

Press kit Presentation Ecosteryl



A few words about Ecosteryl

Founded in 1947, the company was called AMB, which stood for “Ateliers Mécaniques du Borinage”.

It was developed under the initiative of Raoul Dufrasne who, as a colliery manager, decided to develop safer solutions for mine work.

When his son, Philippe Dufrasne, took over the workshops in the 1980s, he wanted to enable the company to diversify its customer base. Ecosteryl discovered the niche market of waste and discovered the importance of a particular type of waste: potentially infectious healthcare waste.

The challenge was to treat this infectious medical waste entirely electrically, without water, without smoke, and without interruption.

Having its own mechanical workshop, Ecosteryl succeeded in developing a machine capable of shredding waste and heating it at 100°C for one hour. This “recipe” (validated in compliance with the strictest standards) transforms infectious waste into non-infectious, decontaminated waste, and reduces its volume by 80%. You can do the maths: every time an operator inserts 5 large bins into the machine, only one comes out.

One of the secrets lies in microwave technology, which enables the shredded waste to be pre-heated very quickly (in just 3 minutes). This means that the waste already reaches 100°C in the “decontamination” tank, which will hold it at this temperature for 1 hour. This is why Ecosteryl is often referred to as a “microwave technology”.

In 2003, in response to the interest shown by service providers in France and the arrival of the first orders, the historic company focused exclusively on the creation of environmental solutions for the treatment of medical waste. The company became known under the brand name “AMB Ecosteryl”, and in 2020 simply became “Ecosteryl”.

Today, Philippe Dufrasne’s 2 sons, Romain and Olivier, are also directors. Ecosteryl is led by Amélie Matton, CEO.

The company, co-managed by these 4 directors, now has a range of machines that can decontaminate between 75 and 250 kg of infectious medical waste per hour. It also has a brand new platform that enables this previously decontaminated waste to be sorted for recycling.

Ecosteryl’s machines can now be found in more than 65 countries, and have been ordered by hospitals, service providers, governments and organisations such as the WHO, the World Bank and the United Nations.

Ecosteryl, based in Mons for 75 years, employs 40 people and is still hiring.

Ecosteryl is co-directed by 4 administrators

- Amélie Matton – CEO – Co-director
- Philippe Dufrasne – Founder – Co-director
- Olivier Dufrasne – Co-director
- Romain Dufrasne – Co-director

Amélie Matton



Amélie Matton studied commercial engineering and specialises in the environment and international trade.

She joined Ecosteryl at a very young age as a trainee student through the Awex Explort programme. It was love at first sight for this SME based in the Borinage region which combines health, the environment and international trade. She never left.

When she arrived, Ecosteryl was not known internationally. With the team, she set up the communication department and launched the company on the international stage.

She held various positions within the company before taking on the role of CEO.

Amélie Matton recently received the prestigious Bold Woman Award from Veuve Cliquot in Belgium. A mother of 3, she regularly takes part in conferences to promote environmental, economic and social causes in line with the SDGs.

Philippe Dufrasne

An economist by profession, he joined the family business after having worked in the rare metals sector.

Philippe Dufrasne's attentiveness and intuition have enabled Ecosteryl to become what it is today: a successful company that works for the environment.

He has also succeeded in keeping the family business going. Calm and discreet, he is still active as a strategist and advisor for government projects.



Olivier Dufrasne



Having completed 2 masters degrees in law and international relations, Olivier Dufrasne spent several years living in Montreal, where he set up and developed the Ecosteryl Americas office.

He was able to develop the company on the international stage by creating the sales department. He set up the sales team, which he manages on a daily basis. He maintains close links with our customers all over the world.

Always on the lookout for the latest trends, he knows how to convince our future customers to choose Ecosteryl and the path towards circular economy.

Having visited almost every country in the world, Olivier Dufrasne represents Ecosteryl internationally on economic, princely and royal missions. He is also present at all international trade fairs -often as a guest speaker- to promote environmental trends and highlight the Belgian know-how.

Romain Dufrasne



A qualified geographer and climatologist, Romain Dufrasne first worked for a major international sports retailer before joining the family business in 2016. After managing the installation and after-sales service department and understanding the diverse needs of our customers, he took charge of Ecosteryl's new development projects. This has enabled him to concentrate on developing the 'R-Steryl' sorting centre project.

He also manages the corporate culture and Human Resources. With the expansion of our facilities and our teams, he ensures that every choice we make is guided by our values, and that every decision is based on its impact on the company's carbon footprint. A much-needed compass.

ECOSTERYL : the success story of a company that transformed medical waste into revenue.

Founded in 1947, the company was first and foremost a metal fabrication workshop in Mons-Borinage (Belgium). Nearly 20 years ago, the company specialised in environmental solutions, and in particular those dedicated to the treatment of infectious medical waste.

Its hospital waste treatment machines have now been exported to over 65 countries on the 5 continents.

At the end of 2022, the company completed its building expansion and celebrated its 75th anniversary. It presented its new sorting machine: R-Steryl. The future lies in sorting and adopting a circular economy.

Ecosteryl's large family.

Initially known as AMB for "Ateliers Mécaniques du Borinage", then AMB Ecosteryl during its second generation, when it entered the world of waste treatment, the brand is now called "Ecosteryl" as the third generation enters the business, more active than ever in the field of ecology and the environment.

Ecosteryl has been passed down through 3 generations and has been able to grow and maintain a climate of closeness for 75 years. It's a professionalism combined with a warm and welcoming spirit, where every worker or employee -and every customer- becomes a member of the big family.

The current executive directors are Philippe Dufrasne, Olivier Dufrasne, Romain Dufrasne and Amélie Matton, who takes on the role of CEO.



1947 – 1980 : Raoul Dufrasne creates AMB to make mine work safer.

Created in 1947, the company was called AMB for “Ateliers Mécaniques du Borinage”.

It was developed on the initiative of Raoul Dufrasne who, as a manager of collieries, developed safer solutions for mine work.



His employer, Société Générale de Belgique, was banking on solutions for the future. It encouraged the start-ups of the day, providing support for their development.



Raoul Dufrasne, a mining engineer by training, teamed up with other colliery owners and friends to come up with healthier solutions for his workers, and followed through on his idea by developing it and setting up his own company.

The machines that went down into the mines meant better working conditions for the miners, such as being able to stand up, having more space, digging better, etc.

AMB designed, drew, machined and built the machines. Other collieries commissioned these solutions.

Little by little, the workshop became a subcontractor for others, producing equipment for sorting centres and specialised presses.

1980 – 2000: Philippe Dufrasne takes over his father’s company and opens it up to new European markets.

By taking over the workshops, Philippe Dufrasne wanted to enable the company to diversify its customer base. He formed a partnership with an Italian company that produced presses for the environment sector. Sold in Belgium, Luxembourg and France, the machines were assembled in the company’s workshops, which also handled their maintenance.

“This enabled us to enter the growing environment sector”, explains Philippe Dufrasne, founder of Ecosteryl.

“We used to supply presses and shears to companies that processed metals, particularly non-ferrous metals. But we soon realised that metals followed stock market prices and that orders varied according to the stock market fluctuations. To remedy this, we expanded our offer to more specific

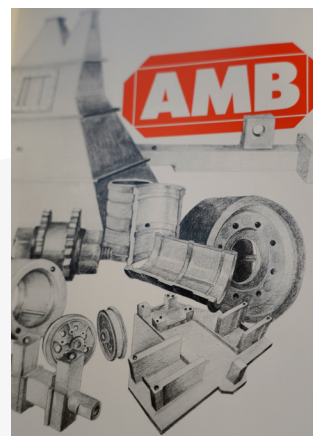


metals.”

These various developments have enabled the company to expand its customer base. Prestigious customers – Péchiney, Ugine, Umicore, Usinor, Rio Tinto – have called on its services.

Late 90s: identification of the needs in niche sectors.

Ecosteryl’s entry into these sectors lasted from 1995 to 2000, when Philippe Dufrasne identified a need among cement manufacturers in the recycling sector. «The idea was to use energy, industrial or common waste by conditioning it to become fuel. The cement industry is a key player in the recovery of waste, which is used as a substitute fuel, but also as a raw material in the production process. Our design office and that of our Italian partners have designed special machines that deliver powerful compressions. These machines were made available to cement manufacturers and their service providers, such as Suez and Veolia.”



Early 2000s: identification of the niche sector of infectious waste.

By entering the recycling market, Ecosteryl was able to increase its knowledge of the market thanks to its increasingly specialised customers, partners and suppliers.

Philippe Dufrasne was able to identify ever more «niche» needs, including the treatment of waste from care activities involving infectious risks.

This waste from healthcare activities involving infectious risks (known as DASRI in France and B2 waste in Belgium) must be collected and destroyed.



It includes:

- sharp and cutting objects;
- blood products;
- therapeutic products;
- anatomical waste, etc.

It involves a huge amount: The WHO (World Health Organisation) estimates that an average of between 0,5 and 3 kg of medical waste is generated per hospital bed every day worldwide.

The most effective solution for eliminating infectious healthcare waste was to incinerate it. Manufacturers active in the field of the environment are thinking of abandoning this solution, which generates polluting fumes. Moving towards a water-based solution was not an option either.

It was necessary to think differently, to propose something more ecological while remaining industrial.

One challenge: to treat infectious waste exclusively by electricity, without water, without smoke, and continuously.

The aim was to find a solution that would :

- use no water nor gas;
- use no chemicals;
- lead to zero emission;
- process continuously rather than in cycles, as manufacturers were looking for productivity.

The equation was solved with a truly innovative and revolutionary technique called "Ecosteryl", a mix of ecology and sterilisation, which, like all the others, is destined to become established on a global market.

This fully electric solution consists of decontaminating infectious medical waste through dry heat. The waste is first shredded and then subjected to a temperature of around 100°C for an hour, before exiting decontaminated.



Ecosteryl has developed a microwave technology that enables infectious healthcare waste to be pre-heated very quickly. This microwave technology saves time in the heating process. In no more than 3 minutes, the waste already reaches 100°C, and all that's left to do is maintain it at this temperature.

The waste leaves the machine decontaminated, dry and unrecognisable, with a 99.9999% reduction in viruses and bacteria (it's worth remembering that achieving full sterilisation is only possible when there is no open air, as in the case of vacuum-packed surgical tools).

The Ecosteryl process has been validated by the Pasteur Institute and has also been approved by the French Department of Health under the joint supervision of the Ministries of Health and the Environment. The French standard NF X30-503 is known to be one of the strictest in the world.

A first sale in 2002 before going international.

Combined with the scientific expertise of universities, the CNRS and the Louis Pasteur Institute, as well as the unfailing support of the French Research Administration (DGO6), Ecosteryl launched its product.

“We were the first in the world to use this totally clean technique”.

The range is expanding. The first machine we developed, Ecosteryl 250, is still the current bestseller; it can process up to 7 tons a day.

Hospitals and service providers that are just starting out are sometimes looking for smaller solutions to get them started, so Ecosteryl created Ecosteryl 125 (treating 125 kg per hour) and Ecosteryl 75 (treating 75 kg per hour).

Since 2002: sustainable machines exported to 5 continents.

Our Ecosteryl machines are exported all over the world. From South Africa to Canada, from Colombia to Italy, from Morocco to the Philippines, from the Pacific Islands to the Canary Islands.

Every month, around 2 or 3 machines leave the workshops in containers in order to be installed in a hospital or on the premises of a service provider. Whether it be for private or public customers.

In almost 20 years, not a single machine has had to be replaced. The very first machine is still in operation in France. «Don't ask us how long our machines last, we don't know», says Olivier Dufrasne.

The Walloon Region, as well as BNP, Credendo, Finexpo, Sofinex, SRIW, IMBC and the Ministries of Foreign Affairs and the Economy have always stood by the company based in Mons.

Ecosteryl owes its international success to this invaluable support, as well as to the ambassadors and international representatives of Wallonia Export.



The Ecosteryl products are now recommended and purchased directly by the United Nations, the World Bank and the WHO (World Health Organisation).

Prestigious representatives (ambassadors, politicians and the Royal Family) regularly work with the company. In 2014, HRH Princess Astrid inaugurated the first Ecosteryl plant in Malaysia, equipped with 4 machines, in partnership with the country's leading sovereign wealth fund.

2022: A first for Belgium and an innovation for the world. A machine that sorts decontaminated medical waste.

“Environmental solutions” is the slogan that occupied the company's thoughts long before the current green wave. The machines meet the “0 emission” criterion. Other solutions to decontaminate medical waste, such as incinerators or autoclaves, release either toxic fumes or contaminated water. With the alternative offered by Ecosteryl, only electricity is required. That's a win for the environment.



And the company is not stopping there. It has developed the 'R-Steryl' sorting centre.

This is a machine that is placed downstream from the Ecosteryl machines to sort the decontaminated waste into components that can be recycled.

When the waste comes out of an Ecosteryl machine, it is decontaminated and dry. This shredded material is perfect for sorting.

With a capacity of up to 1 ton per hour, R-Steryl can be adapted to suit each customer, depending on the kind of waste and based on their own market.

R-Steryl sorts into 3 fractions:

- a fraction of plastics, which will then be used by the plastics industry;
- a fraction of light waste, used as substitute fuel (RDF);
- a residual fraction, which will most often follow the usual

landfill process.

Typical fractions that can be sorted are: PET, PP, PVC, PS, LDPE, HDPE, PC, cardboard, etc.

The technologies used are: infrared optical sorting, aeraulic sorting and pneumatic sorting.

The medical sector produces too much waste.

Hospitals want to provide care, not increase pollution and related illnesses.

According to the Shift Project report (November 2021), while the French healthcare sector provides 2,5 million jobs, it emits 46 million tons of CO₂e, which equates to almost 8% of the French national total.



Initiatives are springing up everywhere to reduce the production of medical waste as far upstream as possible. It's essential to choose the right materials and to sort the waste. But when there is waste, particularly infectious waste, it has to be treated.

The current system, in which Ecosteryl plays a part, allowed waste to be decontaminated and then sent to incineration or landfill.

Thanks to the R-Steryl sorting centre, it is finally possible to recover and recycle these decontaminated materials. This proves that it is possible to combine environmental protection, recycling and profitable business.

To take a simple example: needle boxes containing medical waste are used only once. They are crushed and decontaminated. Many pieces of polypropylene end up in the shredded material. It is quite a goldmine, after all. Plastics manufacturers reuse this polypropylene to recreate recycled rubbish bins.



Ecosteryl continues to expand in Mons.

Ecosteryl still uses its historic workshop in Jemappes to manufacture its machines.

As the company was getting too small, it expanded in 2015 to the *Innovation Pôle of Initialis*. The first phase of work was carried out in 2015, followed by a second phase in 2020.

The new hall houses additional offices and an R&D centre, and allows for 8 machines to be assembled in parallel.

One thing is certain: the company will continue to innovate in the field of medical waste, with the environment and the health of everyone in its sights, and the United Nations' "Sustainable Development Goals" as a model to follow.

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