

INC

ISSUE 5. 2013

GRANGEMOUTH

The battle with the Union and why the UK trails behind Germany

THE TIDE TURNS

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CHALLENGING TIMES

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INEOS
THE WORD FOR CHEMICALS

THE GRANGEMOUTH DISPUTE

The Grangemouth complex, including the refining joint venture Petroineos, is one of the three largest sites in INEOS. It was built over 50 years ago to process oil and gas from the North Sea.

The site has not performed well since the 2008 crisis and has relied on funding from other businesses in INEOS Group, each year since, to survive. A total of £600m (€715 m) has been funded by Group in this period.

There are two businesses on this complex and each one has its issues. Refining has suffered from a poor business environment in Europe since the crisis and low margins. It also has had poor reliability and high costs.

At the heart of the second business on the site, Chemicals, lies the KG cracker which converts North Sea gases into olefins. These gases have declined rapidly in recent years such that now we can only operate at 50% rates. In addition, the cost base is much too high.

Grangemouth (Chemicals and Refining) has been unable to address its high fixed cost base which has been crippling the business, because the resident union on site, Unite, would not sit down to discuss the seriousness of the situation.

Pensions are a prime example of the uncompetitive position. A typical pension on our Grangemouth site costs 65% of salary. This is simply unaffordable. Salaries are double the national average in the UK. Any attempt to discuss this unsustainable position by the union was simply met with a “no” and a threat of strike action. Unite threatened to strike 3 times in 2013, in February, in July and in September. The 2008 strike cost the business £120m and deprived Grangemouth of much needed investment in infrastructure.

Following a ‘summer of discontent’ over the union convenor, Stevie Deans, who sadly had misused INEOS facilities and information together with mounting losses, we decided that either Grangemouth must accept change or closure.

The only scenario for Chemicals that offered a bright future was to supplement the declining North Sea gases with US shale gas, which is both abundant and cheap. Transporting large quantities of gas however requires investment and infrastructure. It requires special ships and large import and export terminals that can handle liquefied gases at minus 100°C. The total investment necessary to enable Grangemouth to bring in, and process, US shale gas, is in the order of £300m, of which £150m is required to build the import facility at Grangemouth itself.

INEOS Capital agreed with management before the summer, that it was prepared to fund this ‘transformational’ project for Grangemouth, but only on condition that the business addressed its cost base including the unaffordable pensions and an overall wage package for operators of £100,000 per year (€120,000 or \$160,000).

Management constructed a “Survival Plan” for Grangemouth that involved closure of the current pension scheme but replacement with a “best in class” pension scheme, a pay freeze for 3 years and changes in redundancy terms and work flexibility. In return, INEOS agreed to invest £300m to import US gas.

Unite continued to refuse to engage in any discussion on the “Survival Plan” meaning that further losses were inevitable, and further more, that businesses elsewhere in the INEOS Group would have to continue to prop up Grangemouth.

We asked employees to vote on the Survival plan but sadly the result was a split vote.

After much internal discussion following this disappointing outcome, we had little option but to announce closure of the Chemical assets rather than sustain further losses.

At the eleventh hour the union announced a reversal of its position and accepted the requirement for the changes needed to secure the funding of £300m.

Looking back now the outcome was clearly a very positive one for the site. It means that Grangemouth has a future, and potentially a very good and long lived one at that.

It is very regrettable however that the process took the path that it did. It caused distress to employees and families, and it wasted an immense amount of money, over €40,000,000.

It was unnecessary and wasteful. Grangemouth needs to find a constructive way to have a dialogue between employees and management as we do in virtually all of our other sites, whether they are unionised or not. We have had two strikes in recent years at a cost of €200 million, years of aggressive confrontational dialogue with unions, multiple strike threats and heavy losses. The world is a changing place, business fortunes rise and fall. At times there will be need for change and there needs to be an effective forum to discuss this.

I would ask employees at Grangemouth to consider how in the future they would like to be represented in an effective and constructive way, bearing in mind that both employee and employer benefit from a successful future for Grangemouth.

JIM RATCLIFFE



SCAN HERE
TO VIEW VIDEO:
GRANGEMOUTH
DISPUTE





THE BATTLE WITH THE UN WHY WE TRAIL BEHIND G

THE Grangemouth oil refinery dispute took on a new turn in the autumn.

After learning that the petrochemical plant in Falkirk, Scotland, will stay open following a deal struck with Unite, allegations emerged of a campaign of bullying and intimidation echoing the union militancy of the Seventies and Eighties.

A senior manager at INEOS, the company that operates Grangemouth, claimed that the Unite union sent a mob of protesters to his home, leading him to fear for the safety of his wife and two young children.

Meanwhile, the daughter of another director said that she had received a **“wanted”** poster criticising her father, at her home in Hampshire, hundreds of miles from the Grangemouth plant.

David Cameron described the allegations as **“quite shocking”** and called on the Labour Party to investigate the claims about the union, which is its largest donor.

Len McCluskey, Unite’s general secretary, defended the tactic as **“legal and legitimate”**, adding: **“If a company director is engaged in what we believe is an unfair attack on workers and their families and their communities, then the idea that faceless directors can disappear to their leafy suburbs and get away with that type of action is something we think is wrong.”**

Here, Jim Ratcliffe, the chairman of INEOS, talks about how he took on the union, and what British industry can learn from a thriving Germany.

INEOS chairman Jim Ratcliffe reflects on the Grangemouth dispute and union militancy

Towards the end of 2005, INEOS acquired Innovene, the petrochemicals arm of BP, for \$9 billion. It quadrupled the size of INEOS overnight and brought with it some of the world’s largest industrial sites. One of those was in Cologne, Germany.

Three months later I visited the Cologne site, similar in size to Grangemouth but far more profitable, where I met the union convenor. His name was Sigg, he stood 6ft 4in tall and was known to represent employees robustly, but fairly.

After 15 minutes of **“get to know you”** chat, he said: **“Jim, I don’t like your bonus scheme.”** Taken aback, I replied: **“But why, Sigg? It’s a very generous bonus scheme.”** He responded: **“I would rather you spend the money on the plant, on capital expenditure, maintenance and painting so we can be sure there will be jobs for the employees’ children and their children.”**

There has never been a strike on that site, or a hint of one. The union, on behalf of employees and INEOS, share a common goal: a long-term, successful future. Employees retain good-quality jobs, and INEOS makes profitable returns and reinvests on the site.

Sad to say, but invariably a chemical complex in Germany is in better condition and is more efficient than an equivalent one in the UK. And, equally regrettably, the German chemical industry has fared better than its British counterpart, which has experienced a number of closures in the North East and North West.

The constructive dialogue that we encounter in Cologne has been lacking at the Grangemouth petrochemicals plant in Falkirk.

Unions can play a valuable role in large organisations where it is difficult to talk to a thousand people. They can negotiate annual pay awards with management, represent grievance cases, and explain and advise

on complicated changes in employment or pension law. However, in my view, they must understand that a business has to be profitable to survive, that the world is always changing, so firms have to adapt to remain competitive, and finally that their role is to safeguard the long-term employment of their members.

On the Grangemouth site this year, Unite threatened a strike three times – in February, July and October. In February, the union demanded a pay rise of 3.9 per cent, a level that the business simply could not afford. We had no option but to accede, as the site was not prepared for a strike and it simply would have been too damaging. In late July, Len McCluskey, general secretary of Unite, telephoned the site personally and demanded the reinstatement of Stevie Deans – who had just been suspended following a discovery of thousands of Labour Party emails on our system – or he would **“bring Grangemouth to a standstill”**. Again, a strike would have been too damaging at that time. And then, in October, came the straw that broke the camel’s back. Unite declared a strike over the investigation of Stevie Deans but, critically and far more damaging, they refused to engage in discussions about the future of the site.

Without change, Grangemouth would certainly fail. The business had been unable to adapt to a world that had moved on and become more efficient and competitive, because the union had kept a stranglehold on the plant. Each operator on the Falkirk site now costs close to £100,000 per annum, if one takes salary of £55,000 plus a pension contribution of £35,000, plus bonuses and National Insurance. This level of expense is simply unsustainable in our industry.

It is misplaced for unions in Britain to think that we are the enemy. We are not. It is not necessary, nor appropriate, to sow dissent and misrepresent employees or constantly to threaten industrial action. It is wrong for **“brothers and sisters”** letters (this is how missives from the union to members on site are addressed) to describe doubters or anyone who deigns to cross the



ION AND ERMANY

union as scabs. It also has the hallmarks of bullying. Not only is it wrong but it is also intimidating, and designed to suppress alternative views – an attitude that runs absolutely counter to the values of society today, in which freedom of speech is cherished.

During the dispute, a female employee in accounting, who was worried by the union drumbeat, expressed concern about her job and confirmed that the business was in financial difficulty (she prepared the figures each month) in an email that she put out across the site. She received rude anonymous phone calls, with the phone being slammed down.

This small incident was much discussed in INEOS. It upset many of us that a lady in our company, a mother of three, was unable to express her views and concerns freely. It played a part, ultimately, in our resolve not to accept a solution for the site that did not bring with it changes on many fronts, but most importantly, in attitude and working practices.

The union issues on the Grangemouth site date back to the Seventies. Only three weeks ago, half a dozen friends and I were guided on rocky trails through the high Alps in Italy on mountain bikes. One participant, Tony Loftus, who had been the operations director for INEOS’s predecessor, Inspec, revealed in a discussion about the troubles at Grangemouth that his first job after a chemistry degree at Manchester University had been as a graduate trainee on the Grangemouth site in the early Seventies. He said, quite spontaneously: **“When I was in Grangemouth, there were no problems, we didn’t have any strikes, and management did as they were told.”** Little has changed since, and today the site struggles compared with its German counterparts.

While unions did not play a part in my family life when I was being brought up, my early years were most certainly spent in a working-class community. My first 10 years were in Failsworth, a northern suburb of Manchester, close to Oldham. I recall being able to count more than 100 mill chimneys from my bedroom window – this is probably how I learnt to count. We lived in a small cul-de-sac called Boston Close, in what I remember as a very pleasant council house. It still exists

today. I do recall my father telling me that when he was younger he had climbed every tree in Miles Platting, a neighbouring suburb where he was brought up. It was only many years later as a teenager that it dawned on me that there were no trees in Miles Platting. It is a far cry from the leafy suburbs of the Home Counties.

These communities in Lancashire developed in the late 1700s. Workers migrated from the fields and sought new employment and opportunity in the Industrial Revolution that began in the heart of Lancashire. Britain invented the concept of manufacturing. I can clearly see in my family tree many of my ancestors moving from the fields of Derbyshire to Manchester. All signed their name with a cross.

I undoubtedly have an affinity to manufacturing, as do many from this part of the country. I am a strong advocate for actually making things in a major economy like Britain. That is not to say I have anything against services. I do not. But I believe that a robust, balanced economy requires a healthy manufacturing sector. We spend a good portion of our income on goods of one sort or another, from washing machines to handbags (heaven knows why so many are required), and it is common sense that we are better off making some of these goods than importing them.

Britain has suffered a collapse in its manufacturing base in the past 20 years. A typical economy splits three ways: agriculture, manufacturing and services. Agriculture is normally quite small, at less than 10 per cent; services is generally the largest sector; and manufacturing might be in the 20 per cent range, as is the case in Germany.

Twenty years ago, Britain lagged behind Germany by a small margin, maybe 2 or 3 per cent. Today, Britain’s manufacturing sector is only half of Germany’s.

The obvious questions are, why this collapse, and is it important? For me, it certainly is important. An over-dependence on services leads to a fragile economy. Germany emerged from the 2008/9 recession much more quickly and vigorously than Britain. Equally important is the geographic divide here. The Midlands and the North are much more heavily biased to

manufacturing, and communities have suffered from high unemployment. London is clearly services-based, and very successful for it. But they are not the only game in town.

I see some tendency in government, which sits in a **“services environment”**, that is to say in London, to believe that the future is all about the City and its love affair with financial services. We should take some lessons from Germany, where they have a strong attachment to their thriving manufacturing base and recognise its key role in a balanced economy.

I see the rapid decline in manufacturing in Britain stemming from previous governments’ lack of recognition of its importance.

Britain doesn’t have a knock-out sales pitch to attract manufacturers. INEOS has several sites in Britain, but they are not as profitable as our plants in Germany, Belgium and, particularly, the US. Britain has expensive energy, skills are not at the levels of other countries, pensions are expensive, and unions can be difficult. Historically, government was not switched on to manufacturing in Britain. In contrast, the USA has excellent skills, most of our sites there are non-unionised, energy is a fraction of the cost in Britain, and they have an enormous market. Germany is simply good at manufacturing – as we used to be.

There is no reason that manufacturing should not revive in Britain. The present Government is becoming more attuned to its importance in maintaining a healthy economy. We should never forget that the Brits invented manufacturing.

To return to my main theme – the unions and the headlines asking **“Unions, good or bad?”** – I maintain that Seventies-style union behaviour leads to ruin. By contrast, Sigg, the convenor in Germany I mentioned, is in the 21st century. He challenges, he tests, he shakes the tree and negotiates, but he always persuades INEOS to invest. A good union is good for employers – and for employees.



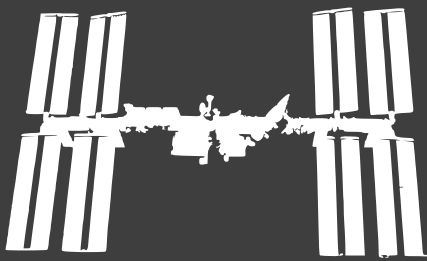


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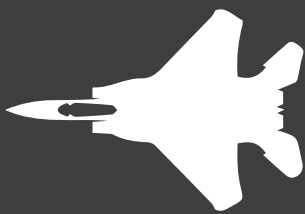
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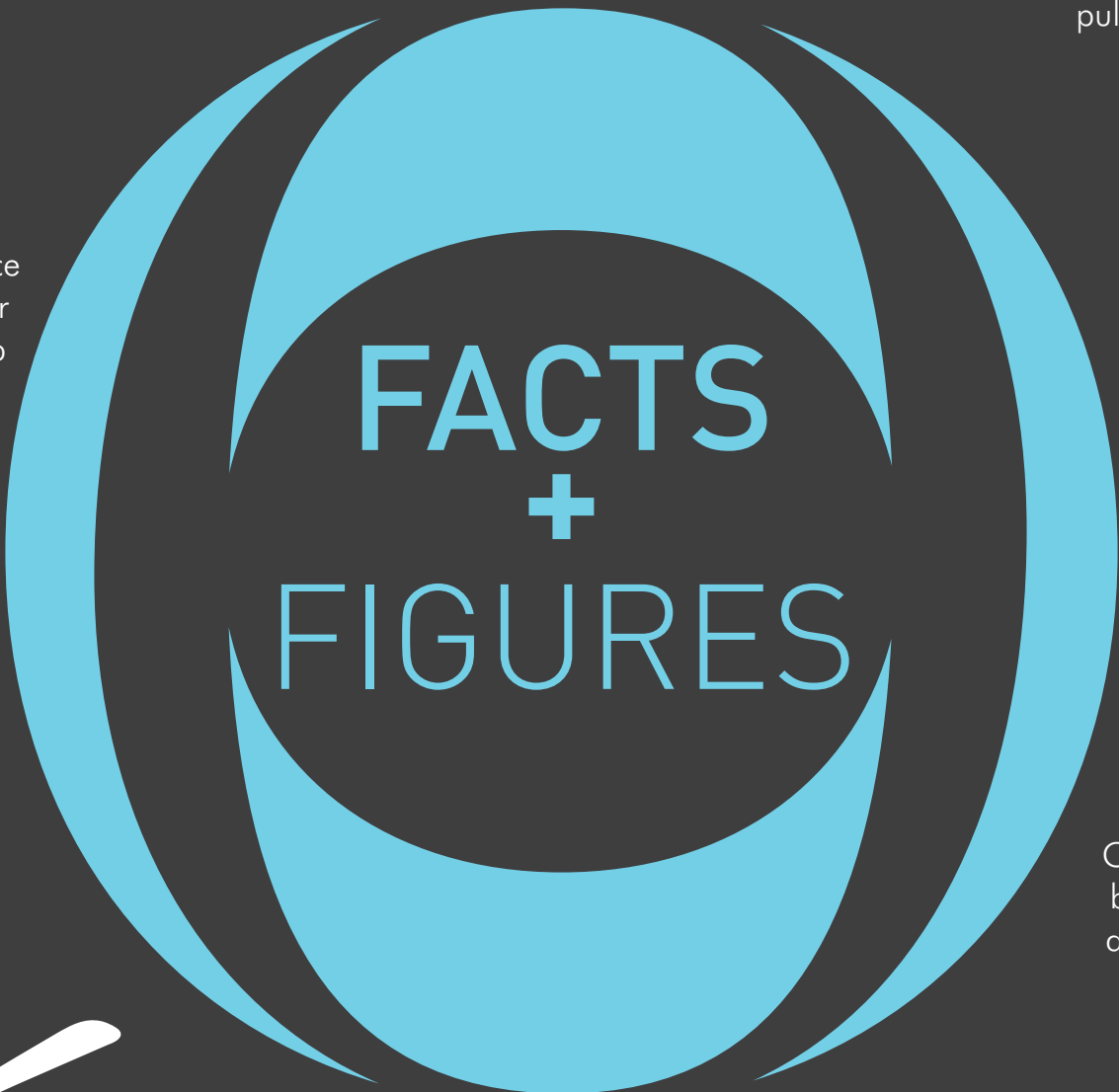
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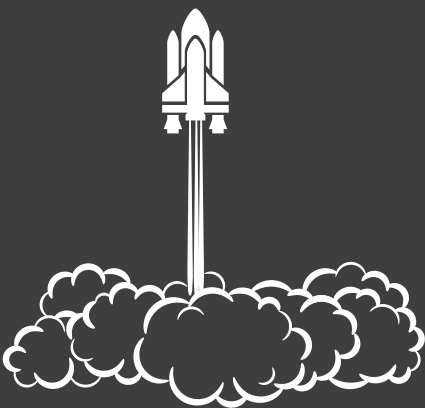
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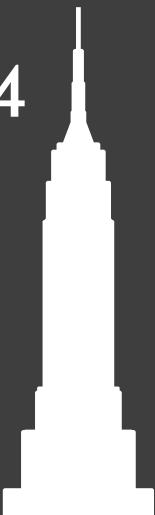


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X4



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INTRODUCTION



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OVER the past 15 years INEOS has come of age.

It has grown from modest beginnings to become one of the biggest chemical companies in the world. It's been quite a ride – challenging at times – but it's something that everyone, who has played a part in its success, should celebrate.

But those that follow us closely will know that INEOS is not one to live in the past. In today's fast-changing, competitive world, successful companies cannot afford to.

It is no exaggeration to say that the global petrochemical industry is undergoing something of a revolution. Five years ago it would have been unheard of for any company to want to build a gas cracker in America. Now they are queuing up to invest in the US. The reason is simple; exploitation of shale gas has given the USA access to vast quantities of both cheap energy and cheap feedstocks. It is a game changer.

So the focus of this edition of INCH is the US. With about two thirds of INEOS' profits now coming from the USA the region has become a magnet for our investment.

But with 51 manufacturing sites in 11 countries, serving markets around the world, the challenge to remain competitive is global.

Europe is now one of the most expensive places in the world to make petrochemicals. We know what needs to be done and governments are slowly starting to see sense over rising energy and environmental costs on manufacturing. Tom Crotty takes a look at how Europe can continue to compete.

We cannot wait for the politicians though and many of our sites are already thinking differently and coming up with creative ways to remain competitive in the face of America's home advantage, such as the new import terminal at Rafnes to access US ethane or the new ethylene terminal at Antwerp.

Some sites face bigger challenges than others and as you would expect, given the public profile of the site in recent months, Grangemouth also features in this edition.

And then there's China, with significant domestic demand for our products, where INEOS is forming strategic Joint Ventures to develop its Nitriles and Phenol businesses. Rob Nevin and Harry Deans talk about our activities in China.

We like competition. It's healthy. It sharpens thinking and focuses minds, and is one of the reasons why INEOS has launched a bold, new initiative to get kids running again in the UK. We hope it will one day become the biggest kids' running initiative in the world. Brendan Foster, a former British Olympic long-distance runner who founded the world-famous BUPA Great North Run, thinks it will be.

The past fifteen years have been quite a ride – looking forwards in today's ever-changing, competitive world, it is clear that the future will continue be equally challenging.

INEOS has proven itself to be a pretty agile company, well equipped to grow and prosper in changing times. We will need all that agility in the years to come to keep us ahead of the competition.

ANDY CURRIE



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Articles by: Sue Briggs-Harris

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THE TIDE TURNS\$

ROCK SOLID FOUNDATIONS ENSURE AMERICA IS ON TRACK FOR GREAT THINGS

For years America had to watch as companies migrated overseas. For those companies, which chose to leave US shores, the grass was much, much greener on the other side of the world. Now they are coming back and America, thanks to shale gas, is at last reaping the benefits



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THE TIDE TURNS

\$48bn

invested in new plants
between now and 2017

\$68bn

planned investment between
2018 and 2030



AFTER years of losing out to Asia and the Middle East, the tide is turning in America's favour.

But it's not just turning.

It's now coming in so fast that the US is struggling to keep up with the number of chemical companies wanting to build new gas crackers, restart old ones or expand existing plants so that they can take advantage of the vast amounts of cheap natural gas either as a source of energy or as a vital raw materials used by the petrochemical industry to make plastics and solvents.

And it's all down to manpower.

"We are already seeing the difficulties because there are so many projects," said Bob Learman, CEO of INEOS Oligomers, which is due to open a new world-scale linear alpha olefins plant on the Gulf Coast at the end of 2016.

"There is a shortage of engineers coming out of colleges, but our immediate challenge is finding experienced people who can build and operate complex chemical plants."

Once built, our new plant is expected to increase INEOS Oligomers' annual profits by about \$100 million.

INEOS' expansion plans, though, are only part of the American dream.

In August, IHS Chemical estimated that chemical companies were planning to invest \$48 billion in new plants between now and 2017, rising to \$68 billion between 2018 and 2030.

"That is a 60% increase from 2010 which is staggering growth," said Bob.

"And what is driving all this investment is access to low-cost ethane for chemicals."

In short, the availability of low-cost ethane, a natural gas derived from shale gas, has revitalised the US chemical industry, and given it an advantage over many competitors around the world which rely on naphtha, a more expensive, oil-based feedstock.

"Shale gas has really changed everything," said Dennis Seith, CEO at INEOS Olefins & Polymers USA.

"It's been nothing short of phenomenal and the opportunities are continuing."

"Lower cost feedstocks are driving increased margins and competitiveness for our domestic markets and we are seeing increased US demand."

INEOS Capital has set aside more than \$300 million to buy pipelines, improve the infrastructure and expand its production of ethylene, a chemical that is used by manufacturers to seemingly make everything from soaps to paint to clothes to plastic bottles to cosmetics.

A new unit to produce 500,000 tons of high density polyethylene a year will also be built before the end of 2015.

"INEOS Capital normally invests between \$50 and \$100 million in our business every year," said Dennis. **"So this is a big number."**

The investment is expected to add about \$250 million a year to the business' bottom line.

Dennis said all the investment was being driven by access to cheap ethane which it used to produce ethylene.

"These low-cost feedstocks have enabled our business to significantly increase profitability from levels that were at \$300 million a year to more than \$1 billion per year," he said.

That access to cheap raw materials, that advantage, that shift in fortune, that 'game changer' is seen as a threat to many outside America's borders.

Saudi Arabia, Russia and China are all believed to be concerned about America's energy boom. For although many parts of the world are sitting on vast reserves of shale gas, only America has so far managed to commercialise production on a large scale.

Europe, which is one of the most expensive places in the world to make petrochemicals, has the same breakthrough technology to unlock the natural gas trapped in shale rock, but is dithering over what to do about it.

In the UK, where some drilling has taken place, there have been protests over fracking.

"Fracking is a very contentious subject in America too," said Bob. **"In the more densely populated places where shale gas has recently been discovered – Ohio, New York and Pennsylvania – they are concerned about perceived negative environmental implications."**

"But there is not the aggressive opposition you see in Europe. It's much more of a sensible, civilised debate and one that is on-going."

"In the places, though, where there is a long history of drilling for oil and gas, people see the benefits and they support it."

In a recent PwC report on the potential impact of shale gas on US manufacturing, experts forecast that shale gas could create more than one million jobs by 2025 and allow US manufacturers to cut their raw materials and energy costs by as much as \$11.6 billion a year.

"That's quite conceivable," said Jim Cooper, a senior petrochemical adviser at American Fuel & Petrochemical Manufacturers.

"There are many reasons why all eyes are on America at the moment and it's because of these two huge advantages – the price of energy and the price of raw materials."

"Basically we have a lot of things in the right place at the right time."

It's a far cry from those dark days during the 2008-2009 global downturn when the world's lights went out.

The American Chemistry Council said during that time an estimated 66,000 people lost their jobs in the chemical sector alone as demand for their products slumped.

Construction – a key market for the US chemical industry – came to a virtual halt. Spending on cars, furniture and electrical appliances – major markets for the chemical industry – massively dropped as people tightened their belts.

INEOS Oligomers, which makes hexane and octane to produce polyethylene, low toxicity drilling fluids and a significant amount of feedstock for high performance synthetic lubricants, saw a big drop in profits, but, due to its diverse range of products, 'rebounded nicely' after a tough two years.

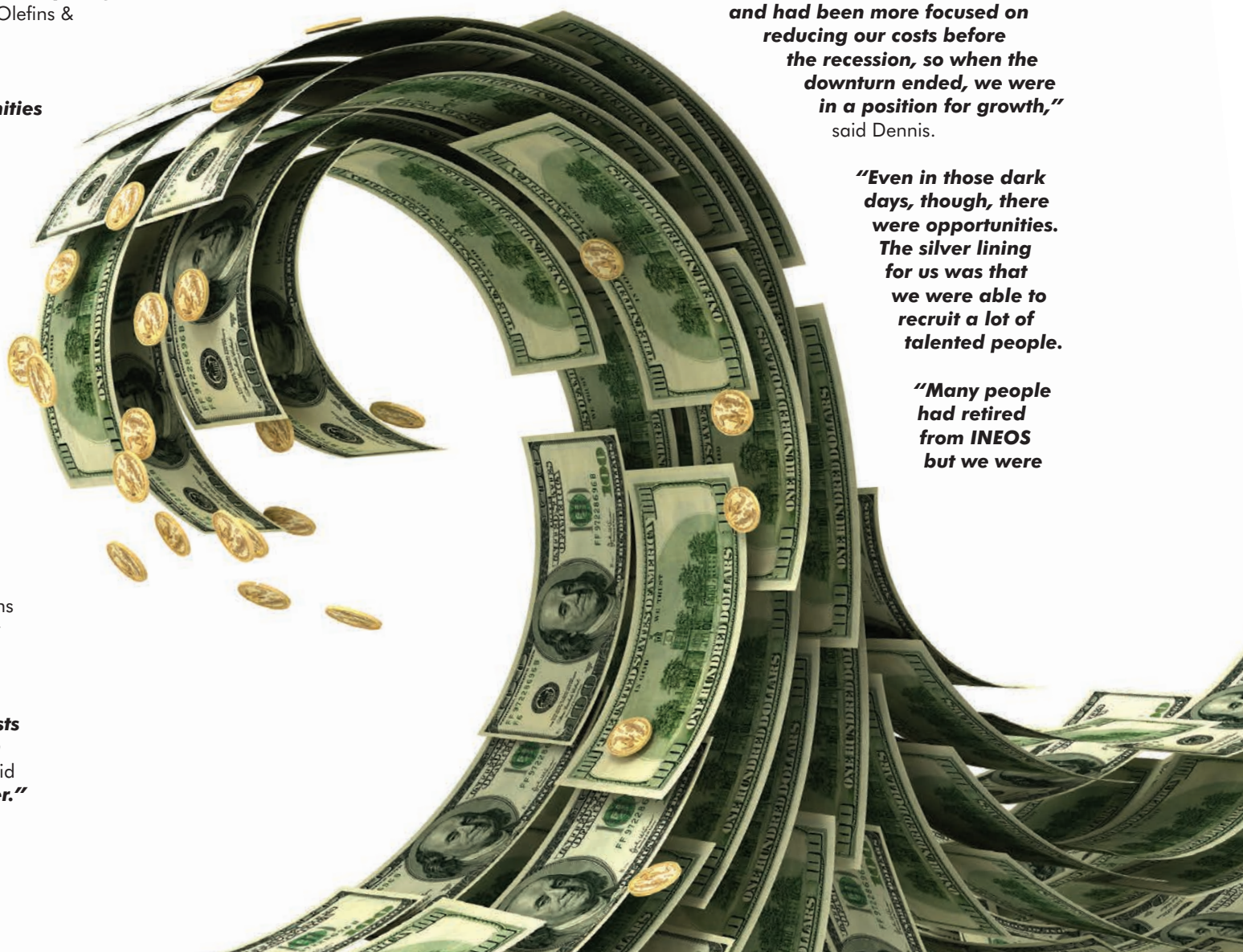
"Our profits almost tripled between 2009 and 2010," said Bob. **"They went from a low of \$67 million during the recession to \$187 million the following year."**

INEOS Olefins & Polymers USA, which makes a range of products including the resins for the global plastics manufacturing industry, also emerged stronger following the recession.

"We had already done our restructuring and had been more focused on reducing our costs before the recession, so when the downturn ended, we were in a position for growth," said Dennis.

"Even in those dark days, though, there were opportunities. The silver lining for us was that we were able to recruit a lot of talented people."

"Many people had retired from INEOS but we were"



able to replace them quickly with a lot of new talent as other companies cut back on staff. And they brought in new ideas."

Today the US chemical industry produces about 19% of the world's chemical output, which is worth billions to the US economy. With shale gas, that figure is expected to rise.

The shale gas boom has also led to an insatiable appetite among banks and individuals now keen to invest in chemical companies.

With more than 50% of INEOS' profits now coming from the US, it has also become a magnet for INEOS Capital's investment.

Between now and 2017, INEOS Capital plans to invest almost \$400 million in its Oligomers business in the US where production costs are half what they are at its sister plant in Belgium in Europe.

In addition to the new linear alpha olefin unit on the Gulf Coast, it also intends to increase its polyalphaolefin (PAO) production to satisfy the demand for high performance synthetic lubricants which lower carbon emissions, improve fuel consumption and protect engines from wear and tear. PAO is also used as an industrial lubricant.

"It is particularly in demand for wind turbines where high shear stability is critical," said Bob.

That investment alone is expected to boost INEOS' profits by \$20 million a year.

"It's really exciting," said Bob. **"Growth creates opportunities for people, and although the PAO plans won't add a lot of jobs, the new LAO plant will create about 100 jobs."**

"INEOS Oligomers is already the world's largest producer of polyalphaolefin and our investment plans will ensure we maintain that position."

The new linear alpha olefins plant, which can be expanded by 50% if needed, will be able to produce an extra 350,000 tons every year.

Most of the extra capacity will be destined for the North American market to support the rapid expansion of polyethylene production and rapid demand for synthetic lubricants.

Discussions are also taking place over whether INEOS, a company which grew through acquiring others' unwanted assets, should invest billions in a gas cracker and an ethylene glycol unit.

"Shale gas has really changed everything. It has been nothing short of phenomenal"

Dennis Seith, CEO, Olefins & Polymers USA

"That is something INEOS has never done before, and it would have been unheard of for any company to build a gas cracker in the US five or 10 years ago," said Dennis.

Before the shale gas boom, America relied heavily on imports of liquefied natural gas. In 2008, the US was so worried that it might run out of natural gas that Houston-based Cheniere Energy built five massive gas storage tanks in coastal Louisiana.

"If you want to see what the natural gas revolution in America has wrought, there's no better place than the Sabine Pass liquefied natural gas port," said Forbes reporter Christopher Helman. **"Those tanks are empty."**

The reason is shale gas. Drillers finally discovered how to squeeze oil and gas out of rock once thought too difficult and too expensive to tap, and now America has so much gas they don't know what to do with it.

"Cheniere Energy is effectively now turning its gas import terminal into an export terminal," said Christopher.

Bob and Dennis are both full of praise for their European colleagues who spotted, then seized, the opportunity to strengthen their own competitive

position as an ethylene producer in Europe – by importing cheap US-derived ethane for their European gas crackers.

"They moved very quickly to secure a deal to export ethane to Norway," said Dennis.

INEOS Olefins & Polymers in Norway will start importing up to 800,000 tons of US-derived ethane feedstock a year from 2015.

"That's going to be a game changer," said Dennis. **"Others will follow, but INEOS was first."**

Meanwhile, if INEOS does decide to build a cracker, it could face another potential battle.

"We would need several hundred people to run it and that's a huge, daunting challenge for INEOS in itself because we are not a household name," he said. **"But we are making lots of progress and INCH magazine is playing a big part in raising our profile."**

"Our best selling point, though, is our own people because they want to work with other good people who share their vision."

Both Bob, who worked for The Dow Chemical Company for 20 years, and Dennis champion INEOS' refreshing approach to business.

"It's not uncommon for an important decision to be made in 30 minutes," said Bob. **"There are no long-winded reports to be written or committee meetings. The process is extremely clear. We just have a good discussion."**

He also praised INEOS Capital's willingness to accept calculated risks.

Graduates also enjoy the freedom to make a difference by being given a real job with real responsibility from their first day at work.

"When I was a young engineering graduate I wanted to change the world but it was hard to do," said Dennis. **"If someone had given me the opportunity, like INEOS does, I would have thought that was a pretty attractive feature."**

US EXPORTS ITS HOME ADVANTAGE

COUNTRIES are queuing up to import the abundant supply of natural gas from the US.

Houston-based Cheniere Energy is currently building the very first US liquefaction terminal in the lower 48 (continental US) so that it can ship cooled, liquefied gas from America. So far it has signed 20-year deals with the UK, Spain, India and South Korea. And it is talking to others.

"The foundational changes that are transforming the global gas markets are quite remarkable," said Charif Souki, chief executive of Cheniere Energy.

US SLASHES CARBON MISSIONS

THE shale gas boom has helped to slash US carbon emissions. According to the national Energy Information Agency, which attributed the displacement of coal by natural gas, energy-related CO₂ emissions in the US fell by 205 million metric tons in 2012. They are now at their lowest level since 1994.



BROADEN YOUR HORIZONS, SAYS KPMG

CHEMICAL companies in America must broaden their horizons if they are to fully benefit from the shale-derived cheap energy and feedstock.

KPMG said they needed to start investing heavily in supply chains, overseas sales and joint ventures with emerging market producers all over the world so that they could successfully export their products.

“Traditionally US companies have focused on the domestic marketplace but America is a mature market and cannot absorb all this extra capacity coming onstream,” said Paul Harnick, KPMG’s global COO for the chemicals and performance technologies practice.

“The real demand growth for chemical products will not be in the US. It is in Asia.”

Mr Harnick said US chemical companies needed to finely balance the pros and cons of basing production in the US, where it is now cheap, with the need to be close to their customers throughout the world.

“That remains critical and the most successful global chemical companies will be those that invest in supply chains so that they can get product to where it is needed,” he said.

To do that, though, takes time.

“The opening up of many emerging markets to import growth can be a slow and complex process,” said Andrew Monro, KPMG’s Global Lead Partner for INEOS. ***“US chemical companies need to take actions today that will guarantee markets for products to be produced in four or five years’ time.”***

In 2010, the US was producing 19% – worth \$689 billion – of the world’s chemicals, more than any single country. Despite forthcoming capacity expansions in the US, by 2015, China is expected to overtake the US as the largest chemical producer.

WHAT COULD BURST AMERICA’S BUBBLE?

EXPERTS predict that America’s chemical industry will have a lasting competitive advantage until at least 2030.

The American Chemistry Council said plentiful supplies of affordable natural gas had already led to unprecedented investment and capacity expansion.

“We are truly a bright spot around the world,” said president and CEO Cat Dooley.

IHS, meanwhile, predicts that basic chemical and plastics production in North America will more than double by 2020 and Western Europe’s will fall by about a third.

But Bob Learman and Dennis Seith, who both run successful, profitable INEOS businesses in the US, say there are forces that could burst America’s bubble.

“There are definitely things that could shoot businesses in the foot,” said Bob. ***“And they include over taxation and over regulation.”***

America currently has the highest statutory corporate tax rate among developed countries, and President Obama has hinted at tougher environmental and industry regulations to reduce carbon emissions.

“I don’t mind regulations, provided they are based on sound science,” said Dennis. ***“But there are a lot of people who would just like to ban things.”***

He also counselled caution over attempts by some to limit exports of US-derived shale gas to other parts of the world so that America retained its competitive edge.



CHALLENGING TIMES

EU MUST SEE SENSE OVER ENERGY AND THE ENVIRONMENT

Chemistry makes a world of difference to the world we live in. But can the European chemical industry, which directly contributes about €500 billion to the EU economy, convince its masters to listen to its concerns so that it can compete on the global stage? Only time will tell. But time is running out, as INEOS' Tom Crotty explains

EUROPE'S status in the world is under threat. Its petrochemical industry, which directly contributes €500 billion to the EU economy, today faces great challenges from outside and within.

But neither should be life-threatening if the European Union sees sense in time, says Tom Crotty, INEOS Group Director.

"Europe has a very clear choice," he said. "Between a vicious circle of decline or a virtuous circle of improvement."

Whichever choice it makes will be determined by two things: the EU's environmental policies to decarbonise the planet and whether it exploits its own resources to bring down the spiralling cost of energy.

"Those are the two biggest issues facing the European Union," said Tom.

Europe is now one of the most expensive places in the world to make petrochemicals. The Middle East is marginally still the cheapest place – but, thanks to its exploitation of shale gas, America is catching up.

"The EU has got a problem in that two of the major trading blocks that surround it are accessing much cheaper energy," said Tom.

And it shows.

In France, INEOS' Olefins & Polymers business spends twice as much as America to produce a ton of ethylene.

"The US business is our most profitable one and the European business scale-for-scale is probably our least profitable," he said.

Cefic, the Brussels-based Trade Association which is the voice of the chemical industry in Europe as a whole, believes the situation will get worse this year before it gets slightly better next year.

"Cefic is forecasting modest growth of 1.5% next year," said Tom, a Cefic board member. ***"It is modest growth, but it is real growth."***

That growth will be driven by the production of high quality, innovative, high value, environmentally-sound products for markets that demand the best, not necessarily the cheapest.

"If you are looking for a specific engineering plastic to make a key component for a brand new BMW, you are not going to go around and ask who's cheapest, you are going to say: 'Who's best?'"

That – so far – has safeguarded Europe's chemical industry.

"That is key to Europe's future," said Tom. ***"Without that protection Europe would be flooded by cheap chemical products."***

"But we must continue to make highly technical products that are difficult for competitors to copy."

One such product is made by INEOS. It specialises in making polymer that the French use for milk bottles. The plastic has to be able to stop chemicals seeping into the milk.

"It is not something a big plant in the Middle East can copy or would want to copy because many of them are too big for that," said Tom.

"Europe must continue to make highly technical products that are difficult for competitors to copy"

Tom Crotty, INEOS Group Director





But still, there is no margin for complacency.

Cefic is currently urging the European Commission not to impose additional environmental regulations in isolation from the rest of the world.

It warns if the EU pursues its 2050 environmental objectives and thereby drives up energy and carbon costs, it will undermine competitiveness and result in carbon leakage and a reduced level of investment in the European Union.

“The EU needs to take stock of its environmental policy-making because increasing regulations are driving up prices and it’s having a huge impact,” said Tom.

Cefic shares the European Commission’s objective to decarbonise the planet. What it does not agree on is how to achieve that.

“Imposing environmental regulations, in isolation from the rest of the world, will cause European chemical production to cease because we won’t be able to afford it,” he said.

“That won’t decarbonise the planet because those same products will still be used by Europe’s 350 million consumers. They will simply be imported from the likes of China where you’ll have the additional carbon from production and from transportation.

“So you will have increased the amount of carbon and also lost jobs and wealth from the EU.

“It makes more environmental and commercial sense to encourage European industries to do the right thing by using their technical expertise to create greener products,” he added.

Tom said a ton of PVC currently made in China using energy generated from coal fired power stations, emitted seven times more CO₂ than a ton of PVC made in the EU. And that was without taking into account the carbon needed to transport it.

“It may be an extreme example,” he said. **“But it is a real example.”**

So the question is: Is the EU listening?

The European Commission’s Directorate-General Energy and Directorate-General Enterprise are, says Tom. But he’s not so sure about the Directorate-General Environment, which imposes the regulations.

“Their message is that the EU must set an example to the world,” said Tom. **“But the reality is the rest of the world is not following. Europe is running in front and the Americans are saying ‘See you later. We are not going to screw up our industry or our economy’.”**

Tom said carbon taxes would work only if they were imposed globally.

“It’s right that the best way to encourage companies to do something different is to make what they do now too expensive, and that is what carbon tax does,” said Tom. **“But everybody must do it.**

“If a tax on carbon is introduced in the EU alone, then nobody upon nobody will run their industrial operations in Europe. They will operate in China, the Middle East or America.”

Cefic believes 9% growth is already needed just to bring European production back to where it was before the 2008-2009 downturn, which saw one of INEOS’ major competitors go bust.

“We bounced back from the downturn because our reliance on the car and construction industries was much less than our competitors,” said Tom. **“For us it was really painful but it wasn’t terminal.”**

Aside from the threat of carbon taxes, though, the chemical industry is also dismayed at the EU’s reluctance to unlock the natural gas trapped in shale rock and, in turn, help to lower production costs of energy for the industry and consumers in general.

“You can keep driving down your own costs but you can only go so far and that’s when you get into the energy policy issue,” said Tom.

“I know I sound like a broken record but it’s a huge issue for us.”

INEOS’ ChlorVinyls plant in Runcorn in the North of England currently uses as much power as the neighbouring city of Liverpool.

Cefic believes the European chemicals sector, which employs 1.2 million, will face tough competition again next year as it battles for growth from US producers who are benefiting from cheap energy and feedstock thanks to shale gas exploitation in America.

So far, the UK is European Union’s best hope for cheaper energy.

“There is no point in looking anywhere else in Europe at the moment because the opposition is too high,” said Tom.

Despite protests in the UK – such as happened in July at Balcombe, West Sussex – the British Government does support the search for shale gas, and has promised to hand control over important, complex, technical planning issues to the Department for Environment, Food and Rural Affairs (Defra) and the Environment Agency (EA) instead of local councillors.

Cuadrilla is one of a dozen UK companies which have licences to drill for shale gas.

INEOS – with a cracker at Grangemouth in Scotland that needs to find a long-term source of ethane gas to run it – is in talks with all of them.

“Clearly we would get involved because we are a customer,” said Tom. **“But the question is: Do we want to get even more involved?”**

“What we do know is that the North Sea ethane gas is virtually gone now and unless we find another source of gas we will be struggling to run the Grangemouth cracker after 2017,” said Tom.

In October INEOS announced it planned to invest £300 million in a terminal at Grangemouth so it can import cheaper liquefied gas from America, after staff agreed to support the site’s Survival Plan.

The Scottish Government has also indicated that it will provide a £9 million grant to help finance the terminal and the UK Government has given its pre-qualification approval for a £125 million loan guarantee facility, even if Scotland does vote to sever its 306-year-old ties with England in next year’s independence referendum.

“We need all their support,” said Tom.

CRACKS START TO APPEAR IN EUROPE

AMERICA’S ability to produce chemicals cheaply is already having a huge knock-on effect.

Worst affected is Europe’s chemical industry that uses mostly crude oil to produce the same products.

In a report published by KPMG in October 2012, Mike Shannon, global head of chemicals and performance technologies, forecast that it might cause some economic disruption.

“It may cause the shutdown of less lucrative assets – and possible countries blocking the flow of US exports to protect local production.”

Arguably it has already started in Europe, which is now one of the most expensive places in the world to manufacture petrochemicals.

In September, Total announced it planned to shut down a loss-making steam cracker in Carling, France. The naphtha cracker, which uses crude oil to make chemicals and has been struggling for the past five years, will close in 2015.

It will come as no surprise to KPMG which, in 2009, forecast that 14 of the 43 crackers in Europe would become uneconomical by 2015 due to stiff competition from the Middle East, Asia and America.

Meanwhile, in America, with low-cost and abundant ethylene coupled with a slowdown in the growth of domestic demand, US companies are looking for expansion opportunities.

The US is already a net exporter of ethylene derivatives and the volume is expected to increase significantly.

Imposing environmental regulations in isolation from the rest of the world will crush the European chemical industry and lead to more goods being shipped into the EU from countries such as China



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TIMES



UNITED FRONT

WORKING TOGETHER IS THE KEY TO SURVIVAL,
SAY INEOS UNION REPRESENTATIVES



With Europe facing pressure from outside and within, it has never been more important for management and unions to work together to find solutions. INCH spoke to union representatives from Norway, Italy and Germany about what they believed INEOS needed to do to remain competitive and how they could help

THEY say marriages are made in heaven.

That may well be the case for the defence. But anyone who is married knows they can also be fraught with difficulties.

The key to survival is openness, honesty and fairness.

Thomas Meiers, the union representative at INEOS Köln, says openness, honesty and fairness are equally as important in business too.

“We work closely with INEOS and that’s a good thing,” he said.

He said discussions were often intense but that was something INEOS actively encouraged.

“Sometimes the discussions between us can get heated, but because we are allowed to be open, all of us can spot any potentially dangerous situations and deal with those potential problems at a very early stage,” he said.

Those frank, on-going discussions, he said, meant the union and management could thrash out the best way to approach a particular issue, and find a solution that satisfied all.

“Usually the outcome ensures both further economic successes and competitiveness for the company as well as decent working conditions and welfare for the workforce,” he said.

And it seems to be working.

The Köln site of INEOS Olefins & Polymers is one of the most profitable in Europe.

Thomas believes that INEOS’ flat management structure, the way it conducts its business and the fact that staff identify with the company and its aims, have all contributed to that.

“Our approach to industrial relations at INEOS is so unique,” he said. ***“It’s also what makes us sustainable and successful.”***

Working together towards a common goal is also what motivates Wenche Jansen Tveitan, the union representative at INEOS’ Olefins & Polymers plant in Norway.

“Any workplace needs to have the staff on board if it wants to remain competitive,” she said.

“And an open relationship, built on trust, is built through openness.”

She said regular informal contact between the union reps and management had been the key to building that trust.

“Any difference of opinion is brought to the table as soon as possible and not left until the next works’ council meeting,” she said.

Management, she said, also used the union as a sounding board.

“When that happens, the employees can play an active part and contribute to even better solutions in the end,” she said.

That kind of approach is critical, especially in today’s fast-paced, ever-changing and competitive world.

Many petrochemical companies are currently investing most of their money in the US rather than Europe because of America’s access to cheap feedstock and energy.

With Europe now one of the most expensive places in the world to manufacture petrochemicals, Wenche believes the union can directly – and indirectly – ensure INEOS remains competitive.

She said that was especially important in Norway where the cost of living is high.

“Our site depends on good performance – all the time,” she said.

“We do that by showing our investing in our site yields a good profit.”



“The co-operation between management and unions is of great importance because together we’re stronger”

Wenche Jansen Tveitan, union representative at INEOS’ Olefins & Polymers plant in Norway.

CHINA

MIDDLE EAST

FIVE THINGS THAT WILL HELP THE EUROPEAN CHEMICAL INDUSTRY REMAIN COMPETITIVE

1 CHEAPER ENERGY

A policy shift towards reducing EU energy costs is seen as vital to drive innovation and investment, create jobs and growth and ultimately help to cut greenhouse gases.

2 BETTER REGULATION

The EU’s chemical legislation, Reach, is already viewed as one of the most burdensome pieces of legislation in Europe. The chemical industry has so far complied with it and registered all chemical substances that are manufactured or imported in quantities of more than 100 tons per year. But there is more to come. Under ‘phase 3’ companies, which produce one to 100 tons per year, must register those substances. That will affect nearly every chemical company in the EU and all their customers.

3 A TRANSATLANTIC TRADE & INVESTMENT PARTNERSHIP

The proposed TTIP would see import duties scrapped on the €48 billion worth of chemicals traded in 2012 between America and Europe.

Cefic would like to see all chemical tariffs eliminated, and hopes the negotiations, which are expected to be finalised in two years, will lead to greater regulatory transparency and co-operation.

4 RETENTION OF KEY ENABLING TECHNOLOGIES

KETs, as they are known, are seen as critical to re-energise the EU economy. At the moment, although Europe is a global leader in KETs research and development – with a global share in patent applications of more than 30% – it is not translating that research into the production of processes and products needed to stimulate growth and jobs.

5 PROTECTION OF ITS TRADE SECRETS

The European Commission is being urged to ensure adequate systems are in place to ensure European innovation know-how is protected. Moving breakthrough ideas to market are viewed as the best way for EU industry to stay ahead in an increasingly competitive global race.

Wenche said the union was equally as concerned as management about energy prices and taxes – and had often lobbied the government and organisations to try to influence policies that might affect the smooth running of INEOS’ O&P site in Rafnes.

“The co-operation between management and unions is of great importance in this regard,” she said. ***“Together we’re stronger.”***

Wenche said the union had recently played an important role in setting up a meetings with politicians.

“We work constantly to show what challenges the land-based industry is facing and what should be done to solve these,” she said.

“Together we have managed to get some tax relief and advantageous energy agreements which have improved our competitiveness.”

She said the union had also played an important part when both the Prime Minister, Minister of Finance and leader of the Standing Committee on Business and Industry visited Noretyl/O&P in Norway.

Tom Crotty, INEOS Group director, said it was important for the unions to be working on solutions with management.

“The relationship with the unions in Köln and Rafnes is fantastic,” he said.

“They want to understand the business’ targets and they want to help both indirectly and directly.”

“They are quite prepared to talk about whether practices need to be changed but also indirectly in how they can put pressure on government and assist you.”

Italy’s union representatives expressed similar views to their colleagues in Norway and Germany.

“Close dialog and co-operation between the company and us is very important,” said Stefano Santini, union representative at INEOS’ O&P site in Rosignano, Italy.

“Over the years we have, together, built up a mutual confidence and trust due to the various commitments taken and then honoured.”

In September Total announced it was planning to shut down a loss-making steam cracker in Carling, France.

Patrick Pouyanné, President Refining & Chemicals and member of the Executive Committee of Total, blamed growing international competition.

“The European petrochemicals market is facing continued overcapacity,” he said.

The cracker, which refines crude oil into chemical components to make plastics, is due to close in 2015.

The announcement has worried INEOS staff at Rosignano.

“The fear here is that this closure could potentially hit also the personnel working in the site of Saralbe,” said Stefano.

He is worried – as are many – about the spiralling cost of energy and feedstock in Europe.

“We need to work on the energy saving, especially reducing the energy waste by using equipment with low energy consumption,” he said.

“We also need to review the energy contracts, and try to produce energy ourselves for the site, and invest in alternative energy sources like the ones coming from use of biomasses.”

He said, from a union perspective, INEOS needed to invest in research to develop innovative products, which demanded technical and structural expertise.

“We could also invest in finding easier ways to access raw materials,” he said.

China is entering a new and an exciting phase. It needs to continue to provide the chemical raw materials to help deliver growth and it needs to tackle the pollution that is choking its cities, by cutting its CO₂ emissions. It cannot do it alone. It needs help from innovative, energy-efficient companies that have the technical expertise together with proven safety records. Companies like INEOS

THE Chinese dragon – long seen as a symbol of power, strength and good fortune – has so far served its leaders well.

It has witnessed the meteoric rise of China from a small, emerging market into the second biggest economy in the world – and it is even now snapping at America's heels.

But that unprecedented, rapid growth, driven largely by exports and heavy manufacturing, has come at a huge cost to the environment, with China now emitting more CO₂ gases than any other country in the world.

The world's perception is that China cares little for the environment.

But China's leaders are no longer willing to accept that.

Their latest Five-Year Plan marks a dramatic turning point in their thinking.

For years, China has been focused on exports. Now it is looking closer to home.

Chinese Business are being actively encouraged to form partnerships with Western companies to help them improve energy efficiency and achieve growth, detailed in the plan.

"The seeds were sown in that Five-Year Plan," said Rob Nevin, CEO of INEOS Nitriles. ***"The door is open for business."***

Earlier this year China formed joint ventures with two of INEOS' world leading businesses. INEOS Nitriles and INEOS Phenol – to build the largest phenol facility in China and a world-scale acrylonitrile plant to satisfy the growing domestic demand for their petrochemical products.

"It's incredibly exciting," said Rob. ***"China is the engine room for petrochemicals and chemicals in terms of demand. And it is the engine that will pull the world."***

"For INEOS it is an opportunity for us to operate in the largest market in the world."

"We wanted to expand and INEOS' market position and technological know-how meant we were the ideal choice."

China was often referred to as a second planet earth.

"You have to go there to appreciate the scale of the place," he said. ***"I have lived in the US but China is like nowhere else in the world."***

INEOS Phenol is the world's largest manufacturer of phenol and acetone. China is the world's fastest growing market for both chemicals which are used to produce polycarbonate, plastics, phenolic resins, synthetic fibres, such as nylon, and solvents.

INEOS Nitriles is the world's largest producer of acrylonitrile, which is the key ingredient to make carbon fibre, and China cannot get enough of it.

Once both facilities are operational, INEOS Nitriles will be the only producer to have plants in each of the world's largest acrylonitrile markets and INEOS Phenol will be the only company to be producing acetone and phenol in Europe, America and Asia.

"It is the leading global producers in the world entering the largest global market," said Rob. ***"It's the perfect marriage."***

EAST LOO TO THE W

CHINA SETS ITSELF AMBITIOUS CLIMATE CHANGE GOALS



INEOS Phenol's joint venture with Sinopec Yangzi Petrochemical Company will lead to the creation of a 1.2 million ton cumene, phenol and acetone complex at Nanjing Chemical Industrial Park in Jiangsu Province.

The plant, which will be capable of producing at least 400,000 tons of phenol and 250,000 tons of acetone every year, is due to start satisfying China's needs by the end of 2016. The new plant will also allow INEOS' European and US plants to focus on growth in their own markets.

"This mutually beneficial partnership is an important development for INEOS Phenol and for INEOS in China," said Harry Deans, CEO of INEOS Phenol. ***"It's also the largest capital investment ever undertaken by INEOS."***

"Combining a strong, local partner like Sinopec YPC with our leading phenol technology and access to the market brings considerable value to our business and our customers."

INEOS Nitriles has gone into business with state-owned Tianjin Bohai Chemical Industry Group Corporation.

Together they plan to build and operate a world-scale acrylonitrile plant in Tianjin, which will be designed using the latest INEOS process and catalyst technology.

"We have not started building yet because we haven't finalised the details, but we have aspirations," said Rob.

"We are widely viewed as the industry safety leader and we intend to bring our very high standards to China."

"Safety performance is not great in China but they hope to learn from the way we do things, both in terms of personal safety and our processes. They want high Western standards."

Joint ventures of this type and scale with foreign companies are what China's leaders want to help it tackle the problems of the past and create a more sustainable economy.

Their clear, long-term vision to shift to a highly-efficient, low carbon economy – using advanced, manufacturing technology – is laid out in the China State Council's 12th Five-Year Plan.

Under the plan, China's leaders promise to:

- **Set** new limits on energy consumption
- **Clamp down** on companies and industries that consume a lot of energy but produce very little
- **Cut** carbon emissions by up to 45% by the year 2020
- **Reduce** China's reliance on fossil fuels, especially coal
- **Invest** in energy-saving technology, and
- **Tackle** pollution

It's a challenge but China's leaders believe it is achievable.

KS EST





Rob, who worked for BP for 25 years, said the speed at which INEOS worked also appealed to the Chinese.

“INEOS is a slim, slick and easy company to work with and it’s made a massive difference,” he said. **“The contrast between BP and INEOS, in terms of getting something approved, is like night and day.”**

He said once INEOS Nitriles had agreed on the right project, the right structure and the right location, the proposal was put to chairman Jim Ratcliffe who approved it.

“Sometimes things can be approved at a frightening speed,” said Rob who has worked for INEOS for eight years. **“But then you have to deliver.”**

That said, though, Rob explained that the Chinese approval processes had got more and more difficult over the years.

“Ten years ago you could have started building anywhere and faced a fine,” he said. **“If you ignored that today, construction can be stopped. Today there is an unprecedented level of care and diligence for the environment and its people.”**

And that, he said, was understandable.

“Pollution in China is something that touches people’s lives,” he said. **“In the major cities people wear face masks because it can be so bad.”**

Air pollution is now the biggest cause of civil unrest in China, with The World Bank estimating that 16 of the world’s 20 most polluted cities are within China’s borders.

The Chinese Society for Environmental Sciences said the number of protests over pollution in China had increased by about 29% every year since 1966.

“In 2011, the number of major environmental incidents, though, actually rose 120%,” said the society’s vice-chairman Yang Zhaoifei.

In September, the authorities in Beijing unveiled their own five-point plan to tackle pollution in the capital.

“What’s new about this is the level of real determination and the level of detail,” said Alvin Lin, China Climate and Energy Policy Director with the Natural Resources Defense Council in Beijing. **“There is a new resolve to do something serious about air pollution.”**

The World Resources Institute said China and the US were currently to blame for 43% of global emissions.

China’s problem is that it relies so heavily on coal.

“Coal provides China with 70% of its energy and nearly 80% of its electricity,” said Luke Schoen, who wrote a report for The World Resources Institute.

Although it has vast domestic coal and gas resources, it has problems accessing it, so it increasingly relies on foreign imports. Its oil comes from the Middle East and Africa, its coal from Australia and Indonesia and its gas from Central Asia and Australia.

“China’s leaders acknowledge that the country’s dependence on carbon for energy is a problem,” said Luke. **“And that growing dependency on foreign energy is a strategic concern among China’s leaders.”**

China has discovered huge areas of shale gas but – unlike USA – it does not yet have the breakthrough technology to access it.

In the meantime, China’s leaders are concentrating on maintaining growth whilst developing policies to cut carbon emissions and deploy more clean energy.

“China actually already invests more in renewables than any other nation,” said Luke.

In 2011 it invested \$52 billion in renewable energy resources which rose to \$67.7 billion last year, 50% more than the US.

While other nations may view clean energy as a costly drag on economic growth, China does not.

It believes its latest policies will help it to maintain its position as a major global player while tackling climate change – something that it believes poses a significant threat to its long-term prosperity.

“By its own estimates, China ascribed \$50 billion in direct economic losses to natural disasters in 2011,” said Luke.

“And one independent study estimated that that figure could increase to nearly \$748 billion per year by 2030 if no action is taken.”

KIDS SWITCH OFF AND GET SWITCHED ON

INEOS goes all out to get kids running again



INEOS has never been one to run from a challenge. This one is no different. It wants to get kids running again and has launched a bold, new initiative that is doing just that

INEOS is hoping to inspire thousands of children to give the TV, the Internet, and video games a rest, and go out and have some fun.

Chairman Jim Ratcliffe has turned his own passion for running into an initiative, which could, in turn, help to tackle one of the most serious global public health challenges facing the 21st century – child obesity.

“It’s not rocket science,” he said. “We just want to get children out of the house.”

“Running is the basis of so many great sports so if our children catch the running bug early, they are more likely to stick to it. And that can only lead to them enjoying a more active and healthier lifestyle.”

The first Go Run For Fun event – and it is one of scores planned throughout the UK – saw hundreds of children taking part in a mile-long run. And by the time you read this more than 10,000 children will have taken part.

Former British hurdler Colin Jackson, an Olympic silver medallist, was in Newbury, London, to see them off.

“Running is simple and kids do it naturally anyway so this is a great way for them to have fun with their mates,” he said.

To ensure the campaign’s long-term success, though, INEOS is working with the people behind the iconic Great North Run to stage a series of small and large

running events for children aged four to 11 all over the UK.

By 2014, it is hoped more than 30,000 children will have taken part in one of the 70 planned Go Run For Fun events, rising to 50,000 – and 100 events – by 2016.

“If this comes off – and I have no doubt that it will – it will be the biggest kids’ running initiative in the world,” said Brendan Foster, a former British Olympic long-distance runner who founded the BUPA Great North Run. ***“It’s also a fantastic legacy from London’s Olympic Games.”***

The role of Brendan and his team at Nova International will be contact Schools and Local Authorities to encourage children to take part in each event.

“You cannot have a Great North Run without people so people will make this happen,” he said. ***“They will be the essential ingredient to the event’s longevity.”***

Initially, Brendan believes the INEOS fun runs will attract mostly kids who already enjoy running, and whose parents understand the mind, body and soul benefits of running – rather than those who class running as a chore.

“We need to target the parents but where parents are difficult, it will be difficult to get those children involved initially,” he said.

“That’s why we need to make the events appealing and inspire those who do take part.

“Those kids will then inspire other kids to get involved. And parents will inspire other parents.”

So why has this not been done before?

“Good question,” said Brendan. ***“But who knows?”***

“All I know is that we run the largest mass participation event in the UK and are happy encouraging people to participate,” he said.

He said it was a combination of the right circumstances – Britain is still on a high after staging last year’s successful Olympic Games – and three like-minded people who wanted to make a difference.

Those three people – Jim Ratcliffe, Brendan and Olympic gold medallist Sebastian Coe – met in London earlier this year.

“It was INEOS’ inspiration, Jim’s idea,” said Brendan. ***“He had a very clear idea of what he wanted to happen and when.”***

“It was a typically bold move. But Jim’s right and his approach is admirable.”

Brendan said he was also delighted that the initiative had come, not from the government but, from the UK’s largest privately-owned manufacturing company.

FF HED ON...



SCAN HERE
TO VIEW VIDEO:
RUN FOR FUN



The campaign is being launched in the UK, which has one of the highest rates of childhood obesity in Europe, but it has been designed so that it can easily be rolled out across Europe and America.

“We will have events in Switzerland, France Germany, Belgium and the US but the main focus is the UK at the moment where kids are less active,” said Jim.

That sedentary lifestyle – coupled with eating too many fatty, sugary foods – has led to a huge increase in the number of children in the UK with obesity.

But the UK is not alone. The World Health Organization said child obesity was now so widespread that it regarded it as one of the most serious global public health challenges facing the 21st century.

“Our key objective is simply to inspire children to be active,” said Jim.

“Young children like to run around. It’s in their DNA. But so often children are told to slow down and sit still. This campaign is about encouraging children to run again.”

Many of the runs will be timed to coincide with existing major running events, such as the Great North Run, to allow children to experience the thrill of taking part in a mass participation event.

The Great North Run, which was founded in 1981, is now the world’s largest and most popular half marathon for adults attracted over 55,000 entrants this year. Along side this a record 6,000 children entered the 4km Junior Great North Run.

Brendan and his team are excited at what can be achieved through INEOS’ Go Run For Fun events.

“It is such a fantastic initiative because it’s all about young kids simply having fun outside and enjoying running,” he said.

“It’s not difficult. We are not trying to put a man on the Moon. We are just trying to get as many kids running for fun as possible.”

“It can be a competition for those who want it to be, but the objective is to encourage kids to run for fun.”

“If they go for a run and enjoy it, they might then want to get more involved in the competitive stuff. And they will be the future Great North and London Marathon runners and you can bet that at least one of those 50,000 kids will be at the Olympics.”

For INEOS, the rewards will come in seeing young children enjoying sport.

“Go Run for Fun really does have just one aim,” said Jim. ***“And that’s to get kids running.”***

“There isn’t really a link to our business apart from the fact that we are making the investment to get this programme up and running.”

“We don’t have public shareholders to influence or products that consumers can buy. This is just about getting kids running and having fun.”



For more information or if you would like to plan an event visit: www.gorunforfun.com



BEST WAY TO FEEL MILES BETTER

Running is not just about burning calories. It goes a lot further than that, as Dr Fred Wadsworth explains

RUNNING is one of the best ways to improve the mind, body and soul.

It's also easy.

"You don't need any equipment and you can do it anywhere," said Dr Fred Wadsworth, a medical director at Corperformance which has worked closely with INEOS in the past.

He said the medical profession was finally realising that running was not just about burning calories.

"There are lots of studies now which show that running is as useful as taking anti-depressants for moderate depression," he said.

One of the biggest misconceptions is that running damages your joints.

"If you are fit and well, it actually protects you from arthritis," said Fred.

"The problems arise when you have existing injuries. The best thing you can do is make sure you don't get overweight."

Fred said running was the best – and quickest – way to get fit.

He went on to praise INEOS' Go Run For Fun initiative to get Britain's kids running again.

"It's a no brainer but governments haven't set up a campaign like this so it's down to companies like INEOS to act," he said.

But he believed the key to its long-term success would be to inspire parents.

"The most powerful influence in a child's life is what his or her parents do," he said. **"They copy what they see."**

"And they are unlikely to get involved if a parent says: 'What are you doing that for?'"

INEOS is hoping that those, who do get involved, will become keen runners and enjoy a healthier lifestyle.

For the long-term benefits of running are now well researched and well documented.

Running gives your heart and lungs a workout, it improves circulation and reduces the risk of a heart attack, high blood pressure and stroke.

It also relieves stress, improves endurance, boosts your immune system, increases energy and helps you to maintain a healthy body weight.

Studies have further shown that healthy adults who exercise regularly are generally happier than those who don't, they sleep better and their brains are sharper.



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TO VIEW VIDEO:
BEST WAY TO
FEEL MILES
BETTER

IS COMPETITION GOOD FOR KIDS?



Is competition a good, or a bad, thing for children? It’s a subject that has divided opinion for years. Some argue that it encourages a child to excel in today’s fiercely competitive world where we compete for everything be it a job, a partner or a house. Others say it can destroy self-esteem and lead to resentment. Whatever your view, the jury’s still out. We sought a few words of wisdom from those who have had something to say on the subject ...

BAD

Most of us were raised to believe that without competition we would all become fat, lazy, and mediocre. And I used to think that competition could be healthy and fun if we kept it in perspective. But there is no such thing as ‘healthy’ competition. In a competitive culture, a child is told that it isn’t enough to be good. He must triumph over others. But the more he competes, the more he needs to compete to feel good about himself. But winning doesn’t build character; it just lets a child gloat temporarily. By definition, not everyone can win a contest. If one child wins, another cannot. Competition leads children to envy winners, to dismiss losers. Co-operation, on the other hand, is marvellously successful at helping children to communicate effectively, to trust in others and to accept those who are different from themselves. Children feel better about themselves when they work with others instead of against them, and their self-esteem doesn’t depend on winning a spelling test or a Little League game.

American Alfie Kohn, author of No Contest: The Case Against Competition

Sports’ competitions are bad for children if those taking part are expected to achieve more than they are capable of. We realised this and, as such, have changed the emphasis in club athletics nationally. New disciplines in the field of kids’ athletics have been designed that are especially adapted for children aged between 6 and 11. Priority is given to team competition with children taking part in a great variety of disciplines. All the children wishing to take part are allowed to do so and they all proudly go home after a formal ceremony equipped with a written document attesting their participation. Athletics competitions have always been popular with children. Children feel the need to compare their strength and skills to others. Since the beginning of this year we have strengthened that innate motivation by offering children new forms of competitions and disciplines that are even more attractive now, more challenging and thrilling.

David Deister, project manager, German Athletics Federation

Competition has been shown to be useful up to a certain point and no further, but co-operation, which is the thing we must strive for today, begins where competition leaves off.

The late Franklin D. Roosevelt, former President of the United States

There are enough opportunities in life for children to have a disappointment and to learn to handle that. At our school we are helping them to get ready for all stages of life. We don’t need them to be losing while they’re children in our school.

Elizabeth Morley, Principal of the Institute of Child Study Laboratory School , Toronto, Canada

GOOD

Healthy competition inspires kids to do their best – not just good enough. When students compete they will become more inquisitive, research independently, and learn to work with others. They will strive to do more than is required. These abilities prepare children for future situations of all kinds. Whether it’s applying to college, seeking a promotion, or finding a cure for cancer, the ability to be competitive will give them an important edge.

Jennifer Veale, founder and executive director of TrueCompetition.org

Competition can be a double-edged sword for kids, promoting positive values under the right conditions but creating negative environments that are demotivating under the wrong ones. Competition can be healthy when it provides feedback to kids about their performance and improvement, when winning is not the sole or primary objective, and when kids get to learn about themselves under challenging situations. Under these circumstances, competition can teach invaluable lessons our children do not typically learn in the classroom. Unfortunately, the frequent win-at-all costs mentality associated with many competitive endeavours can undermine children’s motivation and lead them to avoid or even disengage from activities they may otherwise enjoy. It is critical that coaches, educators, and parents work to teach kids these valuable lessons from competition. That way, win or lose, our children will learn, grow, and be better prepared for life, which (like competition) provides highlights, adversity, and continual opportunities to play well with others and treat opponents with dignity and respect.

John Tauer, Men’s Head Basketball Coach, Professor of Psychology, University of St Thomas, Minnesota

Competition is good for children. It is quite normal for people to judge themselves against others, thus in that respect competition is quite healthy. In a supportive environment it can teach a child to accept failure without losing self esteem. However, it becomes unhealthy when the competitor is forced to compete or feels that they have to compete in order to gain love or status within the family.

Lyn Kendall, Gifted Child Consultant for British Mensa

Our national preoccupation with ‘safety first’ and prevailing climate of risk aversion is creating a generation of children who are ill-prepared for a world that requires risk taking on a daily basis. Competition teaches critical thinking, decision-making and problem solving. Without those skills countries can’t compete in a global economy. Other proponents of competition in North America claim that competition enhances learning, physical fitness and deters juvenile delinquency.

Sir Digby Jones, former UK Government Minister of State for UK Trade & Investment

We need to end the ‘all must have prizes’ culture and get children playing and enjoying competitive sports from a young age, linking them up with sports clubs so they can pursue their dreams. That’s why the new UK national curriculum now includes a requirement for primary schools to provide competitive sport.

UK Prime Minister David Cameron



WHO DARES, V

RHYS LIVES IN A WORLD OF HIGH ACHIEVERS

This year is the 60th anniversary of the first ascent of Mount Everest by Edmund Hillary and Sherpa Tenzing Norgay in 1953. In 1998, a 12-year-old Scout was listening to a talk about Everest. That boy was Rhys Jones who went on to climb Everest on his 20th birthday and, in doing so, set a record as the youngest person to scale the highest mountains in the world's seven continents

MOUNT Everest is not for the faint-hearted.

It is a hostile, unforgiving place. A place where, five miles up, death lives in the faces of frozen corpses that litter the route to the top.

Apart from the lack of oxygen – high altitude can strip you of your senses – avalanches, rockslides, hurricane-force winds, shifting glaciers, blizzards, frostbite, pneumonia, exhaustion and freezing temperatures await climbers in the 'death zone'.

"It's called the death zone and it's even less fun than it sounds," said climber Rhys Jones. ***"Taking the endless steps upwards in thin air is like swimming in glue. There's ice inside the tents. It's miserable. You have no appetite, you cannot rest properly and it's brutally cold."***

But he who dares, wins. And for Rhys, who had dreamed about climbing to the top of the world's highest mountain since he was 12, all the pain would be worth those five minutes he would spend on the 29,035ft (8,850m) summit.

"I heard a talk about Mount Everest when I was a Scout," he said. ***"I didn't really know anything about mountains until then. But I just decided I wanted to climb Everest one day and the rest of what happened was a result of working towards that goal."***

The goal was not only to conquer Everest, but to become the youngest person to complete the Seven Summits Challenge by climbing the highest mountains in each of the world's seven continents.

Mount Everest would be the last of the seven, but first he needed to raise £30,000.

"I had sent literally hundreds of letters to potential sponsors but had very little luck," he said. ***"But then INEOS stepped in which effectively guaranteed I could do the climb."***

INEOS chairman Jim Ratcliffe agreed to meet Rhys to discuss the planned expedition.

"I had no idea what to expect when I met him," said Rhys. ***"I remember turning up in my beaten-up hatchback and wearing a suit. He was wearing jeans and a T-shirt."***

The two chatted for an hour.

"I got the impression nothing is lost on him and he seemed very engaged the whole time we were talking, which was impressive considering how much was probably going on," said Rhys.

"It was also a sign that he had good people working for him in that he could spend a big chunk of the day talking to me."

The face-to-face meeting resulted in a £30,000 sponsorship deal with INEOS.

"It was a game changer," said Rhys.

With the money in his pocket – and an INEOS flag to plant at the summit – Rhys could now concentrate on the journey that lay ahead.

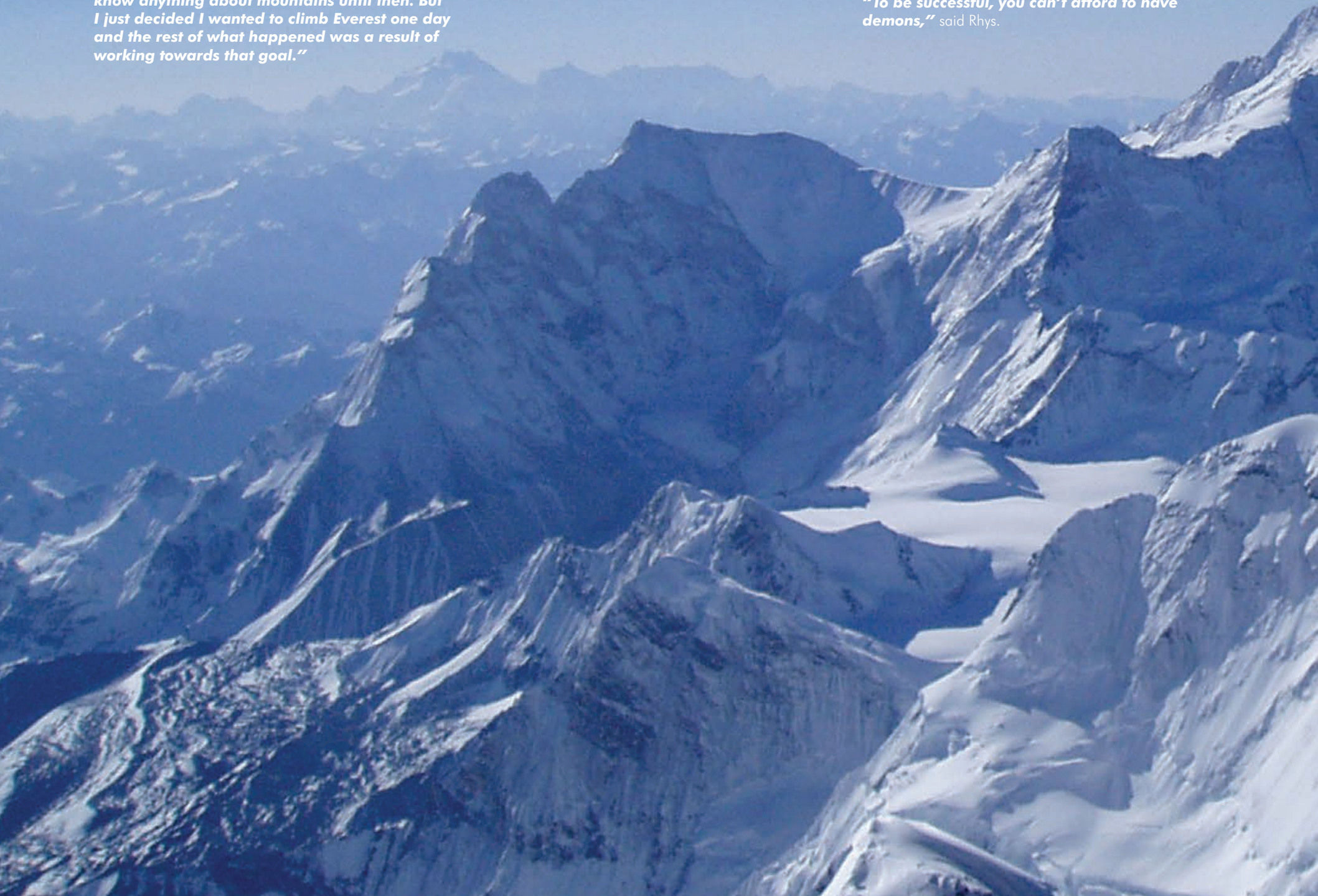
In May 2006, Rhys, three other climbers, two guides and five sherpas left Everest Base Camp.

"We were the first team of the year to go for the summit so we had to fix rope all the way and break trail in the snow which was a test of character," he said.

"To this very day, that experience provides me with good perspective on what is difficult or not."

Fear, though, was something the team left behind.

"To be successful, you can't afford to have demons," said Rhys.



WINS



“A degree of risk is usually the key to achieving something”

Rhys Jones

“Of course I had worries. There were some very close calls. I was nearly taken out twice by an avalanche. People do die on Everest, but I remember being very objective about it, and only scoring things as hit or miss. So long as they were all “misses”, I’d continue.

“I just hoped I’d be lucky with the weather and not end up in the wrong place at the wrong time.”

Had his carefully laid-out plans unravelled – and on Everest, they can unravel at breathtakingly terrifying speeds – Rhys would have turned back. No matter how close he was to the summit.

“No mountain is worth my fingers or toes or my life,” he said. “I’d just go back again. The mountain isn’t going anywhere. Everest, sadly, seems to encourage intelligent people to take stupid risks.”

Everest has so far claimed more than 200 lives and about 150 bodies have never been recovered.

“You need an overriding mental toughness to climb Everest that stops you from ever turning around unless it’s too dangerous,” he said.

“If it’s not, you just have to dig in and get on with it.”

Rhys reached the summit, which was shrouded in cloud, on May 17 2006 at 3pm after a final 16-hour climb.

The relief was immense.

“I was monumentally relieved to reach the top but I was also acutely aware of the fact that it was late and I had a very long descent ahead of me,” he said.



“I just unrolled the INEOS flag, took off my oxygen mask, had a few photographs taken, said ‘thank god for that’ and went down.”

Today Rhys runs his own business, RJ7 Expeditions, a company that operates from offices in four continents, helping others to plan trips of a lifetime.

“It’s not in the same league as INEOS but we are growing aggressively,” he said with a smile.

Lessons learned from climbing have helped him to shape the business.

“There’s a lot of synergy between the two,” he said. “Managing a team in a high risk environment, achieving goals and being ambitious apply equally to both.”

His also views risks in life as necessary.

“A degree of risk is usually the key to achieving something,” he said.

“The risks I take climbing are still sometimes a matter of life or death, the risks I take in business may be more financial. But I treat them both in a similar way, and focus on the facts, the likelihoods, the outcomes and then make a judgement.”

He believes many businesses fail today due to poor management and lack of focus.

“A poorly motivated team is a huge money pit yet it can cost relatively little to remedy,” he said.

“A lack of clear focus is also a trap, as many companies try to grab what they can in the current climate, instead of sticking to what they’re good at.”

Rhys is – and will always be – driven by his passion.

“In all the years I have been climbing, I have never felt like I’ve conquered a mountain,” he said. “I just feel lucky to have enjoyed the climb and been able to stand on the summit for a few moments.”

THE LIFE-SAVER

CHALLENGING COURSE THAT DITCHES FEAR OF A HELICOPTER CRASHING IN THE NORTH SEA

INEOS is obsessive when it comes to safety. But when you work in a high risk environment, you cannot afford to be complacent. Safety runs through the very heart of all that INEOS does. But INEOS-owned Norward AS exists for one reason alone. And that's to save lives, as Øyvind Klæboe knows only too well

IN August 2003 an Indian helicopter ferrying 25 off-shore rig workers nose-dived into the sea, its blades still spinning.

The crew, still strapped in their seats, died as the helicopter sank in seconds. Only two passengers survived. They escaped by swimming out of the rear clamshell doors, and were rescued.

Both of them were also the only two to have undergone helicopter underwater escape training (HUET).

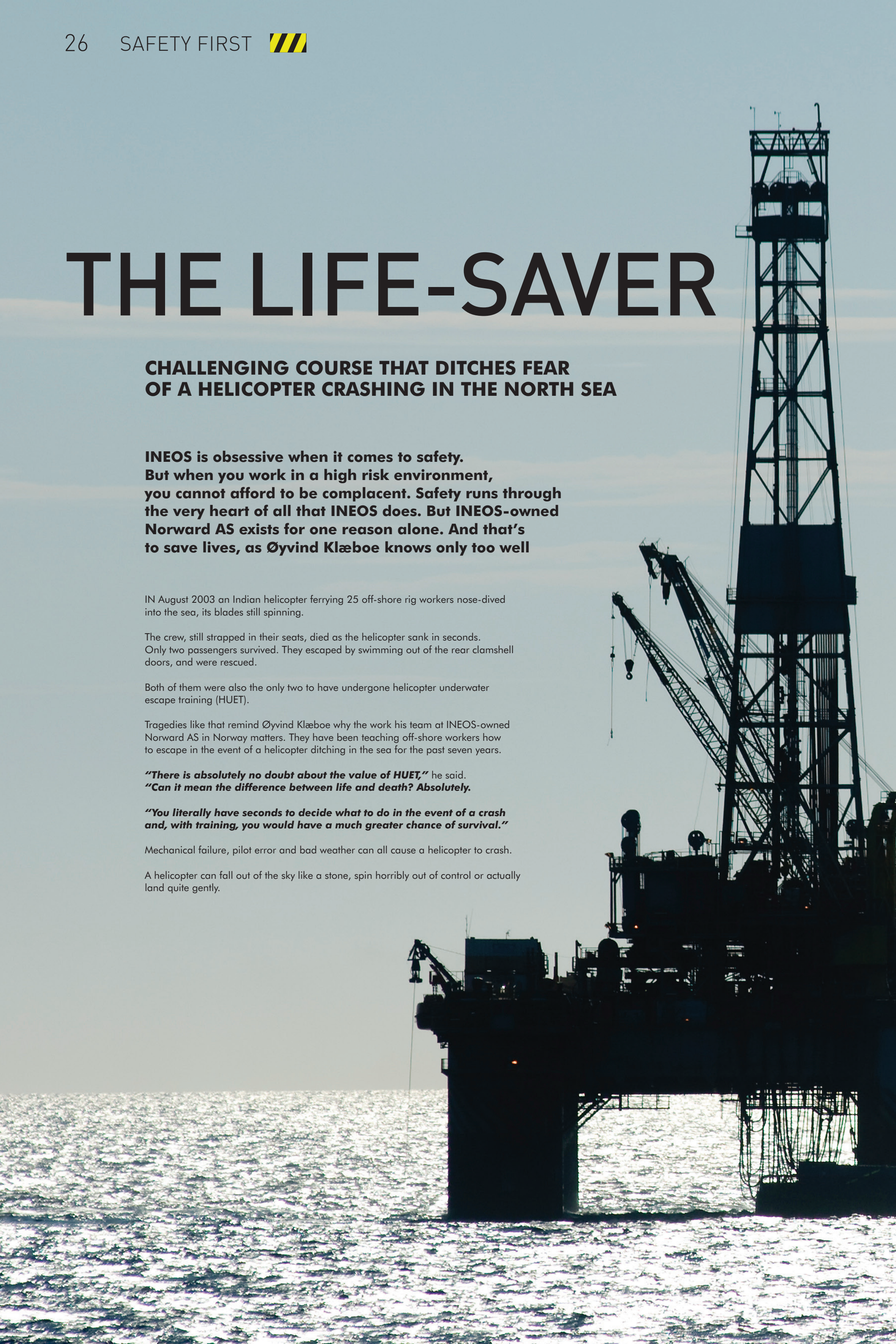
Tragedies like that remind Øyvind Klæboe why the work his team at INEOS-owned Norward AS in Norway matters. They have been teaching off-shore workers how to escape in the event of a helicopter ditching in the sea for the past seven years.

"There is absolutely no doubt about the value of HUET," he said. "Can it mean the difference between life and death? Absolutely.

"You literally have seconds to decide what to do in the event of a crash and, with training, you would have a much greater chance of survival."

Mechanical failure, pilot error and bad weather can all cause a helicopter to crash.

A helicopter can fall out of the sky like a stone, spin horribly out of control or actually land quite gently.





Off-shore workers are lowered into the water during a routine training exercise at Norward. The training could one day save their lives

Whatever happens, the key to survival is to get out as quickly as possible.

“You don’t know how long you have got before a helicopter turns over and sinks so your first priority is to get out of the chopper,” he said. ***“But then you can face a whole host of other challenges.”***

Those ‘other challenges’ can include adverse weather conditions, icy cold waters, rough seas, poor visibility, fire or petrol in the water.

“You cannot say for certain what you will face but the course teaches people to be prepared for that uncertainty,” he said.

It also gives them the confidence to face the unimaginable and stay calm.

At Norward, instructors use a mock helicopter in a pool to demonstrate what will happen when a helicopter ditches in the sea and then, in all likelihood due to the fact that helicopters are top heavy, flips over.

A wave machine, wind generator and lighting are all used to create different scenarios.

“Basically we are able to recreate different situations under very controlled conditions,” said Øyvind.

Helicopter crashes are thankfully rare but since 2006 all off-shore personnel have to undergo HUET by law.

“No one today can go off-shore without a “green card”. That means that HUET is mandatory to all employees and visitors,” said Øyvind. ***“In fact anyone who flies to an off-shore installation must have undergone the basic training.”***

During the eight-hour HUET course at Norward, workers are taught how to cope with both the physical and psychological stress of ditching in the sea.

It’s the type of training that Øyvind hopes they will never need, but knows that, if they do need it, it will be the most important training they have ever had.

INEOS acquired the Norward training facility when it bought Norway’s Norsk Hydro ASA’s polymers business in 2007.

By then it had been transformed from a simple, in-house emergency response centre, affiliated to Norsk, into a successful business – with a five million Euro turnover – offering training to outside companies and members of the public.

“Step by step Norward took up new challenges,” said Øyvind. ***“We ended up developing our own employees, improved in-house competence and penetrated new markets.”***

“We now serve customers from the private market all over Norway.”

One of their biggest customers is Statoil which this year asked Norward to launch a new course to help its off-shore workers learn how – among other things – to help a helicopter pilot land safely on an oil rig, and what to do in the event of an accident.

Apart from the standard fire-fighting course modules, and first aid, Øyvind’s team also offers training in industrial safety, and how to tackle gas and chemical leaks.

“Courses like these have industrial clients from all over Norway and Norward is one of the best suppliers,” said Øyvind.

For more information visit: <http://norward.no/>



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TO VIEW VIDEO:
THE LIFE SAVER

ALL POWER SWITZERLAND

SWISS GOVERNMENT'S BOLD DECISION CREATES OPPORTUNITY FOR INEOS TO HELP MAKE A DIFFERENCE TO THE WORLD WE LIVE IN

The world needs chemistry now more than ever. Far from being a drain on society, the chemical industry is best placed to understand what needs to be done to create a sustainable world and, more importantly, it knows how to achieve it. So far 11 countries have signed up to SusChem Europe. Switzerland is next. And INEOS – a company that thrives on finding innovative solutions to challenging problems – is in the driving seat

THE Fukushima nuclear disaster – triggered by an earthquake and a massive tsunami in Japan in March 2011 – sent shockwaves around the world.

Germany shut down eight of its reactors, Italy voted overwhelmingly to keep their country nuclear free and Spain banned the construction of new reactors.

There was a similar reaction in Switzerland which actually was the first country in Europe to announce plans to phase out nuclear power in the wake of the crisis in Japan.

In its place, the Federal Council and Parliament laid the foundations for a new strategy for Swiss energy to 2050.

Initially Switzerland will have to rely on imported energy and electricity, which will increase its carbon footprint and presents a huge political and economic challenge.

But that bold decision has also created a real opportunity – and incentive – for Switzerland to use energy more responsibly and upgrade the use of carbon – as a feedstock rather than a fuel.

In November SusChem Switzerland will be launched at an Ecochem gathering of the world's most influential industry and government leaders, scientists and innovators in Basel.

And the timing of this INEOS-driven initiative could not be better.

“INEOS has been one of the key companies behind SusChem Switzerland right from the start,” said Greet Van Eetvelde, chairman of SusChem Switzerland.

Its aims will be to find ways of cutting carbon emissions, reducing energy consumption, managing resources effectively, handling waste and developing clean technologies.

“Industrial symbiosis will be a key focus,” said Greet.

“To make things happen, different industry sectors will need to find new ways of working together to build a shared vision for the future that benefits all.”

Greet, who works for INEOS Europe, said process industry produced a lot of waste heat that could easily be re-used onsite, by other industries or even in neighbouring communities.

“That’s the future,” she said. ***“And it is a win-win situation for all parties. One industry may have a question; another the answer. We will act as the glue in between.”***

Today INEOS works closely with the Ecole Polytechnique Fédérale de Lausanne (EPFL) to create energy integration and optimisation on the INEOS production sites.

Last year INEOS also agreed to financially support innovative and entrepreneurial projects involving the EPFL researchers until 2022.

Greet said, ***“She hoped the ‘INEOS Innogrant’ would support some fascinating laboratory research, especially in the field of green chemistry.”*** The first ‘INEOS Innogrant’ will be awarded at the SusChem conference to Imperix, a young company that has been tackling power grid stability.

Energy production, management and storage, as well as CO₂ capture and utilisation, will also be researched at the EPFL Valais Wallis campus in the Swiss canton of Valais.

One study has been focusing on whether Switzerland could take advantage of its glaciers which are melting at an alarming rate due to rising temperatures.

When glaciers melt, new lakes are formed. But the study explored whether these natural reservoirs could in fact help to boost hydro-electric power production.

RTO AND

So far 11 countries, including Belgium, France, Germany, Italy, and the UK, currently have their own SusChem National Technology Platforms. Switzerland – thanks to a push from INEOS – will be the 12th.

The Swiss initiative will be launched at the three-day Ecochem conference, which will see the brightest sparks from across the chemical industry and value chains gathered in one place with one aim: to speed up ‘green chemistry’.

This network of national technology platforms are all linked to SusChem Europe – The European Technology Platform for Sustainable Chemistry, which was launched as a joint initiative between The European Chemical Industry Council (Cefic) and others in 2004.

Far from being a ‘talking shop’, it has become a force for good and is now formally recognised by the European Commission.

Over the years SusChem has helped to develop advanced materials and process technologies that have led to a more efficient use of energy, feedstock and water.

And it is now very much at the heart of the European Union’s growth strategy and also ‘Horizon 2020’, a new Research and Innovation Framework programme due to be launched next year to tackle climate change, energy and food security, health and the ageing population.

In short, the European Commission believes the European chemical industry has a pivotal role to play in creating a better future for us all.

SusChem Switzerland will be building on SusChem Europe’s vision and mission to create an even more competitive and innovative Europe where sustainable chemistry provides solutions for future generations.

“INEOS knows it can help,” said Greet.

For INEOS, which moved its headquarters to Rolle in 2010, its involvement also gives the company a chance to play a bigger part in shaping Switzerland’s future, while at the same time increasing its own presence.

Cefic said it was delighted at INEOS’ decision to become a key player in SusChem Switzerland.

“Switzerland is an important manufacturing hub for Europe, both in base chemicals and fine chemicals for active ingredients for health and many more,” said Esther Agyeman-Budu, Cefic’s communication counsellor for research and innovation.

“Companies, like INEOS, which has more ‘know how’ on the production side are needed to rejuvenate manufacturing. With our limited resources, we need to ensure that our resources are maximized, in terms of the value they bring to society.”

For more information about the Ecochem conference, log on to www.ecochemex.com, or for SusChem, visit www.suschem.org



CLIMATE OF CHANGE

Sweden's chemical cluster sets ambitious target to use renewable fuels by 2030

SOME of the world's leading chemical companies have challenged themselves to tackle a global problem to preserve the Earth's natural resources.

By 2030 INEOS, AGA, AkzoNobel, Borealis and Perstorp, the chemical cluster in Stenungsund, Sweden, want to be producing plastics and chemicals used for tubes, pipes, flooring, paints, cables, detergents, and many other applications, where possible, without fossil oil, coal or natural gas.

For INEOS in Stenungsund, which relies solely on fossil fuels, it will be a tough challenge. But Lars Josefsson, Chairman of INEOS Sverige AB, says finding and switching to renewable fuels is vitally important, not only to Sweden but the rest of the world if it is to help reverse the effects of climate change.

"It is a major challenge but we want to help build a future society where resources are used efficiently and all our products are recycled," he said.

"We want to use renewable resources to develop more sustainable products."

The chemical cluster with the five companies in Stenungsund, are viewed among the best in the world. As such, they have already secured significant funding since launching their vision – Sustainable Chemistry 2030.

"If we succeed, it would mean a significant improvement towards the environment and the economic prosperity of our region," said Lars.

"We know that it's possible but it cannot happen by itself. It requires many players to achieve it, including the collaboration with academia, politicians and other industries. We all need to work together."

And that's what they have been doing since they outlined their vision.

So far they have won funding from, among others, the European Union and several Swedish government agencies.

Their vision to break their dependence on the Earth's reserves of oil and gas, has also earned them the respect of the local community.

Within 20 years, the five key companies believe Stenungsund will be the engine in Western Sweden's economy, the hub for manufacturing of sustainable products within the chemical industry, and the place for companies with similar mindsets to thrive and develop.

But the journey towards 2030 has arguably already started. Both INEOS and Borealis have been involved in pushing and supporting Stena Recycling's plans to develop the technology to enable thousands of tons of cable plastics to be recycled and upgraded to new products yearly. The recycling started a couple of years ago and every year thousands of tons of plastics (PVC and PE) is successfully recycled.

"That previously wasn't possible due to the high content of metal in the material," said Lars.

Another example involves AkzoNobel, which invest a lot in research and development. One end – commercial – result is a water-based and effective dirt and grease remover which now allows more than 97% of water to be re-used in car washes. Most of all new car washing stations in Sweden are built using this technology.

"Energy is also very important," said Lars. ***"And we have a project ongoing for energy saving."***

"A total site analysis study carried out by Chalmers University of Technology and funded by the Swedish energy agency is showing a big saving potential if we look at all the five companies together."

"A second phase has now been started to find out how this potential can be realised."

The chemical cluster has also launched a project for increased plastic recycling from hospitals.

"There is a lot of plastic used in hospitals including PVC," said Lars.

"We have now a consortium of partners, including the county of Stockholm and the west coast region of Sweden. In addition to INEOS other partners include Universities and Institutes of Sweden, Recycling Companies and PVC MedAlliance*. The aim is to establishing a sustainable management system for medical plastic waste through close collaboration between various stakeholders and field projects."

Another project is a joint programme with leading Swedish paper and pulp companies to explore possibly sourcing renewable raw materials from forests. Sweden, which has the third largest paper and pulp industry in Europe, is in a unique position in that large swathes of the country are covered in forest.

But with paper consumption decreasing, the industry is looking for new applications.

The project, Forest-Chemistry, is supported by the Swedish government agency VINNOVA.

Sustainable Chemistry 2030, meanwhile, has also won support from academic institutions such as Chalmers University of Technology, SP Technical Research Institute of Sweden, The University of Gothenburg, IVL, and Luleå/Umeå University among others.

"Our vision, Sustainable Chemistry 2030, has increased the co-operation in the cluster and is a platform to communicate that chemistry is needed to move towards a bio-based society," said Lars. ***"This will be very important when we also discuss other important issues with the politicians."***

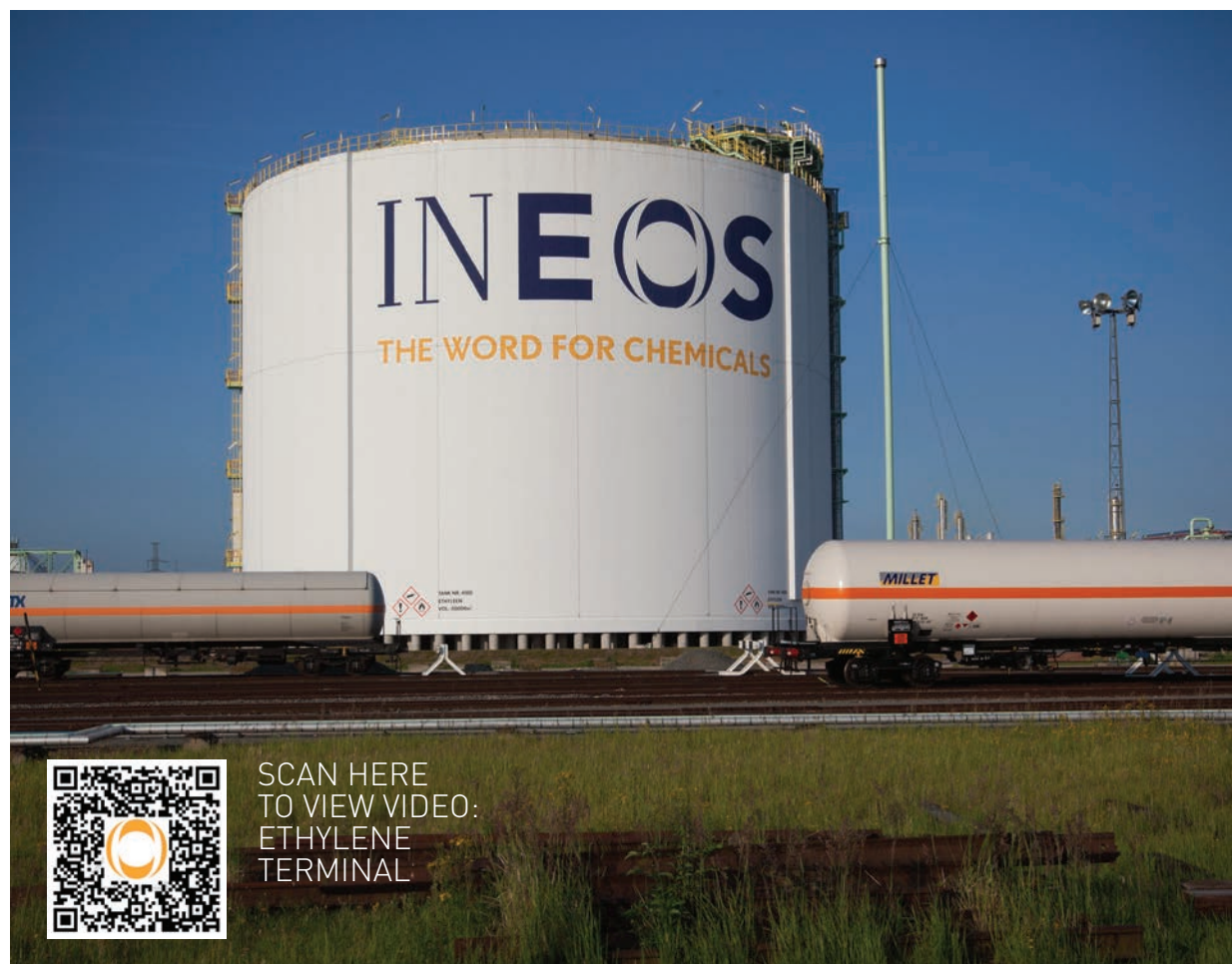
Lars said the year 2030 provides clear focus and maintains the pressure to achieve our target.

"We think it's possible to reach our goal," he said.

*Read more about PVC Med Alliance at <http://www.pvcmed.org/>.

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Ethylene terminal gives INEOS edge over rivals

INEOS Oxide has opened a new million tonne deep-sea terminal at its plant in Belgium so that it can access competitively-priced ethylene from around the world.

CEO Hans Casier said it meant the Antwerp site would be able to compete successfully with the best in the world.

The new terminal, which is at the heart of the second largest petrochemical region in the world, was officially opened by the Kris Peeters, the Minister-President of Flanders.

“This new terminal gives a new strength to the petrochemical cluster in Antwerp, which for the past 50 years has brought skilled jobs and prosperity to Flanders,” he said. “This investment shows that INEOS sees a future in Antwerp and is a sign that the policy of Flanders is starting to bear fruit.”

The terminal will be capable of unloading shipments of ethylene from the world’s largest ethylene vessels for INEOS’ European plants located at the Antwerp

site and also those connected along the ARG pipeline, which links Antwerp to Köln and the Ruhr industrial areas.

By connecting the terminal to INEOS Oxide in Antwerp and beyond, via the pipeline, to INEOS Oligomers LAO/PAO facility in Feluy Belgium, and INEOS Olefins & Polymers in Lillo and Köln, INEOS will be able to supply a competitively-priced raw material to efficiently balance its requirements across many of its main European facilities.



Industry viewed in a new light

THE French glimpsed industry in a different light this summer.

Giant, illuminated images and photographs of people working at INEOS and Petroineos were beamed on to huge storage tanks, and big photographs of the Lavéra refinery were also displayed on buildings in Martigues and Port-de-Bouc.

The occasion – dubbed Industrial Night – was part of European Capital of Culture Marseille-Provence’s tribute to its industrial heritage.

The Lavéra site – including subsidiaries Appryl, Naphtachimie and Oxochimie – is normally closed to the public, but that too opened its doors.

Martine Le Ster, from Petroineos Manufacturing France SAS, said more than 700 people took advantage of the special opening hours and enjoyed bus tours with full commentary from actors.

Elsewhere plays and concerts were staged and other companies’ sites also welcomed streams of visitors.

Unipetrol puts faith in INEOS

THE Czech Republic’s leading refinery and petrochemical group has chosen INEOS to help it develop its polyethylene business.

Unipetrol has licensed INEOS Technologies’ Innovene S Process so it can manufacture medium density and high density polyethylene at its cracker complex in Litvinov.

Unipetrol said the construction of the new polyethylene unit was a key investment project in its medium-term strategy.


“We have chosen the newest technology, which will allow us to innovate our current product portfolio and satisfy most demanding requirements of our customers,” says Marek Switajewski, Chairman of the Board of Directors and General Director.

The technology will also improve production safety and reliability.

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***“If you take advantage
of everything America
has to offer, there’s nothing
you can’t accomplish”***

Former US Attorney Geraldine Ferraro