



MARINE TECHNOLOGY

ALWAYS ON A SAFE COURSE

Efficient filtration and separation
solutions for marine technology



Filtration Group®
Industrial

WITH OUR FILTRATION AND SEPARATION SOLUTIONS WE MAKE THE WORLD



safer

by ensuring that even in the heaviest seas, vital propulsion systems and engines can be relied on



healthier

by efficiently filtering and dewatering our systems for the separation of fuels and oils without the use of additional chemicals



more productive

by creating optimal conditions for reliable operation of equipment on ships and in industrial applications

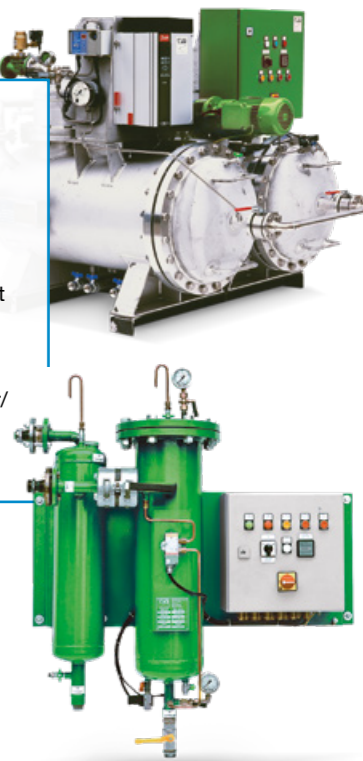
EXPERTISE BASED ON DECADES OF EXPERIENCE



FOR THE TOUGHEST REQUIREMENTS IN MARINE TECHNOLOGY With decades of experience and expert knowledge from countless applications, FGI is the innovative development and systems partner in fluid technology, oil and water separation, and water treatment for marine technology. Besides an extensive standard range of high-quality filters, we work together with you to develop customized filtration and separation solutions that exactly meet your specific requirements—in their filtration performance, reliability, economic efficiency, and environmental protection. It goes without saying that our production meets all international standards.

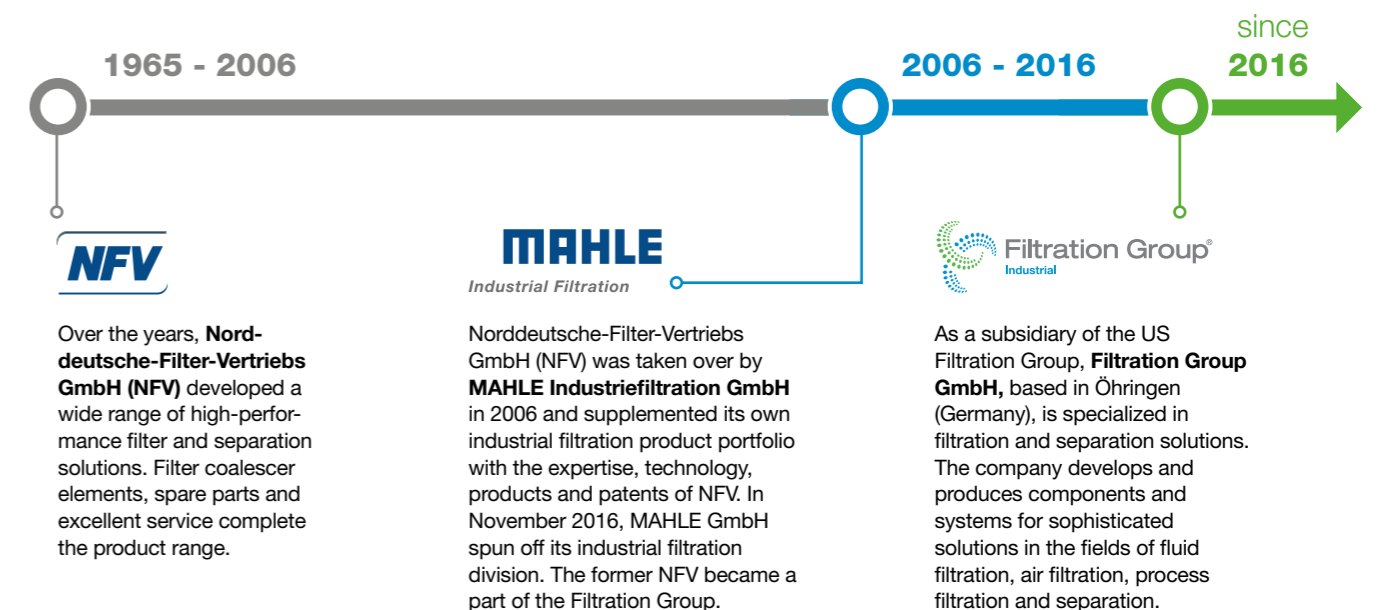
AN OVERVIEW OF OUR SOLUTIONS FOR MARINE TECHNOLOGY:

- Filtration and separation solutions all around the engine (fuel filters, lubricating oil filters, fuel treatment systems)
- Filtration systems for hydraulics, lubrication, and systems reliability
- Membrane filtration for best water/oil separation



OUR HISTORY

Our expertise in the field of separation technology has a long history. The company name has changed, the product range has undergone continuous further development: it extends from components and modules to complete separation and filtration systems.



SYSTEMS AND COMPONENTS – FROM MAST TO BILGE

In merchant, passenger and special ships around the world, filtration and separation solutions from FGI stand for uncompromisingly clean performance under the toughest conditions. All components and systems are continuously being developed, are characterized by high efficiency, reliability, and low maintenance requirements, and can be designed flexibly to meet your requirements.

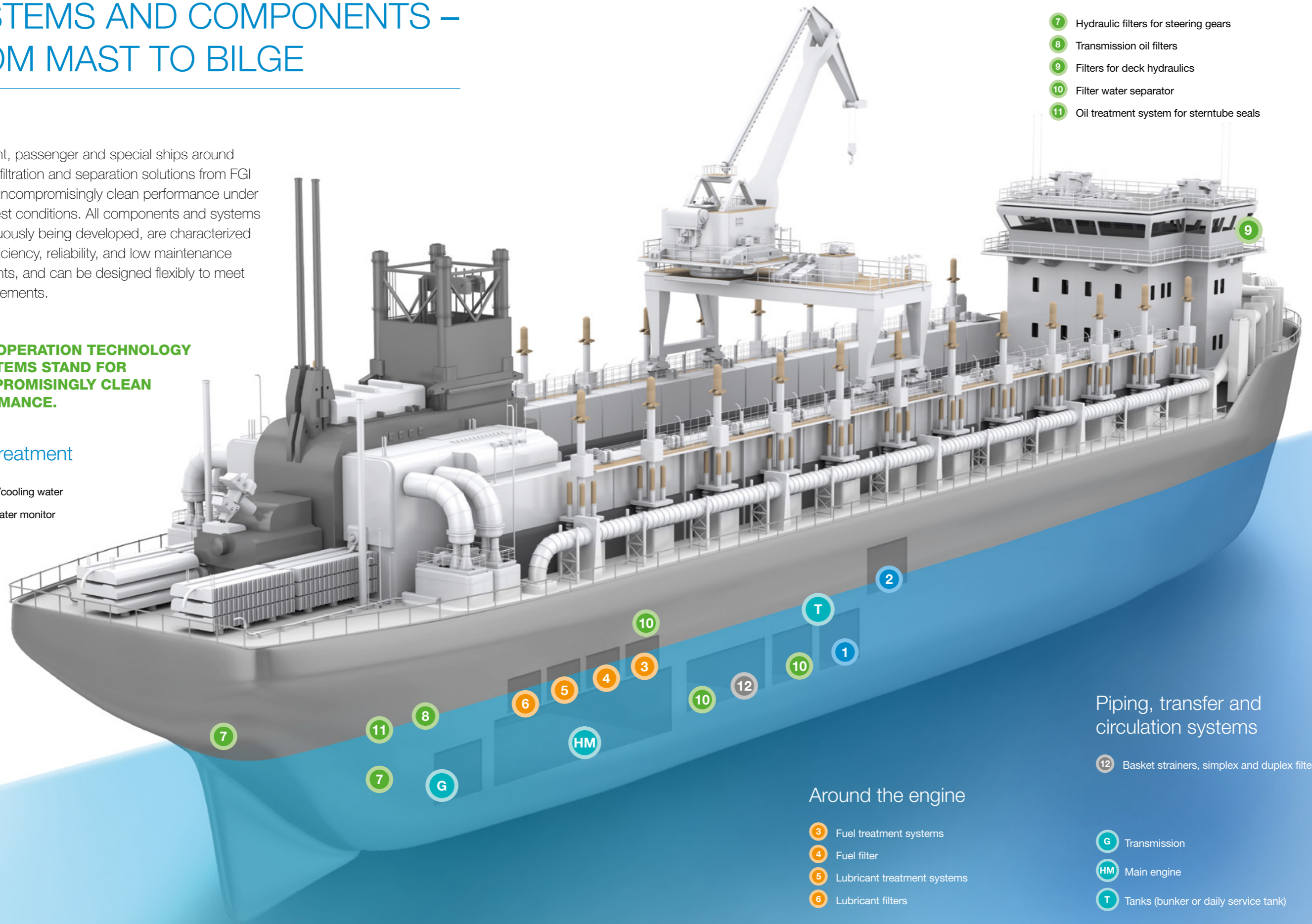
**IN SHIP OPERATION TECHNOLOGY
FGI SYSTEMS STAND FOR
UNCOMPROMISINGLY CLEAN
PERFORMANCE.**

Water treatment

- 1 Service/cooling water
- 2 Oil-in-water monitor

Hydraulics and lubrication

- 7 Hydraulic filters for steering gears
- 8 Transmission oil filters
- 9 Filters for deck hydraulics
- 10 Filter water separator
- 11 Oil treatment system for sterntube seals



Piping, transfer and circulation systems

- 12 Basket strainers, simplex and duplex filters

Around the engine

- 3 Fuel treatment systems
- 4 Fuel filter
- 5 Lubricant treatment systems
- 6 Lubricant filters

- G Transmission
- HM Main engine
- T Tanks (bunker or daily service tank)

PRODUCTS

HIGHER PERFORMANCE, LOWER EMISSIONS – FILTRATION AND SEPARATION ALL AROUND THE ENGINE

The longer, more reliably, and lower-maintenance large engines can operate in marine applications, the higher their efficiency and cost effectiveness. Clean fuels and lubricating oils contribute decisively to maintaining and extending the service life of your engine, and to low-emissions operation. FGI offers a wide spectrum of fuel and lubricating oil filters, fuel and oil treatment systems, as well as intake air and ventilation filters for marine engines of all types.

FUEL TREATMENT SYSTEMS

High-performance fuel filters and treatment systems from FGI can make the worst quality fuels optimally usable. Complete fuel filter systems are specially matched to the requirements of large engines. The filter systems work reliably and safely around the clock in fully automated mode. Using the FGI filter and coalescer technology, FGI fuel treatment systems can reduce the water content in fuel to a minimum, and thus prevent premature wear of engine components.

LUBRICANT FILTRATION

FGI Filter systems for lubricant treatment and lubricant conditioning ensure low-maintenance, trouble-free engine operation over a long period of time. All oil care systems are adapted to your specific area of application, quality and design. Typical contaminations such as solid and suspended particles, sediment, rust and water from the lubricants of all engines. FGI lubricant filters are available as switchable or automatic systems and ensure high availability of your engines.



Our systems for oil and fuel treatment

KFWA

The efficient fuel treatment system prevents the concentration of free water rising to over 70 ppm. This provides effective protection against diesel pest. Thanks to its compact design, it does not need much space in a ship's engine room.

- Volume flow: 700 to 8000 l/h
- Classification: DNV GL, Lloyd's Register, Türk Loydu, CCS and others on application
- Low operating costs
- Low maintenance requirements
- Easy handling
- Robust design



PTS

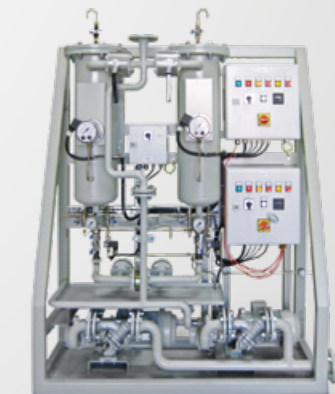
Apart from the coalescer elements, the PTS is fitted with additional separator membranes. These membranes prevent the escape of even the tiniest water droplets, meaning the fuel or oil is discharged after optimal cleaning. The PTS is configured individually for the corresponding requirements.



FTS

This two-stage system filters the fuel before water separation in the coalescer elements, which in the case of pollution with larger solid particles improves the service life of the system. The efficiency of the first filter stage can be adapted to specific requirements.

- Residual water content below 70 ppm free water
- Volume flow: 600 to 4500 l/h
- Classification: DNV
- Low space requirements
- Simple handling



Water treatment for particularly high demands

MPS/MF

With this high-performance unit, the residual oil content of the outgoing water can be reduced to less than 1 ppm. In the MPS/MF, a membrane is connected to the multiphase separator, which separates the remaining water-oil emulsions under high pressure. Oil and other residues are concentrated and re-circulated.

- Residual oil content: 1 ppm and less, proven in tests by DNV and the German Navy
- Flow rate: 0.5; 1; 2.5; 5 or 7.5 m³/h
- Complies with international standard according to IMO MARPOL MEPC.107(49)



PRODUCTS

**RUNS LIKE CLOCKWORK –
SOLUTIONS FOR HYDRAU-
LICS AND LUBRICATION**

Longer service life, higher operational safety, lower maintenance requirements, and more efficient use of resources—the performance of our systems pays off for you and for the environment. You can benefit from our decades of expertise, extensive standard product range, and customer-specific solutions that meet individual requirements.

SMOOTH OPERATION: FILTERS FOR DECK HYDRAULICS

For the widely varying installation points and functions of deck hydraulics, we offer suction filters, pressure filters, duplex filters, return-line filters, bypass filters, air breathers, filter units and elements for all pressure stages, as well as accessories and service units.

SAFE FUNCTIONALITY: HYDRAULIC FILTERS FOR STEERING GEARS

Hydraulic filters from FGI reduce particle contamination in hydraulic and lubricating systems to the level required by the cleanliness class, in accordance with the international standards ISO 4406/1999 and NAS 1638

OUTSTANDING ECONOMIC EFFICIENCY: TRANSMISSION OIL FILTERS

Our duplex filters are reliably ready for operation around the clock and ensure highly efficient performance, long service life and low flow resistance even at high viscosities.

HIGH CLEANLINESS LEVELS: SIMPLEX FILTERS

Our simplex filters, with various housing sizes for flexible use, ensure ultrahigh performance with low costs and simple operation. Simplex and duplex filters are optionally available in a heated version for use in fuel circuits.

MAXIMUM EFFICIENCY: DUPLEX FILTERS

Duplex filters from FGI are equipped with two filter vessels enabling non-stop operation of the filter and consistent cleanliness of the media to be cleaned. When the maximum contamination level has been reached, the system switches automatically to the other filter vessel. The filter that has been switched off can now be cleaned out.

PARTICULARLY CLEAN: FILTER WATER SEPARATOR

The coalescer filter was developed to separate free water from oils and fuels. Specifically arranged filter materials collect the small water droplets floating in the fluid and separate them out. Phase separation takes place according to the adhesion principle. Star-shaped pleating of premium filter material improve particle separation and dust holding capacity to a higher level, achieving the ISO 4406 specification.

PERFECT PROTECTION: STRAINERS

Cost-efficient strainers from FGI are perfectly suited to preventively protect piping, and to treat and maintain fluids.

FLEXIBLE FILTRATION: OIL TREATMENT FOR STERN TUBE SEALS

Our oil treatment can be used for any middle distillates and reliably separates water and other typical contaminants from the medium.

EVERYTHING FROM A SINGLE SOURCE

INCLUDED IN DELIVERY: OUR DRIVE TO INSPIRE YOU



SPARE PARTS

Seamless storage

We supply you with everything to maintain smooth operation of our separators, from **filter elements** to the **complete set** of matching spare parts. In addition: with our original spare parts, we provide you with the guarantee that your system achieves maximum efficiency. We always have the matching spare parts for each product in storage and guarantee their availability at short notice worldwide. And with spare parts you order from Filtration Group, the permit for your ship from the International Maritime Organisation (IMO) is preserved. There is simply no replacement for our genuine spare parts.



SERVICE

Service across all borders

The service technicians of Filtration Group Industrial support you worldwide in the **installation** and **commissioning** of our separation systems – if the situation calls for it, even on the high seas. Of course, our services also include **changing elements, maintenance, repairs, modernizations and retrofitting**. In addition, we train your operating personnel and are pleased to advise you on choosing the right system.



APPLICATION MANAGEMENT

Advice without question marks

To ensure you get the optimal product for each area of use, our consulting and engineering service will provide you with support throughout the entire procurement process. Based on an **analysis** of the problem and determination of the design parameters, we can provide you with a recommendation for an appropriate separation system. We configure the system and also assume the **project management** and engineering **project supervision**. This is what we mean by comprehensive application management that leaves no questions unanswered.



LABORATORY

Uncompromising precision

We are pleased to analyze any mixture you send us as a sample in our laboratory. The **Laboratory examination** provides the precise data for the perfect system with which you can separate the mixture according to the set requirements and legal standards.

WE ARE COMMITTED
TO HIGHEST QUALITY.
THIS APPLIES TO OUR
FILTER SYSTEMS AS
WELL AS OUR SERVICE.

FILTRATION GROUP INDUSTRIAL

WORLDWIDE AT OVER 100 LOCATIONS IN 28 COUNTRIES



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