



Demolition | Dismantling | Relocation



VIEW ON DDM



STRONG IN INNOVATIVE, PRACTICAL
AND PROJECT-ORIENTED THINKING



SHAPING THE FUTURE



**EVERYTHING CAN
BE BOUGHT BUT
BUILDING A
GOOD TEAM
TAKES TIME.**





REVIEWING THE PAST WITH PRIDE AND LOOKING TO THE FUTURE WITH CONFIDENCE

Our plans for future business activities start by looking back to the past, as this is where we draw our experience and knowhow from, this also providing us with a sound basis for what we will do next.

We have made significant investments in developing expertise, robust safety measures, quality standards, team spirit, innovation, sustainability, open communication and the training of good people.

We take today as our starting point: where do we stand as a business? What do we excel in? Where do our opportunities lie? We facilitate and encourage our employees to grow through ongoing training and focussed schooling.

We started in 1990 and over the years have created a great company together. A business that can now look to the future without me with confidence, a future in which our management team is led by inventive thinkers who are backed up by advanced technologies. We have a state of the engineering department where innovation comes to life, as well as a top-notch safety and quality department. Our large pool of specialists and dependable clients are the cornerstone of our business, supported as they are by our team of seasoned professionals.

At DDM, clients and team members are always put at the heart of our activities. Our client partnerships are embedded within our business operations and are founded on mutual trust. Good communication, both internally and with our clients, is essential for DDM: being a good listener is the key to successful interaction.

I can look back with pride at the way in which we have built up this great business, full of talented employees and valuable clients. It is with great confidence that I now hand over the reins at DDM to our management team but note that I will remain closely involved with it in an advisory capacity. The success we have already achieved is thanks to the commitment shown by all our employees, partners, suppliers and other business relationships.

This organisation now stands ready and prepared to take on any challenge.

Theo Velis - CEO



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SAFETY FIRST

HSEQ: SAFE, HIGH-QUALITY WORKING PRACTICES



At DDM, safety and operational activities go hand in hand. In other words, at DDM safety isn't seen as just another discipline that creates some additional compulsory work but as something that is an integral part of our business activities: not because it has to be but because we want it to be. The bottom line is that we are motivated by our very nature to carry out our work without incident(s) for the people involved in and around the projects, including in respect of the environment.

We safeguard this process in the following areas: quality by means of the ISO 9001 certification. Environment by means of the ISO 14001 certification and the CO2 Performance Ladder certification. Safe working practices by means of the ISO 45001 and SCC Petrochemical certification. Safe and environmental demolition by means of our SVMS 007 certification and asbestos removal by means of the Process Certificate for Asbestos Removal in the Netherlands, the BELAC for working with asbestos in Belgium and the necessary personal certification for asbestos removal in Germany. What's more, DDM is an active member of a number of asbestos and demolition sector associations and is affiliated with the SIR industrial cleaning foundation in respect of our work with high-pressure equipment.

Going home safely and in good health and being proud of the work that you have delivered: that's what

DDM is all about and what the entire organisation believes in. This vision is used to tackle work from start to finish: in other words, no work is started until the entire work process has already been fully mapped out and analysed in a safety project plan that reveals and manages all the risks. DDM distinguishes itself in this regard because it goes through this process with the client and involves him or her in all aspects of it.

However, bringing a project to a safe and high-quality conclusion is not something you do from behind a desk. Our project employees are the most crucial asset here. This is why DDM makes sizeable investments in both its personnel and the equipment they work with. This ensures we are thoroughly prepared, because we can always carry out our work using the right know-how, instructions, certification and resources.

DDM IN ACTION: OUR DEDICATION TO A BETTER WORLD.



**THIS 23-TONNE DEMOLITION EXCAVATOR
IS COMPLETELY ELECTRICAL! ITS BATTERY
CAPACITY OF 460 KWH MEANS IT CAN RUN
FOR A FULL 8 TO 10 HOURS.**



WE SUSTAINABILIZE

SUSTAINABILITY IS STRENGTH

DDM sets great store by making its business operations sustainable. Both there and within the industry as a whole, we see a growing trend to focus on reducing environmental pollution. A range of related measures is being taken at DDM, such as investing in equipment that has lower emissions, using alternative fuels and making sizeable investments to create more sustainable office buildings.

Sustainability refers to the efforts to minimise the long-term negative impact that industrial activities (can) have on both the environment and society. It is an essential aspect of more broadly-based efforts to create a more sustainable future and to tackle climate change. One important aspect of this is circular demolition: DDM ensures that as much of the raw material released can be used again elsewhere in a high-quality application.

At DDM, we want to keep the concept of 'sustainability' as practical and deployable as possible. Measures that are to be implemented are discussed and coordinated with operational employees in order to achieve

the best result. In this way, we create corporate social responsibility for all our business activities. In order to initiate this process, DDM has had itself certified for the CO2 Performance Ladder, with the ISO 14001 certification being an important consideration for environmental issues too. The certifications and norms provide us with frameworks for pursuing our objectives and for continually monitoring our performances.

Sizeable investments have been made in order to minimise our environmental impact. This is a development that we will continue to focus on in the coming years. DDM hopes that this will inspire our competitors to work on creating a cleaner future too!





30 m

< Chimneys already removed

DISCONNECT

DISMANTLING

JACKING

750 tonne p/p

More than 10 tonnes
of reinforcement
steel added

SPMT >
2x 13 axes

WE DISMANTLE

Dismantling and disassembling is all about preserving value. It's not about brute force but about using force in a controlled and targeted way. This requires intelligence, dedication, experience and innovation. Well, at DDM these are all in our DNA. This is how time and again we achieve the (seemingly) impossible.



ENGINEERING

c Temporary
foundations

DISMANTLING



WE DISMANTLE

DDM DISASSEMBLES ICONIC A40 RHEINBRÜCKE BRIDGE WITH PRECISION AND INNOVATIVE TECHNIQUES

In Duisburg, Germany, an impressive and technically challenging project was carried out, namely the dismantling of the iconic A40 Rheinbrücke road bridge. This old bridge, which for years was an important connecting route across the River Rhine, was removed with the utmost care and precision. The complex nature of this operation required not only our professional skills but also our innovative techniques and methods that ensured the safe, continued flow of road and river traffic.



The team that worked on this project consisted of experienced dismantling specialists who amongst other tasks carried out the meticulous work preparation needed for this project. All the steps taken to successfully disassemble the bridge were worked out by a structural engineer beforehand, with any special considerations then leading to a corresponding adjustment of the dismantling plans.

The dismantling was no easy task, as it required each component to be removed with the utmost care. Thanks to advanced technologies, including specially developed pylon heads and auxiliary tethers attached to strand jacks, optimal use could be made of the existing span mechanism. This enabled the team to dismantle the bridge in sections, whereby they worked in two directions from the centre outwards. Each step in this process was carried out with precision, which was essential in order to guarantee the safety of the surrounding area.



SAFETY IS EMBEDDED IN DDM'S DNA



'Safety first' was the credo during the disassembly, especially because the road and river traffic had to be able to travel along their route as before. This requirement meant careful planning and coordination, with the associated preparation process taking more than a year to complete.

Tonnes of steel were removed bit by bit and all the materials were taken away so that they could be used as new raw materials for future applications.

The A40 Rheinbrücke bridge was not just a bridge - it also symbolised both connection and progress. With the disassembly of this bridge, Duisburg created room for two new bridges that further strengthen the region. Innovation, precision and teamwork were the key elements of this unique enterprise, with the team being determined to make this disassembly process one big success - and they succeeded!



LOCATION: DUISBURG, GERMANY

**SCOPE: 10,000 TONNES OF IRON,
20,000 TONNES OF CONCRETE**

PROJECT DURATION: 1 YEAR

DEPLOYMENT:

- **SPECIALLY DEVELOPED LIFTING
AND HOISTING EQUIPMENT**
- **SPECIALLY ENGINEERED PYLON HEADS**
- **A STRAND JACK SYSTEM**
- **DEMOLITION EXCAVATORS**
- **LIFTING CRANES**
- **CHERRY PICKERS**





WE DISMANTLE

COMPLETE SOLUTION FROM DDM: FROM CLEANING TO THE SUSTAINABLE RE-USE OF AN ACRYLIC FACTORY IN BÖHLEN

In Böhlen, Germany, DDM acquired a complete acrylic factory to use as it saw fit. This acquisition also meant that we were responsible for all the permit and regulation management processes, as well as having obligations vis-à-vis the site operator. This meant that we acted as the main contractor i.e. as the owner of the installation, with all the associated rights and obligations.





LOCATION: BÖHLEN, GERMANY

SCOPE: 6,000 TONNES OF SCRAP

PROJECT DURATION: 15 MONTHS

DEPLOYMENT:

- DEMOLITION EXCAVATORS
- HD CLEANING LORRIES
- HD CLEANING SYSTEMS
- TELESCOPIC CRANES
- HEAVY TRANSPORT VEHICLES

A special aspect of this project was the cleaning of the chemical installation. Our service package consisted of a complete industrial cleaning of the acrylic factory, including the emptying of all the systems. Before DDM started the work, we had an independent analysis carried out to establish the types of system contamination present. We then used these results to direct the deployment of special suction cars that subjected the installation to an industrial-scale emptying and clean-up operation.

Following this, a largely in-situ cleaning operation was carried out, with certain components being cleaned inside specially designed washing containments in line with the SIR standard. Following the successful cleaning of the whole system, DDM, which is certi-

fied for this work, both certified and documented the whole process in line with the AWSV guidelines and then reported the cleaning results to the relevant competent authority.

With DDM, the focus was on protecting and preserving the environment and the natural resources. This is why we re-used many components of the system and made demolished materials ready for re-use. DDM distinguishes itself not only in this regard but also because it continues to make major progress in improving sustainability and efficiency. What's more, all waste flows were carefully separated and transported to certified processing companies.

The special aspect of this project is the emphasis on safety during each phase of its execution. Despite the complexity and the many challenges, DDM carried out the project carefully and effectively, with safety always being the highest priority. The team ensured that all safety protocols were closely followed, so that the project could be completed successfully and without incident.

The project in Böhlen is impressive evidence of the wide range of services and expertise that DDM can offer. From work preparation through thorough cleaning to implementation and the re-use of materials: DDM handles and controls every stage of the process. Thanks to this integrated approach that focussed on quality and sustainability, the project was a complete success.



WE DISMANTLE

COMPLETE DISASSEMBLY OF A BODYSHOP INSTALLATION FOR A MAJOR CAR MANUFACTURER

DDM carried out the complete disassembly of a bodyshop installation for a major car manufacturer, with a specific focus on safety, timely execution and incident-free execution.



LOCATION: BORN, THE NETHERLANDS

PROJECT DURATION: 6 MONTHS

SCOPE: 750 ROBOTS, 7,000 TONNES OF SYSTEMS

DEPLOYMENT:

- ELECTRICAL EQUIPMENT INCLUDING CHERRY PICKERS AND FORKLIFT TRUCKS
- SPECIALLY DEVELOPED LIFTING AND HOISTING EQUIPMENT



This project consisted of various important activities, including the dismantling and extrication of 750 robots, as well as the associated control boxes that were intended for re-use. In addition, the whole bodyshop installation that extended over an area of 69,646 m² was removed, with a total of 7,000 tonnes of other systems being dismantled too.

Circular business operations are becoming ever more important, which is why DDM makes re-use and recycling a core aspect of its dismantling and relocation activities. In this case, many components were transported to other factories to be re-used there. Non-reusable structures were disassembled and recycled. The project was carried out using electrical equipment, specialised equipment and specially developed lifting and hoisting equipment.

Despite the various challenges, we, working closely with our team, persevered and completed the project successfully. The dedication and deployment of all those involved ensured that we not only met expectations but also gained valuable experience for future projects.



WE DISMANTLE



WASHING POWDER FACTORY IN BELGIUM EMPTIED SAFELY

DDM secured the mandate to dismantle a washing powder factory in Belgium. The owner had opted to take this step as the result of a change in corporate strategy.

Our client asked us whether we could dismantle the factory. This required the removal of all production equipment, pipelines, storage tanks and systems connected with the production operations.

The factory's main building, in which all equipment, systems and pipelines for the production of dishwasher tablets were located, consisted of twelve separate floors. On each floor, the systems were dismantled and removed from the factory. Next, all these components were removed and moved with the help of DDM's 90-tonne cable crane.

This work took a whole year to complete, which was precisely the amount of time set aside for this project. A diverse team of dismantling specialists, mechanics, engineers, foremen and operators were deployed for this project.

The client set strict safety requirements for the project location. Thankfully, safety is embedded in DDM's DNA too. So-called 'toolbox meetings' were held every day and there were regular VGM inspections too. Both DDM and the client saw this as a necessary means of ensuring the work was carried out in a safe and healthy way.



LOCATION: BELGIUM

PROJECT DURATION: A YEAR

SCOPE: 1,140 TONNES OF EQUIPMENT

DEPLOYMENT:

- CABLE CRANE
- MOBILE CRANE
- TELESCOPIC HANDLERS
- CHERRY PICKERS





WE DISMANTLE

DOING EVERYTHING DESPITE LIMITED ROOM FOR MANOEUVRE

Little room for manoeuvre, asbestos, hazardous substances, two ovens to disassemble: that describes the main aspects of a complex - but challenging - assignment we carried out in Linz, Austria. In just four months, DDM efficiently and safely dismantled a chemical factory.



Before we could start on the dismantling, we had to remove the asbestos there. Following this decontamination, removal and cleaning work, we could start with the dismantling work.

In essence, the latter consisted of disassembling two ovens, which work meant we also had to dismantle pipelines up to the required dividing cut. For this type of work, DDM specialists always start by carrying out extensive checks to ensure that the pipelines are free of hazardous substances.

The two ovens were dismantled from top to bottom. The oven walls were cut into sections by our dismantling specialists. Holes were then cut in these sections so that chains could be passed through them. Suitable lifting equipment was then used to lift these heavy sections down to the ground - heavy and meticulous lifting work where you had to remain constantly alert.

All waste flows were separated on site, where they were also processed, loaded up and quickly transported away in order to make room for the new equipment. Because the available work area was limited in size, a lot of thought had to be put into the order in such issues as which activities would be carried out, where the equipment would be sited, the location of the cutting lines, the removal of demolition waste and of course the operational safety.

The project's risks and complexity meant that demolishing the concrete using the traditional 'brute force' demolition method was not an option, which is why the concrete on the project was removed with the help of a DARDA. This hydraulic stone and concrete splitter can exert pressure of no less than 700 bar and up to 413 tonnes of force, which ensures that the concrete falls apart without vibrating. This method ensured we could remove the concrete effectively and safely, even in this complex work environment.

LOCATION: LINZ, AUSTRIA
PROJECT DURATION: 4 MONTHS
SCOPE: TWO OVENS
DEPLOYMENT:

- DISMANTLING SPECIALISTS
- LIFTING CRANE
- CUTTING TORCHES
- 23-TONNE CATERPILLAR CRANE
- HYDRAULIC HAMMER
- MAGNET ON CHAIN
- SORTING PINCER

COMPLEX AND CHALLENGING? NOT FOR DDM!



LOCATION: UTRECHT, THE NETHERLANDS

SCOPE: 7,000 TONNES OF IRON,
22,000 TONNES OF CONCRETE.

PROJECT DURATION: 8 MONTHS

DEPLOYMENT:

- DEMOLITION EXCAVATORS
- LIFTING CRANES
- CHERRY PICKERS



WE DISMANTLE

ARCH BRIDGE NEAR VIANEN **DISMANTLED** **AND REMOVED**

Above the River Lek in Utrecht, the CBV (the Vianen Arch Bridge Consortium) was dealing with a special assignment: the steel arch bridge that was no longer needed was being dismantled and removed by DDM in collaboration with KWS and VES (who together formed the above CBV consortium). This job was no piece of cake, as the arch bridge weighed no less than 5,000 tonnes.

The first stage of the dismantling process was to remove all the traffic barriers and lampposts so that they would not hinder removal of the tarmac. Once the tarmac was gone, we started removing the northern access ramp. Demolition excavators were used to demolish the concrete decking. The main load-bearing structure made of steel was removed too and the pillars were demolished using our 90-tonne demolition excavator that is equipped with a hydraulic hammer and concrete

maw. Important considerations here were the control measures we deployed to prevent dust dissemination.

As preparation for the removal operation, holes were made in the road surface for the attachment of the special lifting structure that would raise the arch. It was especially important here to ensure that the steel arch structure retained its original strength, so that all of it could be removed safely.



In a controlled concerted action between the various hoisting cables, the hacks, a hoisting system and the pontoon, the arch bridge was raised, hoisted onto the pontoon and riveted to it. The pontoon was then turned around and navigated to the Prinses Beatrixsluis lock, where it was moored in the lock's outer harbour.

The lifting system made it possible to lower the arch in stages whilst still removing sections of the arch bridge. The pontoon with the pieces of the arch bridge was navigated to Schiedam, where it could be further demolished in an industrial setting and reduced to recyclable pieces. By carrying out this work in Schiedam, a great deal of nuisance was avoided for the area surrounding the bridge's former location. Sustainability

was a very important focus of this project, which is why ultimately 100% of the entire bridge was recycled into new building materials, this work naturally being undertaken by certified processors.

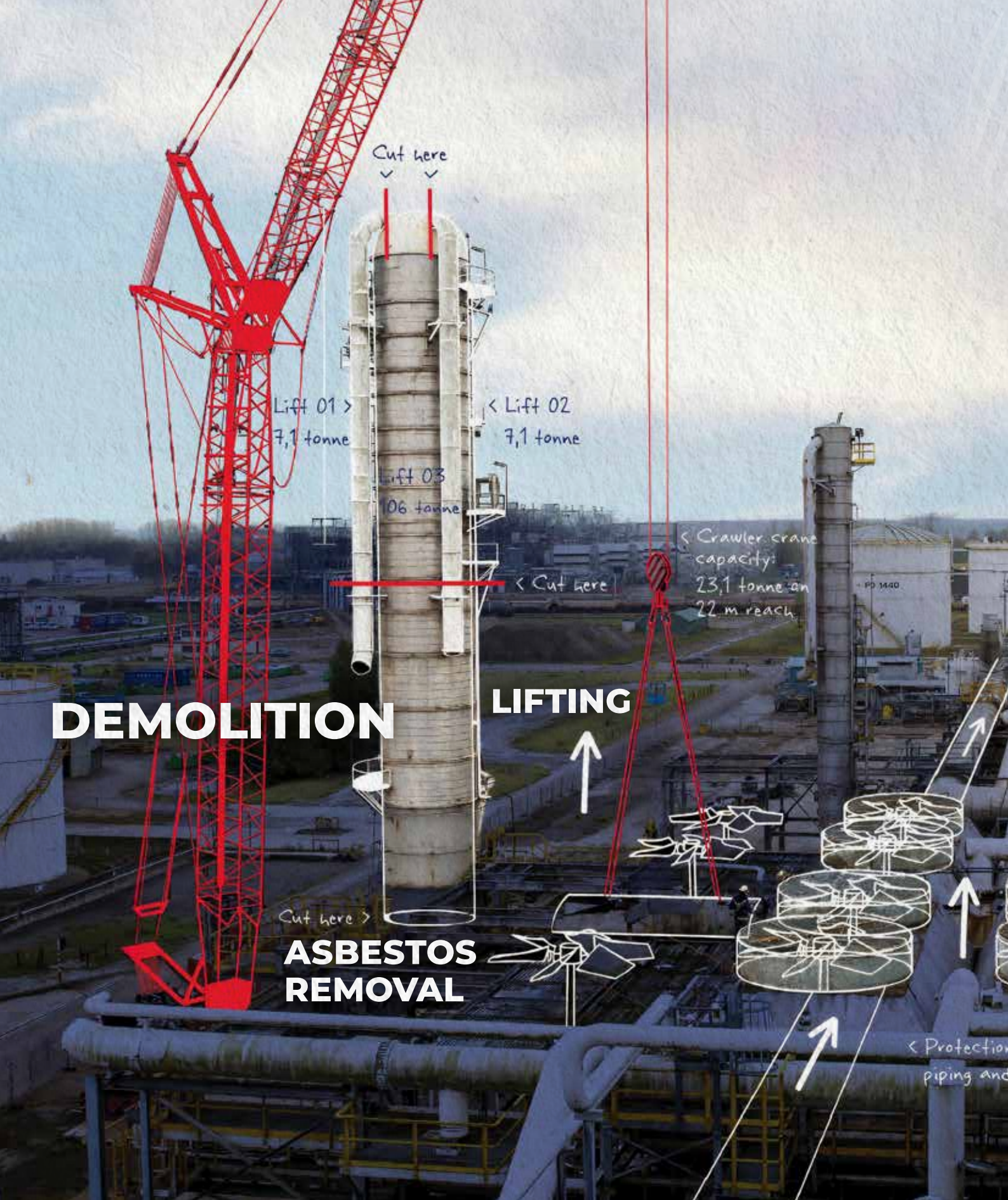
Once the southern access ramp had been demolished in the same controlled way as the northern one, the specially constructed work areas were cleaned up and the forelands were restored to the condition that they had been when we had first encountered them a whole year before.

A successful project with a unique work procedure, a happy client and no accidents! Not 'a bridge too far' then!

100% OF THE BRIDGE RECYCLED INTO NEW BUILDING MATERIALS







Cut here
✓ ✓

Lift 01 >
7,1 tonne

< Lift 02
7,1 tonne

Lift 03
106 tonne

< Cut here

< Crawler crane
capacity:
23,1 tonne on
22 m reach

PD 1440

DEMOLITION

LIFTING



Cut here >

**ASBESTOS
REMOVAL**



< Protection
piping and

WE DEMOLISH PROBLEMS RESPONSIBLY

Responsible demolition is a specialised profession: it requires engineering, expertise, care, creativity and a constant focus on safety. Committed and client-focussed, DDM develops the right solution for each problem or set of problems, no matter how complicated it is. Effective, sustainable and focussed on achieving your goals - that's us!





WE DEMOLISH

HARBOUR CRANES DISASSEMBLED WITH **MINIMAL ENVIRONMENTAL IMPACT**

Container transshipment can't just grind to a halt during demolition work - or at least not for too long. In Bremerhaven, Germany, DDM removed eight container gantry cranes from the quayside and quickly took them to a location where they could be disassembled. In addition, SPMTs were used to speedily move two gantry cranes to another location on the quayside. Transshipment activities were affected as little as possible. The cranes weighed no less than 1,800 tonnes each. A great project for DDM!



For DDM, the project was challenging, also because a new disassembly method was being used for the first time. A gantry system worked in conjunction with a strand jack lifting system to hold each crane in four different places, this allowing the base structure under the crane to be removed. Next, the dismantled crane sections were placed on SPMTs (transporters for heavy components) and driven away.

The topside of the gantry cranes was still in place, so it was brought down using its own hoists. With the help of a lifting crane and cutting torches, this section was cut into smaller pieces too. All the parts of the gantry cranes were brought to a disassembly location and then turned into scrap with the help of DDM's own cable crane. For this project, a heavier scrap shear was actually acquired too and attached to the main arm of a 70-ton demolition excavator.

The work on the quayside itself took 'just' three weeks, this quick completion being of real benefit



to the client. Other important advantages were that the disassembly location meant there was no need to work at a great height, which work can be risky. Additionally, we were no longer dependent on the weather.

All waste flows produced were carefully sorted at the disassembly location and then transported to certified

processors. When removing harbour cranes of this size, both phasing and planning are crucial. The collaboration with the client proceeded very smoothly. Work was carried efficiently and (above all) safely. Shortly after the cranes were removed, normal terminal activities could be resumed.



LOCATION: BREMERHAVEN, GERMANY

SCOPE: 8 CONTAINER GANTRY CRANES

DURATION: 12 MONTHS

DEPLOYMENT:

- DEMOLITION EXCAVATORS
- MOBILE, CABLE AND TRANSSHIPMENT CRANES
- SPMTS
- GANTRY STRUCTURE, INCLUDING A STRAND JACK SYSTEM



WE DEMOLISH

THE EFFICIENT AND SAFE DISASSEMBLY OF A BERLIN POWER PLANT

In the vibrant city district that is Charlottenburg, which lies right at the heart of central Berlin, DDM carried out the impressive disassembly of a power plant. This project was especially challenging, not only because of the complex inner-city location but also because the nearby listed buildings had to be preserved, for which work a special team was set up.



Before being disassembled, the building was completely covered by scaffolding, with both the facades and the roof structure being disassembled and brought down to ground level by hand. This process was carried out in such a way that neither the nearby sections of the listed buildings nor the immediately adjacent public road were affected.

During the work, DDM removed the original paving stones by hand. These paving stones were then carefully cleaned and re-used in future building projects, making it a great example of circular disassembly.

Once the facades, roof structure and clinker sections had been dismantled, the concrete building structures and staircases were demolished conventionally, with the help of a specialised demolition excavator equipped with a powerful scrap shear. The highest building was 70 metres tall. A unique challenge within this project was the limited space in which DDM had to operate. This required meticulous logistical planning in



LOCATION: CHARLOTTENBURG, BERLIN

SCOPE: 4,000 TONNES OF IRON,
40,000 TONNES OF CONCRETE

PROJECT DURATION: 1 ½ YEARS

DEPLOYMENT:

- DEMOLITION EXCAVATORS
EQUIPPED WITH APPLIANCES
UP TO 70 METRES TALL
- TOWER CRANE
- CABLE CRANE



order to remove waste flows both promptly and efficiently, with strict requirements also being laid down for the maintenance of order, cleanliness and tidiness at the location.

The focus during the process was both on ensuring safety and minimising nuisance for the surrounding area. By applying advanced techniques, DDM was able to significantly reduce both noise pollution and dust generation, an essential achievement given Charlottenburg's densely populated urban environment.

The client was very pleased with the progress made, especially because DDM succeeded in staying ahead of the tight planning schedule. The project was carried out extremely safely and efficiently. This project illustrated not only DDM's technical expertise but also its dedication to achieving sustainability and respecting the communities in which it works.





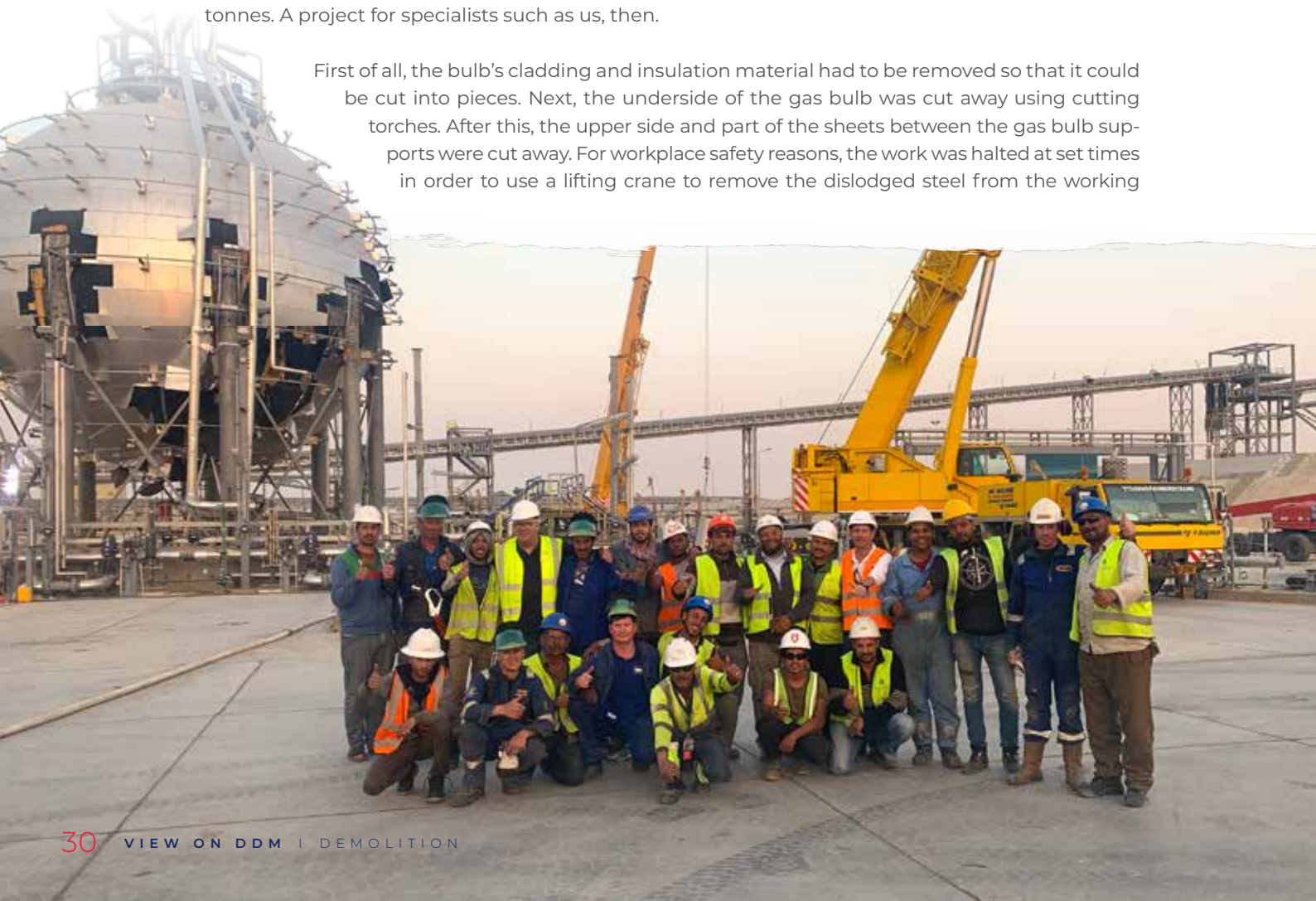
WE DEMOLISH

QUICK ACTION NEEDED TO MAKE FACTORY SAFE AGAIN

A ‘bulb’ of gas had exploded at a recently opened factory in Sokhna, Egypt, an event that severely affected the business. DDM received a call: we were asked to come immediately to dismantle the exploded gas bulb structure and thus restore the previous safe working environment. Of course we said yes.

DDM didn't hesitate to leap into action quickly. Following an initial analysis of the project location, a team of specialists was flown to Egypt. The bulb in question was no less than 25 metres high and weighed 300 tonnes. A project for specialists such as us, then.

First of all, the bulb's cladding and insulation material had to be removed so that it could be cut into pieces. Next, the underside of the gas bulb was cut away using cutting torches. After this, the upper side and part of the sheets between the gas bulb supports were cut away. For workplace safety reasons, the work was halted at set times in order to use a lifting crane to remove the dislodged steel from the working





LOCATION: SOKHNA, EGYPT

SCOPE: 300 TONNES, 25 METRES HIGH

PROJECT DURATION: 4 WEEKS

**DEPLOYMENT: LIFTING CRANE,
DEMOLITION EXCAVATOR**



area. This steel was then transported away immediately, so that the work location was always in a safe, cleaned-up state.

The elevated work was carried out by specially trained personnel who work according to a disciplined procedure and who are properly protected by certified safety equipment. No risks are taken and safety is of paramount importance, this being one of DDM's mantras. This project was a perfect fit for DDM because a lot

was required of the expertise possessed by our dismantling specialists. It was a complex operation, and one where the clock was ticking too.

The team of dismantling specialists succeeded in completing the project in just 4 weeks without complications. DDM's quick work showed that we can respond quickly to hurry to someone else's aid, even in situations where to do so means we are faced with a complex, difficult situation.



LOCATION: ANTWERP, BELGIUM

SCOPE: 3,334 TONNES OF STEEL

PROJECT DURATION: 40 WEEKS

DEPLOYMENT:

- DEMOLITION EXCAVATORS
- LIFTING CRANES
- CHERRY PICKERS
- FORKLIFT TRUCKS

A TYPICAL PROJECT FOR DDM





WE DEMOLISH

RUST RUSTS - EXCEPT WHEN DDM'S AROUND

An ethylene producer located in the Antwerp port area had about fifteen towers and reactors that hadn't been used in years. They proved unable to stand the test of time, with rust formation making it necessary to remove the plant and carry out a clean-up operation. Which is why the phone rang at DDM...

This complex disassembly was a project typical of the work that DDM does. The towers and reactors, which we refer to as 'columns', stood between other installations and a pipeline bridge that were both in full use. This is why we first removed the installations located around the columns - the largest of these being no less than seventy metres high - in order to 'set them apart' and thus create space for the follow-up work.

Next, we used cherry pickers, cutting torches and mobile lifting cranes to dismantle all the pipelines and catwalks. A 700-ton lifting crane with a mast length of more than ninety metres was then used to divide the towers into different sections and lift them to the

ground one by one. This work was no piece of cake either, because each section weighed between 16,000 and 30,000 kg.

For recycling purposes, all the pieces brought down were then turned into scrap and cleared away. Since the columns contained more than 250 internal platforms, it was this work - along with all the engineering work - that took the most time. The project was completed on schedule and the premises were handed back to the client in a clean and tidy state.

The client was very pleased, both for the meticulous way we tackled the whole project and for the ad hoc solutions we came up with during the project.





WE DEMOLISH

THOROUGH PREPARATIONS FOR THE COMPLEX WORK TO DISMANTLE A PILE OVEN

‘Careful preparation and no risk’ were our key mantras when removing a pile oven located in Duisburg, Germany. During the work preparation phase, DDM devoted a lot of time to implementing protective measures in order to ensure the project’s safe execution.

LOCATION: DUISBURG, GERMANY

PROJECT DURATION: 8 MONTHS

DEPLOYMENT:

- LIFTING CRANE
- DEMOLITION EXCAVATOR
- CHERRY PICKERS



The difficulty with this project was that on four sides, the pile oven was ‘trapped’ between installations that were still operational. What’s more, the pile oven was located in a building where all sections to be removed had to be lifted and taken away above the existing operational installations. Another essential aspect of this assignment was that we had to both record details of and decontaminate all the asbestos we found before we could make a start on the disassembly work.

The overhead pipelines were cut up using cutting torches and hoisted away with the help of an overhead crane. In order to carry away these sections right away, the existing façade was opened up and the crane track was extended to the open air. Once the

overhead pipelines had been removed, the brickwork was demolished using a demolition excavator that was temporarily sited in the oven.

The brickwork was carried away along a long conveyor belt that was installed above the operational systems.

Once the brickwork had been removed, the heavy steel sections were cut down to size with cutting torches and removed to the open air in hoistable containers.

DDM’s careful work preparation enabled it to successfully disassemble the oven by the set deadline. The dismantling specialists worked ‘flat out’ day and night under a shift system to complete the work on time.



WE DEMOLISH

DISASSEMBLY IN THE PHILIPPINES: **TRANSFORMATION INTO A FIRST-CLASS TANK TERMINAL**

Asian industry is currently undergoing an extensive transformation process, with DDM playing a key role here in the conversion of an existing refinery into a first-class tank terminal.

DDM successfully removed and recycled the processing installations and heavy oil tanks. Before a start was made on the work, all the necessary documentation was carefully prepared and extensively discussed with the team.

Our specialised machines equipped with shears and scrap pincers disassembled the installations efficiently. A large number of steel sheets were sold for re-use, which helped us to achieve our sustainability objectives.

Our use of large-scale machines equipped with shears gives us a safe, quick and effective way of doing such work. Our dismantling team consists of a mix of Asian and European specialists. This sharing of experience gives the local employees additional useful information for future projects too.

In addition, DDM successfully undertook a controlled demolition of an iconic chimney south of Manila. This chimney, once a striking landmark for the region, was disassembled using explosives that were put in position carefully and precisely.

This entire project was carried out not only safely but also to our clients' complete satisfaction. DDM is always working hard to further improve the quality, safety and sustainability of all our projects. This transformative

project means we have now made a real contribution to the future of industry in this region.



LOCATION: THE PHILIPPINES

SCOPE: OIL TANKS, GAS BULBS, CHIMNEY

PROJECT DURATION: 2 YEARS

DEPLOYMENT:

- DEMOLITION EXCAVATORS
- CHERRY PICKERS
- EXPLOSIVES



SAFETY IS PARAMOUNT: CONTROLLED SEPARATION OF RESIDUAL MATERIALS





WE DEMOLISH

DEMOLISHING WHILST SIMULTANEOUSLY **ADDING VALUE IN TERNEUZEN**

Winning a mandate by adding value to the project: the client chose DDM to carry out this assignment due to the sustainable approach we were taking to it. In Terneuzen (NL), DDM demolished an old factory building, a project where it was challenged to not only retain as much of its value as possible but even to add to it!



LOCATION: TERNEUZEN, THE NETHERLANDS

PROJECT DURATION: 10 MONTHS

SCOPE: 2,500 TONNES OF CONCRETE, 2,000

TONNES OF SCRAP

DEPLOYMENT: DEMOLITION EXCAVATORS,

LIFTING CRANES, CHERRY PICKERS

First of all, the sold components of the production line had to be dismantled and then hoisted out of the building. Next, all asbestos-containing materials had to be decontaminated and removed. Only then could we start dismantling the entire building.

The necessary preparations were undertaken for this, including the siting of a cable crane with a main mast 30 metres high with a 55-metre jib. This was used to lift down large sections of the roof.

When lifting down the façade at a height of over 20 metres, it was decided to use a spreader bar, which meant that the façade cladding (complete with its insulation and structure) could be lifted down in a controlled way. The advantage of this method is that it is safer and quicker, as well as creating less pollution for the surrounding area. The insulation material could then be removed from the walls in a controlled way at a lower level.

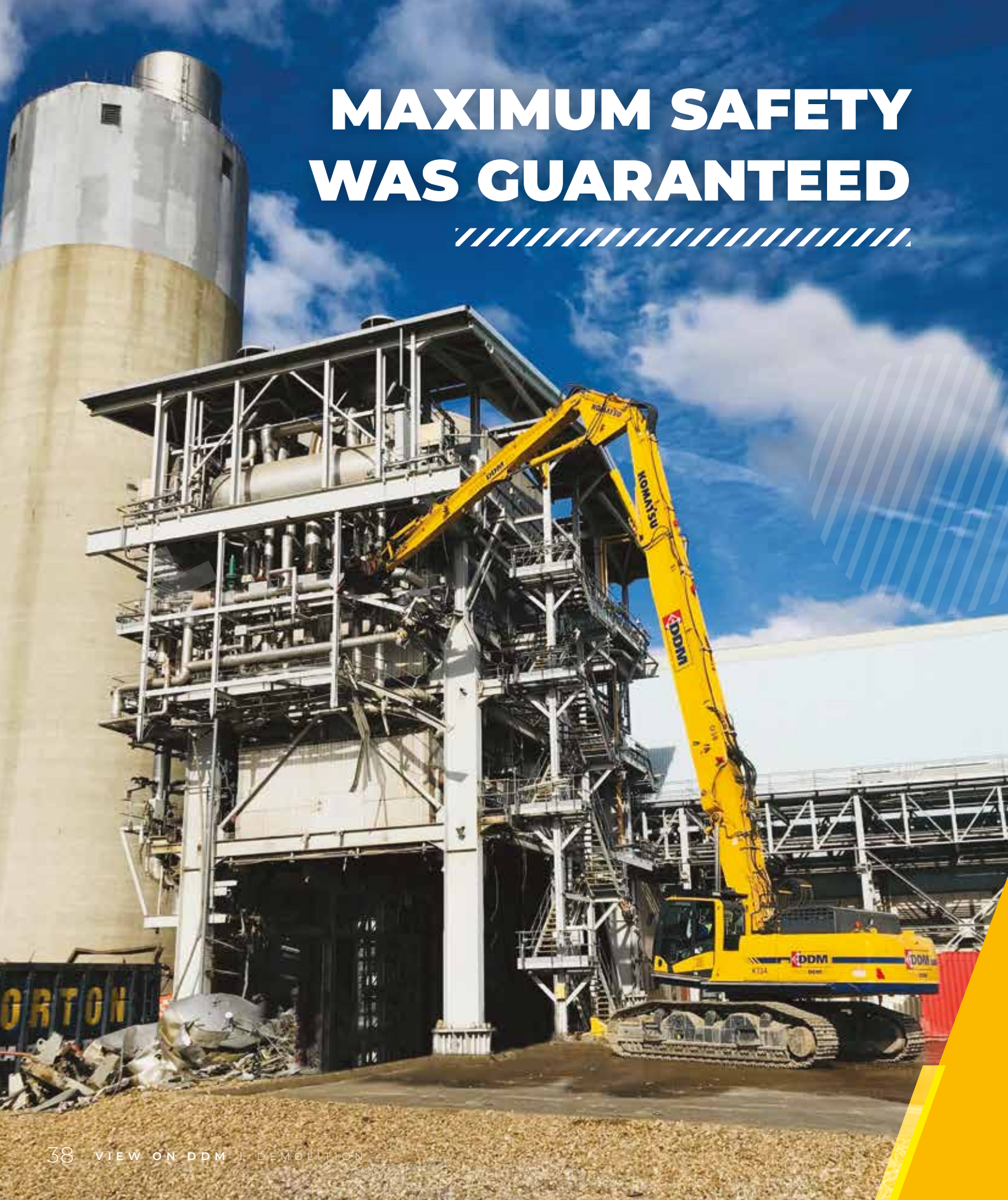
Once all facade cladding had been lifted down from a height of 32 to 20 metres above ground, the cable crane was swapped for a demolition excavator with a long

arm. This building adjoined another building, which is why DDM - in agreement with the structural engineer - decided to leave the framework of the steel structure in place, in order to ensure the stability of the adjoining building. The concrete floors were professionally dismantled using shears.

Our client was very pleased, both with the clean and tidy end-result of our work and with the added value that we were able to deliver. DDM had once again successfully completed an important project without any accidents.



MAXIMUM SAFETY WAS GUARANTEED





COMPLICATED LONDON

POWER PLANT DEMOLITION PROJECT

Barking Power Station used to be a series of coal-fired power plants in East London but following their demolition in the 1980s, they were replaced with a gas-fired power plant. In 2014 the operator decided to close most of this plant too and to have it demolished by DDM - whilst still retaining the gas turbines for re-use, by the way.

The gas turbines, five in number, were equipped with Heat Recovery Steam Generators (HRSG units). It's a system that generates energy in two ways: the gas turbine powers a generator, whilst the hot exhaust gases from the turbine produce steam that is used to drive a steam turbine.

DDM was awarded the mandate to demolish the five HRSG units, along with two 55-metre high concrete chimneys. There was just one complicating factor: the Barking neighbourhood. It was namely the case that the plant lay close to a major car manufacturing plant and alongside one of London's busiest and most important motorways. What's more, it was located less than ten kilometres from London City Airport.

The largest amount of work was required for the planning process and the communication with all the stakeholders. Maximum safety had to be guaranteed for the car manufacturer, the motorway and the airport - and nuisance had to be kept to a minimum too. The most critical part of the work, namely the demolition of the concrete chimneys, could only be carried out at one specific time, namely outside office hours. This was done on a Sunday morning in October at 7.00 a.m. The factory was shut down, the motorway

closed to all traffic for four hours and the airport was closed from Saturday afternoon to Sunday afternoon. Thanks to the deployment of very carefully positioned batches of explosives, the chimneys were brought down in a controlled explosion.

Just six weeks after that Sunday 'moment suprême', the job was declared finished: safely, on schedule and without any trouble.



LOCATION: LONDON, ENGLAND/UK

PROJECT DURATION: 10 MONTHS

SCOPE:

- 5 TURBINES
- TWO 55-METRE HIGH CONCRETE CHIMNEYS

DEPLOYMENT:

- DEMOLITION EXCAVATORS
- CABLE CRANE
- EXPLOSIVES

**THE GREAT THING:
THE SURROUNDING AREA
NOTICED NOTHING AT
ANY TIME**





WE DEMOLISH

STEEL ROLLING MILL NEAR GERMANY HAD TO BE EMPTIED

A steel rolling mill on the outskirts of Dortmund in Germany had to make way in order to make possible the city's urban expansion plans. This steel rolling mill had been used for decades to make thick steel sheets that had been used to construct numerous dam walls. DDM was awarded the mandate to empty the rolling mill, whilst taking extra care with the buildings, as they had to remain intact so that they could be sold.

The rolling mill on the city's outskirts took up a huge amount of space that housed the industrial buildings that contained the relevant equipment. This included ovens and rollers that were first used to make the steel sheets red hot and then to roll them into the desired form. The client decided to sell all the equipment located inside and outside the buildings. The buildings themselves had to remain intact, so that ultimately they could be sold together with the land to a project developer.

DDM had to carefully work out what the total weight of the equipment was and put a value on what could still be sold as usable. According to DDM's calculations, there was about 40,000 tonnes of steel and equipment,

10,000 tonnes of which could be sold as re-usable. This suited DDM down to the ground, as it offers materials for re-use as part of its sustainability drive.

DDM worked for 18 months on this project with a team of experienced dismantling specialists, five demolition excavators equipped with hydraulic shears, two heavy forklift trucks and a lot of smaller-scale equipment. Both the client and the stakeholder authorities were especially pleased with the progress made by the project and with the results. Something that made the project extra special was that throughout the entire project, the local neighbourhood didn't even notice that this work was being carried out!

LIFTING

Crawler lifting crane >

HEAVY EQUIPMENT

RELOCATION

Hydraulic lifting crane >

EXCEPTIONAL TRANSPORT

< Custom made wispert
transport saddles

Telescopic extended
low bed trailers



WE RELOCATE YOU

From the biggest objects and heaviest machines to complete factories: here at Relocation, we deal with 'extreme' moves and relocations; in other words, gigantic projects where it's all about planning and project management. Here, even the smallest details can have a huge impact on the end result.

SPECIALIZED PERSONNEL

DISCONNECT

< Aluminium silos

< After dismantling
of equipment and
building, removal of
concrete foundations

< 45m high mobile elevated
work platform (manip)





WE RELOCATE

HOW DO YOU MOVE AN ENTIRE LABORATORY? **WITH DDM OF COURSE!**

Dismantling a complete laboratory and moving its entire contents to nine new locations in Europe and the Far East: a large-scale logistical challenge that was carried out by DDM with a combination of visual marking, a detailed asset list and a clear plan, in close consultation with the client.

Four floors, more than 1,500 assets to be shifted, six different departments, twelve new locations, nine countries (in Europe and the Far East) and over one hundred different shipments: planning this multiple relocation operation was a massive challenge.

All the assets in the laboratory that were to be moved were neatly dismantled and carefully packed before being shipped to their new homes. The specialists



who dismantled the machines then travelled with them to the new locations, in order to carefully unload everything again there and to then store it or immediately assemble/install it.

Different DDM sites were involved in the project. Our Dutch colleagues demolished and emptied the old laboratories in Terneuzen in order to make reinstallation possible, with our Belgian site then taking the dismantled equipment and installing it again at the client's new locations.

The client was extremely pleased with the way in which DDM tackled this project and gave our service provision a very high score of 9.8! We accordingly have to conclude that DDM works as precisely, safely and accurately as a Swiss watch!

LOCATION: SWITZERLAND
SCOPE: FOUR FLOORS, MORE THAN 1,500 ASSETS TO RELOCATE, 12 DIFFERENT LOCATIONS, NINE COUNTRIES.
PROJECT DURATION: 25 WEEKS
DEPLOYMENT: A TEAM OF VARIOUS DISMANTLING SPECIALISTS AND RELOCATORS.



WE RELOCATE

MOVING A PRODUCTION LINE **ACROSS THE BORDER**

DDM was awarded the mandate to relocate a production line from Semach in Germany to Oudenaarde in Belgium. Not only did the production line have to be moved but new catwalks had to be designed and created too.



Before a start could be made on the dismantling work, the production line in Germany had to be electrically disconnected. Next, the various components of the production line were labelled, in order to make it easier to rebuild the production line again later on. A range of machines and tools were used to dismantle the production line and load it on to various means of transport in order to convey them to Oudenaarde.

The hall to which the production line had to be brought was not yet ready for it, as a good deal of pipeline work and secondary steel still had to be cut away and

removed before a start could be made to the moving and reconstruction work.

Following the preparatory activities, and once arrived in Oudenaarde, the various parts of the production line were put together again. This was not a 'simple' 1-for-1 affair, as the production hall in Oudenaarde was smaller than the production line's previous hall. This meant that the production line had to be shortened and that new catwalks had to be developed. The careful project planning carried out beforehand meant that the entire project ran smoothly.

Everything went entirely according to plan and it proved possible to install the production line in Belgium on schedule.



**LOCATIONS: SEMACH, GERMANY
AND OUDENAARDE, BELGIUM**

PROJECT DURATION: 4 WEEKS

DEPLOYMENT:

- ELECTRICAL FORKLIFT TRUCKS
- ELECTRICAL CHERRY PICKERS
- ELECTRICAL LIFTING CRANE



DISMANTLE OLD LINE, ASSEMBLE NEW LINE





WE RELOCATE

DISASSEMBLY OF THE OLD - AND RECONSTRUCTION OF THE NEW - **CAR PRODUCTION LINE**

At a major car manufacturer in Bordeaux, France, DDM was mandated to dismantle and remove a complete production line and to then put together an entirely new production line using new machines and systems.

The usable machines and systems that were suitable for re-use were carefully disconnected and dismantled. The machines such as robots were disassembled, packed and transported to the new owner in shipments.

Once their usable parts had been removed, the remaining systems were uncoupled. They were then disassembled using standard procedures: the materials were all separated out and transported to certified recycling companies.

Once the factory halls had been emptied, a start could be made to the construction of the new production line. New machines and systems were professionally and very precisely sited, connected up and set up. Floors, stairs, platforms and inventories were all put in place again and set up so that car production could start again soon afterwards. The hall is now manufacturing cars very efficiently, more efficiently than ever before in fact.



LOCATION: BORDEAUX, FRANCE

PROJECT DURATION: 10 MONTHS

SCOPE: 8,000 TONNES OF METALS REMOVED

DEPLOYMENT:

- ELECTRICAL CRANES
- FORKLIFT TRUCKS
- TRANSPORT TRAILERS





DDM HAS GIVEN 27 WIND TURBINES A NEW CIRCULAR LEASE OF LIFE AND EXPORTED THEM

////////////////////



WE RELOCATE

RELOCATION OF 27 WIND TURBINES

FROM ZEELAND TO URUGUAY

In Zeeland (NL), 27 wind turbines needed to be replaced by new, larger-capacity models. Due to sustainability and circularity concerns, DDM was mandated to remove these 27 windmills and ship them off to another location. This location was on the other side of the world, namely in Uruguay.

During the work preparation phase, various pieces of hoisting equipment were specially made, including a lifting beam for raising the turbines. DDM's project preparation staff then put all the paperwork in order and planned the remaining activities.

The actual hoisting was carried out using two caterpillar lifting cranes. The advantage of the caterpillar lifting cranes is that they can easily be driven to the next place where they need to be. The rotor blades were then set in a horizontal position and the crane was used to lift both them and the turbine down to ground level in a single operation. Next, the blades were dismantled, loaded onto wooden saddles on trailers and driven to the port.

The turbines were placed on flatbeds. The towers consisted of two sections that were also hoisted onto trailers using the specially designed hoisting equipment and that were then conveyed to the port.

All 27 wind turbines were dismantled and transported over a period of just 3 weeks. The turbines were thus given a new lease of life to generate renewable energy in Uruguay.



**LOCATION: ZEELAND,
THE NETHERLANDS**

PROJECT DURATION: 3 WEEKS

SCOPE: 27 WIND TURBINES

RECONSTRUCTED IN URUGUAY

DEPLOYMENT:

- LIFTING CRANES
- (SEMI-)FLATBEDS
- TRANSPORTATION TRAILERS

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