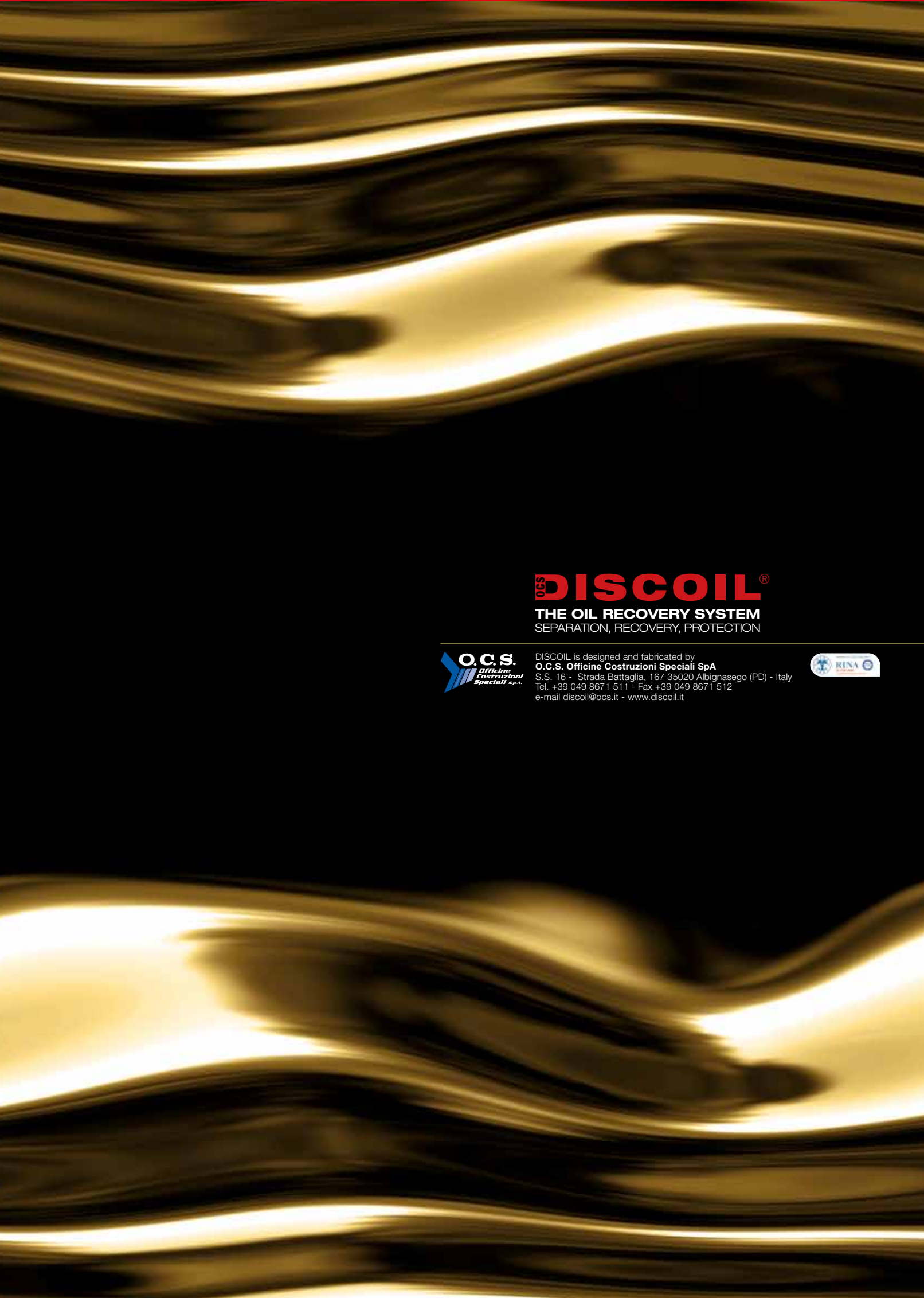
WHERE DISCOIL HAS OPERATED

MADE IN ITALY

DISCOIL machines are designed in Albignasego, Padua, its parts are constructed in Europe and assembled in the Veneto factory. DISCOIL systems are shipped from here throughoutthe world.

WHEN THE GOING GETS TOUGH, DISCOIL GETS GOING **AND O.C.S. CUSTOMERS KNOW IT**

In time, O.C.S. skills and work have been applied in different contexts and situations in locations around the globe.
From the refineries in the Mediterranean (especially Italy, Spain, Greece and North Africa) to the Arabian peninsula and Far East.
Discoil is currently used in leading European petrochemical plants and in all Italian power plants.
As for steelworks, O.C.S.' technology is used in Italy, Mexico, Russia and Eastern Europe.
Finally installation in some lakes in Venezuela that experience oil eruptions, are found to be of great value.



DISCOIL®

THE OIL RECOVERY SYSTEM

SEPARATION, RECOVERY, PROTECTION

DISCOIL is designed and fabricated by
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