PRESS KIT

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SUMMARY

10 MILLION EUROS INVESTED IN A CENTRE OF EXCELLENCE IN BULGARIA

BELGIANS SAFEGUARD A VITAL RESOURCE: PHOSPHATE

8 September 2016 - With the opening of its «Technophos» Centre of Excellence and Technology in Varna, Bulgaria, the Belgian group EcoPhos consolidates its pioneering role in the area of phosphates.

The mission of the new centre is to solve the global problem of phosphate scarcity. The Technophos centre is the product of EcoPhos' efforts to combine technology, ecology and economy in the fight against the spectre of a global food crisis.

Why phosphate? Phosphate is an essential raw material for the development of living organisms, humans, animals and plants. Phosphate is a component of our body, it is used to make fertiliser and figures in the composition of animal feed. In short, it is vital to feeding humanity! Phosphate is mined from phosphate rock, but much like oil, global resources of high quality phosphate will be exhausted in around 50 years. Hence the urgent need to find innovative solutions in this area.

The Belgian company EcoPhos, founded in 1996 by Mohamed Takhim and based in Louvain-la-Neuve, develops and markets technologies that reduce production and energy costs by 30%. In addition, the methods developed by EcoPhos allow us to make maximum use of urban waste and even the lowest grade rocks, hitherto left almost completely unexploited. EcoPhos now holds ten patents internationally, with an investment of over 45 million euros since its inception.

The new centre of excellence comes in addition to three production sites in Europe (the Netherlands, France and Bulgaria), the Lummen engineering offices and the EcoPhos headquarters located in Louvain-la-Neuve. The group employs 270 people and has a turnover of 138 million euros, up more than 50% per year since 2009.

ECOPHOS: KEY FIGURES

JOBS
270

TURNOVER IN 2015
138.5
MILLION EUROS

EBITDA IN 2015
17.2
MILLION EUROS

INVESTMENTS IN 2015
17.5
MILLION EUROS

INSTALLED CAPACITY (EUROPE)
25%
OF THE MARLET

SHAREHOLDERS
100%
MOHAMED TAKHIM

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HOW
IT ALL BEGAN

When he created EcoPhos at the age of 20 while still a student, Mohamed Takhim undoubtedly never imagined that twenty years later, his company would gain worldwide recognition in the area of phosphates, employing nearly 300 people.

With a childhood fascination in handling materials and chemistry, the young man grew up in the Moroccan city of Khouribga, around one hundred kilometres from Casablanca. During an internship at Office Chérifien des Phosphates - a world leader in this area - the high school student discovered an entire new universe. Above all, he was struck by the sheer complexity and sophistication of the phosphate purification process.

Remembering an experiment carried out in practical work at school, he felt he may be able to develop a simpler alternative technique that has the same effect as conventional methods. Aided by his school, which provided him access to laboratories, chemicals and so on, and counting on the assistance of the headmaster's secretary for typing up the results, the young researcher tested his invention and filed his first patent. This was 1994, and Mohamed Takhim was just 18 years old.

With a keen desire to make his process known to the world, the young inventor submitted several applications to participate at exhibitions and fairs. **In 1995, the Brussels Eureka Fair** offered him the opportunity to exhibit his method, and the jury awarded him the Gold Medal of chemistry. An independent assessment of the invention was then made by a professor at UCL, who reached positive conclusions: yes, the process is worthy of development.

In 1996, at the age of 20, Mohamed Takhim officially created the Belgian start-up EcoPhos with a capital raising of over three million euros from the big names in Belgian industry (Capricorn, GIMV, the Colruyt family, and Mitiska among others).

While continuing his studies in Morocco and France, where he was awarded **3 diplomas** (chemical process engineering, project management and business administration), Mohamed Takhim pursued his destiny as a **scientist-entrepreneur**. Over the years, the business model was refined to two areas: first, the sale of licensed technology to phosphate producers, and second, positioning the company directly as a producer.

Two main lines of attack but one theme: the commitment to technology, ecology and economy. EcoPhos develops and markets technologies that reduce production and energy costs by 30%. In addition, these technologies allow us to make maximum use of urban waste and even the lowest grade rocks.

KEY DATES

1994 — Filing of its first patent

1995 — Participation in the Eureka Fair

1996 — Creation of the company EcoPhos

2001 — Acquisition of company shares by the Solvay Group

2002 — Acquisition of Decaphos (50% JV with Agropolychim)

2004 — Belgian Naturalisation

2008 — Increase of holding in Decaphos to 100% in order to build a demonstration plant in Bulgaria, which helps to secure potential customers

2009 — Release of early investors

2013 — Decaphos is used as a dedicated production plant, Decapilot is created for testing and demonstrations

2014 — Acquisition of Aliphos de Tessenderlo Chemie (TESB.BR) and integration of Decaphos into Aliphos

2016 — Opening of the Dunkirk site and commissioning of the TechnoPhos centre of excellence in Bulgaria

2017 — Commissioning of a third Aliphos plant in Dunkirk

2019 — Commissioning of a fourth plant in India

SCIENCE ENTHUSIAST, PASSIONATE ABOUT BUSINESS

An entrepreneurial spirit and natural ability to mobilise teams has enabled Mohamed Takhim to achieve his ambitions as a chemist and entrepreneur since the age of 18.

Some poignant quotes:

· **On his age:** « Starting my business in industrial chemistry at age 20 was not at all typical or normal. A genuine emotional hell, I was often attacked and my authority was constantly called into question ».

· **On the capital risks:** « I remember that I was only twenty when my partners had injected 3 million euros into my discovery on the chemical purification of phosphates! The risk was pretty big ».

· **On the industrial culture:** « Until now, the phosphate industry has been a volume industry with a fairly traditional industrial culture ».

« The chemical industry has an « old brick » culture of industrial operators who want to see to believe! This meant that we had to build a prototype plant so that customers could come and see a device that works with our process. If we didn't position ourselves as the first reference by investing ourselves, we would deplete our funds without making any sales and would go under as a result ».

· **On prices:** « The pressure of the high demand for phosphate pushed its price from 30 dollars per tonne in 2006 to its current level of **120 dollars**, peaking at 400 dollars in 2008 ».

· **On phosphate shortages:** « With the predicted shortage of high quality phosphate, customers using conventional technologies feel trapped by the drastic increase in prices and are looking for alternatives. This will require a completely different approach. But current technology is 40 years old and the potential for improvement is completely exhausted ».

· **On the design:** « We have developed methods that allow us to capitalise on the experience gained from projects already completed and to use this experience in future projects. This approach is inspired by strong design concepts that are widespread in the textile and fashion industry ».

WHY PHOSPHATE?

Phosphate is an essential raw material for the development of living organisms, humans, animals and plants. For example, human bone consists of 85% calcium phosphate.

Phosphate is also a raw material used in fertiliser and animal feed. Without fertiliser, it would prove impossible to satisfy humanity's food needs! Phosphate is mined from phosphate rock, but much like oil, global resources of phosphate will be exhausted in about 50 years. Hence the urgent need to find innovative solutions in this area if we are to avoid a major food crisis.

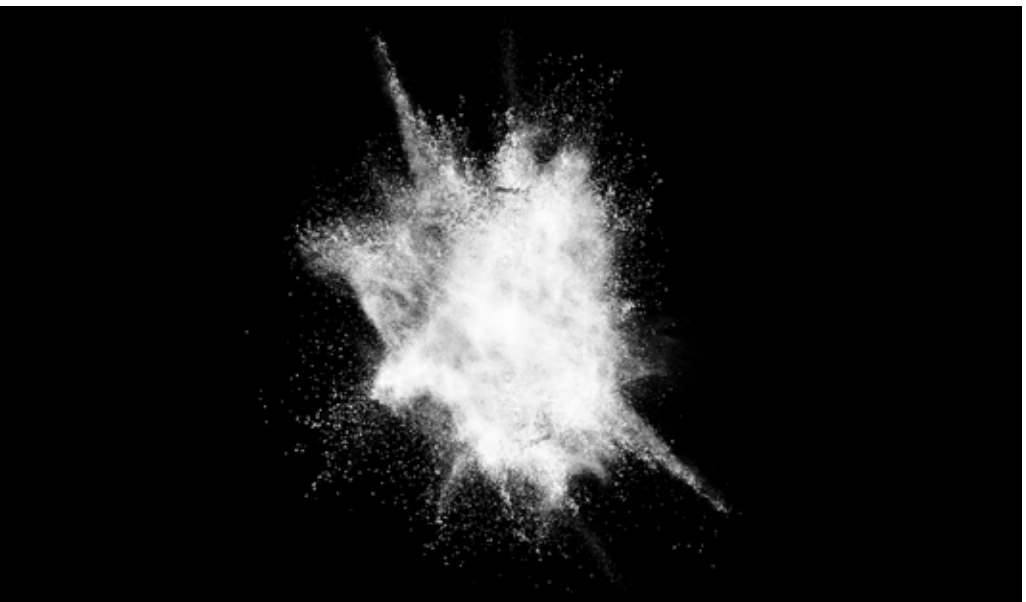
A REAL STRATEGIC TURNING POINT: IT IS POSSIBLE TO PRODUCE PHOSPHATE USING A DIFFERENT METHOD!

· **More accessible:** EcoPhos technology allows us to make maximum use of urban waste and even the lowest grade rocks, hitherto left almost completely unexploited. This process is fully in line with the « cradle to cradle » vision: EcoPhos will be among the first to industrially extract phosphate content from fly ash produced by the incineration of sewage treatment plant sludge. This is the concept known as « urban mines ».

· **Purer:** The results are highly purified products, similar to the best fertilisers on the market that enrich our crops and provide high-yield nutrients for livestock.

· **Greener:** EcoPhos develops and markets a technology that reduces production and energy costs by 30%.

The high ecological added value is also seen in the elimination of any potential pathogens (heavy metals, for example) by incineration.



TECHNOPHOS: A NOBLE PROJECT

A CENTRE OF EXCELLENCE

The EcoPhos Group has invested 10 million euros in its new technology centre in Bulgaria, TechnoPhos, which was inaugurated this year on 8 September.

This investment is fully in line with the group's strategy, which has always focused on innovation, with a clear emphasis on the research and development side.

All the semi-industrial units of the different processes operated within the group will figure at the heart of this ultra-modern centre and at the forefront of new technologies. The centre will be used to test new methods developed in the laboratory and to demonstrate to customers that Ecophos methods are optimal for their needs. This type of testing is essential in convincing industrialists to invest several millions into an innovative technology. EcoPhos will conduct tests on behalf of its customers for a charge, using the customer's own raw materials, and will provide them with comprehensive reports specific to their project.

This should generate additional revenues and bolster the profitability and credibility of the company. Potential industrial customers will actually see how the processes work in practice. This will make it more natural for them to continue the journey with EcoPhos.

AN INVESTMENT

SOME KEY FIGURES ON INVESTMENT:

INVESTMENT OF OVER
10
MILLION EUROS

ENGINEERING
20,000
HOURS

LAND AREA OF
28,000
M^2

PRODUCTION FLOOR
3,000
M2

NUMBER OF PEOPLE
38

PROCESSING CAPACITY
0.5
T/H OF ROCK

ECOPHOS TODAY
AND TOMORROW

THE POWER OF A GROUP

JOBS
270

TURNOVER IN 2015
138.5
MILLION EUROS

EBITDA 2015
17,2
MILLION EUROS

INVESTMENTS IN 2015
17,5
MILLION EUROS

INSTALLED CAPACITY (EUROPE)
25%
THE MARKET

CAGR (COMPPUND AGGREGATE GROWTH RATE)
> 50%
SINCE 2009

PROJECTS COMPLETED:

· **UCCI (Syria-2011):** 60 kt/year of phosphate for animal feed

Quimpac (Peru-2015): 60 kt/year of phosphate for animal feed

· **Technophos (Bulgaria-2016):** Semi-industrial technology centre with a processing capacity of 0.5-1 t/h of rock. Ecophos technology showroom.

ONGOING PROJECTS :

Aliphos France (Dunkirk-Late 2017): Phase 1: 220 kt/year of phosphate for animal feed. Phase 2: Processing of 100 kt of ash/year for the production of phosphoric acid for soluble fertilisers.

Evergrow (Egypt-Mid 2018): 110 kt/year of phosphate for animal feed. 25 kt/year of phosphoric acid for soluble fertilisers.

EGIL (India-Late 2018) 200 kt/an de phosphate destiné à l'alimentation animale.

PROJECT IN THE PIPELINE:

Egypt, Brazil, Senegal, Jordan, Morocco etc.

ONE TEAM, SEVERAL VALUES

EcoPhos is built on its 5 core values

1	2	3	4	5
PASSION FOR INNOVATION	TEAM SPIRIT	OPERATING AT A GLOBAL SCALE	RESPECT FOR LIFE	RESPECT/ TRANSPARENCY/ HONESTY

TOMORROW

Our ambition is clear: to become a world leader in the phosphate industry. We have a 5x5 strategy specifically for 2020

5	5	IN 5	PRODUCING 5	WITH A TURNOVER 5
YERS FROM NOW	PLANTS	COUNTRIES	KEY PRODUCTS	MILLION EUROS

High resolution photos are available for the press: 

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