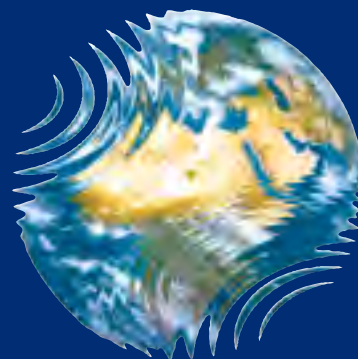
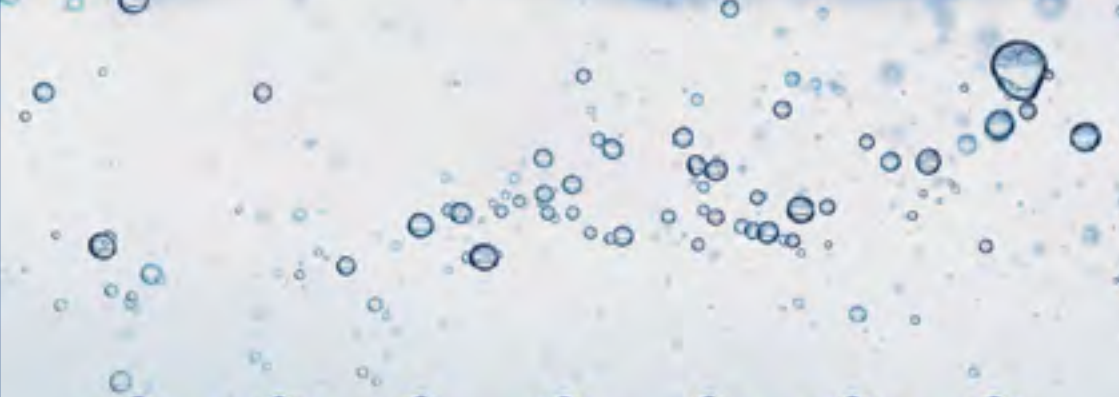




Polymer Chemistry for Conservation



SNF FLOERGER

SAFEGUARDING OUR NATURAL RESOURCES

“ PRESERVING STRATEGIC RAW
MATERIALS HAS BECOME A
VITAL CONCERN FOR HUMANS
AND THE PLANET. ”



.....

SNF's work derives from the growing scarcity of resources: water, ore and hydrocarbons. We treat the water of more than 750 million people around the world and help thousands of industrial sites to recycle their water. In oil extraction, by viscosifying water our products increase the amount of oil recovered and significantly decrease the amount of water consumed per barrel produced. In Canadian bituminous sand extraction, we treat the sand lagoons to return them to their initial consistency and facilitate reforestation.

We thus have the advantage of being positioned in markets that are at the heart of sustainable development issues. We provide genuine solutions to help our clients to grow while minimizing the environmental impact of their activities.

With a view to consolidating its position as a leader, SNF is constantly broadening its range of products and reinvesting its financial resources into improving and expanding the industrial tools it offers in order to maintain its competitiveness and that of its clients.

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Pascal Remy
Chairman and CEO of SNF

SNF FLOERGER

SNF, A GLOBAL LEADER IN POLYACRYLAMIDES

A leader in manufacturing and processing water-soluble polymers, SNF has developed a range of more than 1000 products that help to preserve our natural resources, encourage recycling and improve efficiencies of industrial processes. Our polymers have several complementary functionalities: flocculation, which enables solids to be separated from liquids, viscosification and friction reduction.

Our products are used in all the fields in which water is present: drinking water production, wastewater treatment, sludge dewatering, oil and gas extraction, mining, agriculture, and the manufacture of paper, textiles and cosmetic preparations.



CHEMISTRY SUPPORTING NATURE

Our products play a vital role in preserving our environment and making energy accessible. To that end, they help to drive our ambition and make it a reality: improving everyone's daily lives, all around the world.

A LONG-TERM STRATEGY, CONVINCING RESULTS

Ever since SNF was first established, we have been seeking to offer our clients the broadest range of polymers and related services in the market. We also provide supply, quality and price levels that enable them to meet their performance targets.

In order to achieve this, we have developed a long-term strategy focused on innovation and investment. SNF maintains a high level of R&D expenditure alongside constant investment in improving and expanding its production sites.

SNF now accounts for almost half of global polyacrylamide production, which underscores the effectiveness of this innovation and investment policy.

SNF

DATA WALL

LEADER IN POLYACRYLAMIDE MANUFACTURE

MORE THAN 1000 PRODUCTS



10% INVESTMENT

2% R&D

4500 EMPLOYEES AROUND THE WORLD

300 000 CLIENTS GLOBALLY



LENS

A COMPANY WITH GLOBAL REACH

..... SNF AMERICAS

23 INDUSTRIAL SITES



6 PRIMARY FACTORIES

Plaquemine

Riceboro

Andrézieux



LOCATED AS CLOSE AS POSSIBLE TO OUR CLIENTS

SNF's head office is based in the Rhône-Alpes region in France, but the Group now has a strong, longstanding presence on every continent. With 23 factories in Europe, Asia, Australia and America, we have the largest polyacrylamide production capacity in the world.

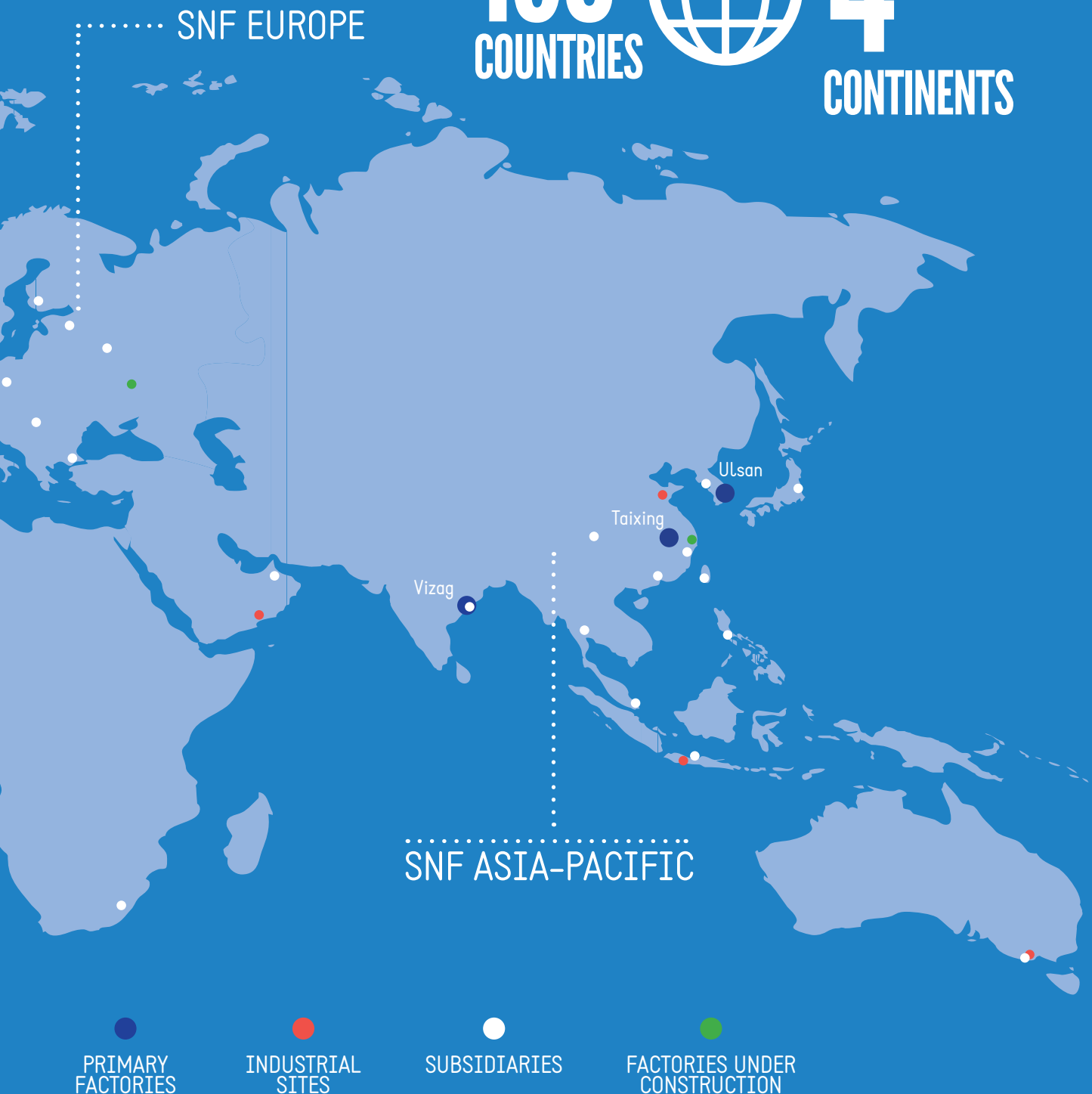
51 subsidiaries located in more than 40 countries in 3 major economic areas (the Americas, Europe and Asia) enable us to sell our products in 130 countries across every sector of the economy.

Located as close as possible to our clients, SNF provides a globally unparalleled security of supply of polymers.

130
COUNTRIES



4
CONTINENTS



WATER

PRESERVING A VITAL NATURAL RESOURCE



THE MAJOR CHALLENGE OF THE COMING DECADES

As a result of urban development, growing industrialization and large-scale irrigation, ever-increasing amounts of water are needed. Wastewater treatment, drinking water production and industrial water recycling have therefore become central to ensuring the world's sustainable development and the well-being of the planet's population. Therefore, effective solutions and responses tailored to match individual operating conditions are needed.



WATER TREATMENT, SNF'S CORE ACTIVITY

SNF has maintained a strong position in the water treatment sector since day one. To meet the needs of this ever-growing market, we have developed a product range of more than 1000 organic coagulants and flocculants, which we are constantly expanding and fine-tuning.



FURTHER SUPPORT

With more than 50 regional subsidiaries, SNF's technical teams are able to offer their services all around the world. They select the polymers most suited to our clients' needs and provide local follow-up and support.

OUR PRODUCTS

Our products now cover all the requirements of the global market, from drinking water production to sludge dewatering. They are approved by a number of governments and meet local standards in more than 130 countries.

FLOPAM™:

A range of cutting-edge polyacrylamides and high-performance flocculants.

FLOQUAT™:

A range of organic and inorganic coagulants.

METALSORB™:

Heavy metal chelators.

ODORFLO™:

Anti-odorants and anti-H₂S reagents.

FLOSPERSE™:

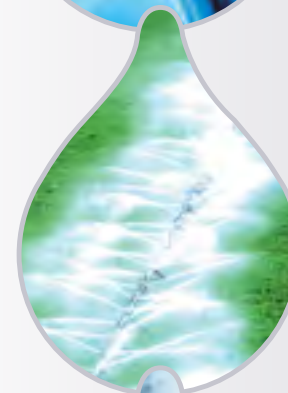
Dispersants and anti-scalants.

FLOFOAM™:

A range of silicone and non-silicone anti-foams.



OUR PRODUCTS
TREAT THE
WATER OF
750
MILLION
PEOPLE



HYDRO- CARBONS

IMPROVING OIL AND GAS EXTRACTION



.....

TOWARDS INCREASED OIL AND GAS PRODUCTION

.....

The oil and gas industries are constantly seeking to increase the final percentage of hydrocarbons recovered from mature or newly exploited reservoirs, thus multiplying the number of enhanced extraction projects around the world.

In Enhanced Oil Recovery (EOR) processes, polyacrylamides are used to viscosify injection water in order to improve reservoir sweeping and increase the volume of hydrocarbons extracted therefrom. This technique greatly reduces the amount of water needed to extract a barrel of oil. Used as friction reducers, these polymers have revolutionized the energy market by making it possible to fracture low-permeability bedrock with aqueous fluid and release hydrocarbons that have been held captive over geological time.



AN OPTIMIZED OIL AND GAS RECOVERY METHOD

SNF has been providing polymers for EOR since 1986. Since then, research and development activities have improved our knowledge of the behavior of polymers in geological formations and brought down the cost of this technology to very competitive levels.



ADDITIONAL SERVICES

Polymers are used to increase the viscosity of water injected into underground formations, improve the sweep efficiency and raise the final percentage of hydrocarbons recovered from the reservoir. To optimize this operation, SNF offers design and manufacture services for water-soluble polymer dissolution and injection equipment.

OUR PRODUCTS

We are now able to offer our clients a complete range of polymers with chemical characteristics that have been specially studied for each application.

FLOPAAM™:

Temperature- and salt-resistant polyacrylamides used in the enhanced recovery process.

FLOJET™:

Friction reducers used in particular in the hydraulic fracturing process.

FLODRILL™:

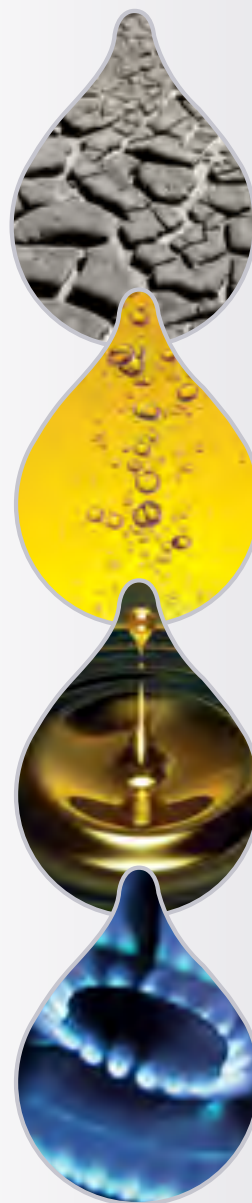
Water-based drilling mud additives.

POWDERFRAC™:

Mobile dissolution equipment.

.....
SNF PROVIDES ASSISTANCE ON
200 
OIL PROJECTS
.....

POLYACRYLAMIDES HAVE DRIVEN THE NEW ENERGY REVOLUTION IN THE UNITED STATES AND CANADA.



MINING

WATER PRESERVATION



.....
ORE EXTRACTION SITES ARE OFTEN BASED IN ISOLATED LOCATIONS, AT HIGH ALTITUDE OR IN THE DESERT, WITH LITTLE ACCESS TO WATER. SNF PRODUCTS REDUCE THE WATER NEEDS OF THE MINING INDUSTRY, OPTIMIZE THE EXTRACTION PROCESS AND LIMIT ITS ENVIRONMENTAL IMPACT.
.....

OUR PRODUCTS

SNF provides assistance at every stage of the mining process, from the quarries and mines to the final wastewater treatment, including the extraction and refining process itself. SNF's product range is tailored to each type of ore.

The main products we offer are for use in clarification/decantation (FLOPAM™ and FLOQUAT™), as grinding agents (FLOGRADE™), dust control agents (FLOSET™), and agglomeration agents (FLOFORM™), and in sludge dewatering (DRYFLOC™).

Moreover, through its subsidiary FLOMIN Inc., SNF offers a complete range of specialized reagents:

- Collectors (FLOMIN C™) used in the flotation of copper, lead, zinc, gold and nickel;
- Frothers (FLOMIN F™) tailored to common sulfurous metals, precious metals, industrial minerals, coal and other non-sulfurous ores;
- Special depressants and activators (FLOMIN D™) used in copper flotation;
- Solvent extraction agents (CuPRO MEX™).






AGRICULTURE

IMPROVING YIELD



DRY REGIONS CAN
STABILIZE OR INCREASE
CROP YIELDS

SNF PROVIDES A SOLUTION TO A MAJOR CHALLENGE:

.....
  **FEEDING**
 **9 BILLION**
PEOPLE
BY 2050
.....

OUR PRODUCTS

SNF has created polyacrylamides that optimize water management and reduce soil erosion. They are already used in the ornamental sector, in forestry, landscaping and golf courses and are now developed in agriculture.

AQUASORB™:

Increase the water and nutrient retention capacity of soil.

FLOBOND™:

Reduce erosion and crusting. Prevent the runoff of certain mineral fertilisers and of pesticide residues.



PAPER

PRESERVING WATER QUALITY



WATER IS ESSENTIAL TO THE PAPER INDUSTRY, WHERE IT IS USED TO TRANSPORT CELLULOSIC FIBERS AND MIX THEM WITH OTHER COMPONENTS. INCREASED PAPER AND WATER RECYCLING PRACTICES PLACE A HEAVIER BURDEN ON IMPROVEMENT OF CHEMISTRIES USED TO MAINTAIN PAPER AND BOARD QUALITY.

.....
WHEN PAPER IS RECYCLED MULTIPLE TIMES, LARGER AMOUNTS OF CHEMICALS HAVE TO BE USED TO MAINTAIN THE PERFORMANCE LEVELS OF THE MACHINE AND THE PAPER.
.....

OUR PRODUCTS

SNF is constantly developing new products to counter the problems associated with starch with a view to keeping up to speed with the technological developments in the paper industry and lowering the use of virgin fibers and tree-felling.

FLORET™:

A range of water-soluble polymers designed to improve the water holding capacity, drainage and operation of machines.

FLOSTRENGTH™:

A range of synthetic agents designed to improve the physical properties of paper (dry strength and temporary wet strength).



TEXTILE & OTHER INDUSTRIES

ENHANCING PRODUCTIVITY



SNF HAS DEVELOPED A BROAD RANGE OF THICKENERS FOR PIGMENT, DISPERSE AND REACTIVE PRINTING. THESE PRODUCTS MAKE IT POSSIBLE TO PRINT VERY FINE DETAILS AND ALLOW FOR IMPROVED COLOR YIELD. THE RANGE IS ACCOMPANIED BY FIXATIVES, ANTI-MIGRATION AGENTS AND DISPERSANTS.

THESE PRODUCTS ARE AVAILABLE AT 4 MAJOR SITES IN FRANCE, CHINA, INDIA AND THE USA. SNF HAS ALSO DEVELOPED A RANGE OF FUNCTIONAL POLYMERS FOR THE COSMETICS, DREDGING, CONSTRUCTION AND CEMENT MANUFACTURING SECTORS.

FLOLUX™:

Textile finishing products.

FLOSIZE™:

Sizing agents for use alone or in combination with other sizing agents. They improve productivity and reduce environmental impact.

FLOFIX™:

Fixatives.

FLOLINE LUB™:

Lubricants.

FLOPRINT™:

Thickeners for textile printing.

FLOSOFT™:

Thickeners for textile softening.

FLOCARE™:

Cosmetic thickeners and conditioners.

FLOPAINT™:

Paint thickeners.

FLOSET™:

Rheology modifiers and additives for cements.

FLOSPERSE™:

Dispersants.

FLODERM™:

Additives for leather.



INNOVATION

AT THE HEART OF OUR STRATEGY

Each year SNF dedicates almost 2% of its turnover to developing new products and procedures and improving our equipment range.

RESEARCH AND DEVELOPMENT

Our research teams work on developing new molecules by using different types of functional monomers with a view to constantly improving the performance of our products. Our vast local technical network enables us to test our new products in our clients' regions.

Moreover, SNF collaborates closely with several clients' research laboratories and the most prestigious universities.

IMPROVING OUR PROCESSES

In addition to product innovation, SNF dedicates a significant proportion of its resources to continually enhancing the effectiveness of its manufacturing tools. As a result, SNF has an engineering team that designs and deploys new production lines around the world. Each new generation increases the competitiveness of our production tools. What is more, this approach enables us to guarantee the same level of quality to our clients irrespective of the production site.

IMPLEMENTING OUR PRODUCTS

Our engineering skills also allow us to offer our clients equipment and systems to enable them to make optimal use of our products. This is particularly necessary for clients in the oil industry, and SNF has developed a range of systems to fulfill the requirements for pilot projects up to and including large-scale deployments.

150
SCIENTISTS/
LABORATORY
TECHNICIANS



AN ENGINEERING
TEAM



CONSISTING
OF 100 STAFF
MEMBERS

120
FIELD
TECHNICIANS




100
NEW PRODUCTS OR
FORMULATIONS
EACH YEAR

500
PATENTS



ENVIRONMENT

SNF: A SOFT CHEMISTRY PIONEER

SNF's products help to preserve natural resources. Likewise, our manufacturing processes are designed to minimize the environmental impact of our operations. Our primary monomer is therefore produced enzymatically at room temperature under atmospheric pressure. Given the volumes involved, this biological catalytic process makes us a soft chemistry pioneer.

CONTINUOUSLY IMPROVING

Across all our industrial sites, we are constantly making efforts to reduce our environmental impact. Consequently, our unit water, gas and electricity consumption has declined regularly for more than 10 years. Most of our sites are ISO 14001 certified, have signed up to the Responsible Care initiative and track their greenhouse gas emissions.

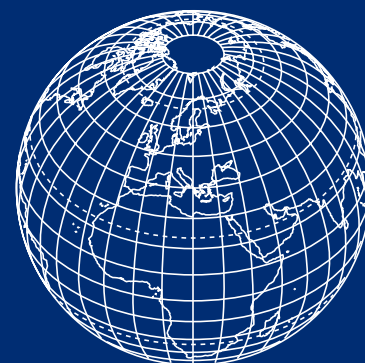
SIGNING THE UN GLOBAL COMPACT

Since it was first founded, SNF has conducted itself as a corporate citizen with a clear understanding of its social responsibility. As a signatory to the UN Global Compact, SNF makes every effort to apply and promote the principles laid down therein, in particular those concerning working conditions, respect for the environment and the fight against corruption.

SAFETY FIRST

SNF's top priority is the safety of its facilities and the health and well-being of its employees. All our production units are designed with safety concerns in mind to ensure that risks are as isolated as possible. Moreover, we dedicate a significant proportion of resources to training our staff in industrial safety. This policy has unquestionably borne fruit, as our workplace accident record is one of the very best in our industry.





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