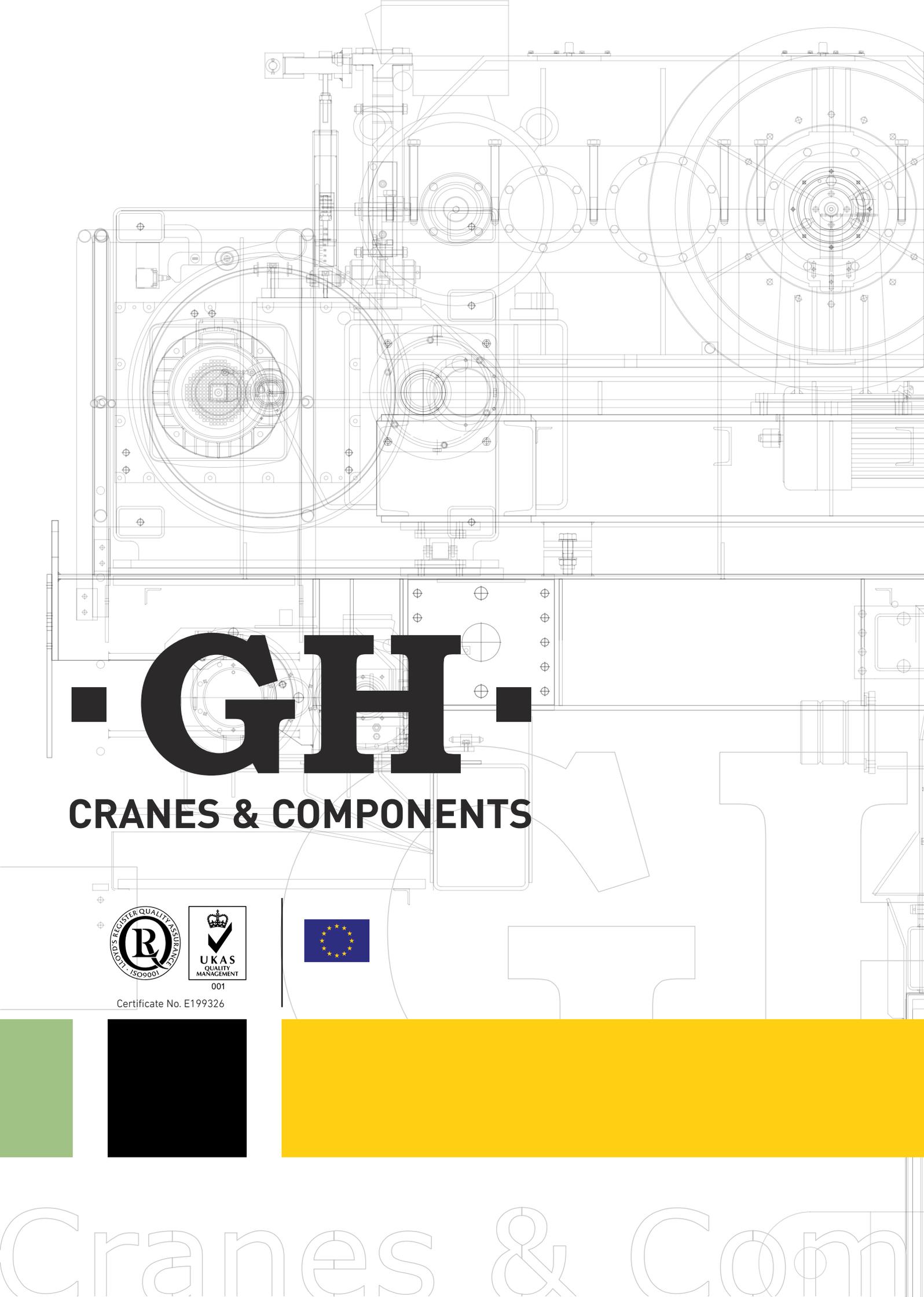


· GH ·
CRANES & COMPONENTS

WASTE TREATMENT CRANES (WTC)



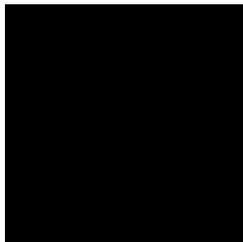
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CRANES & COMPONENTS

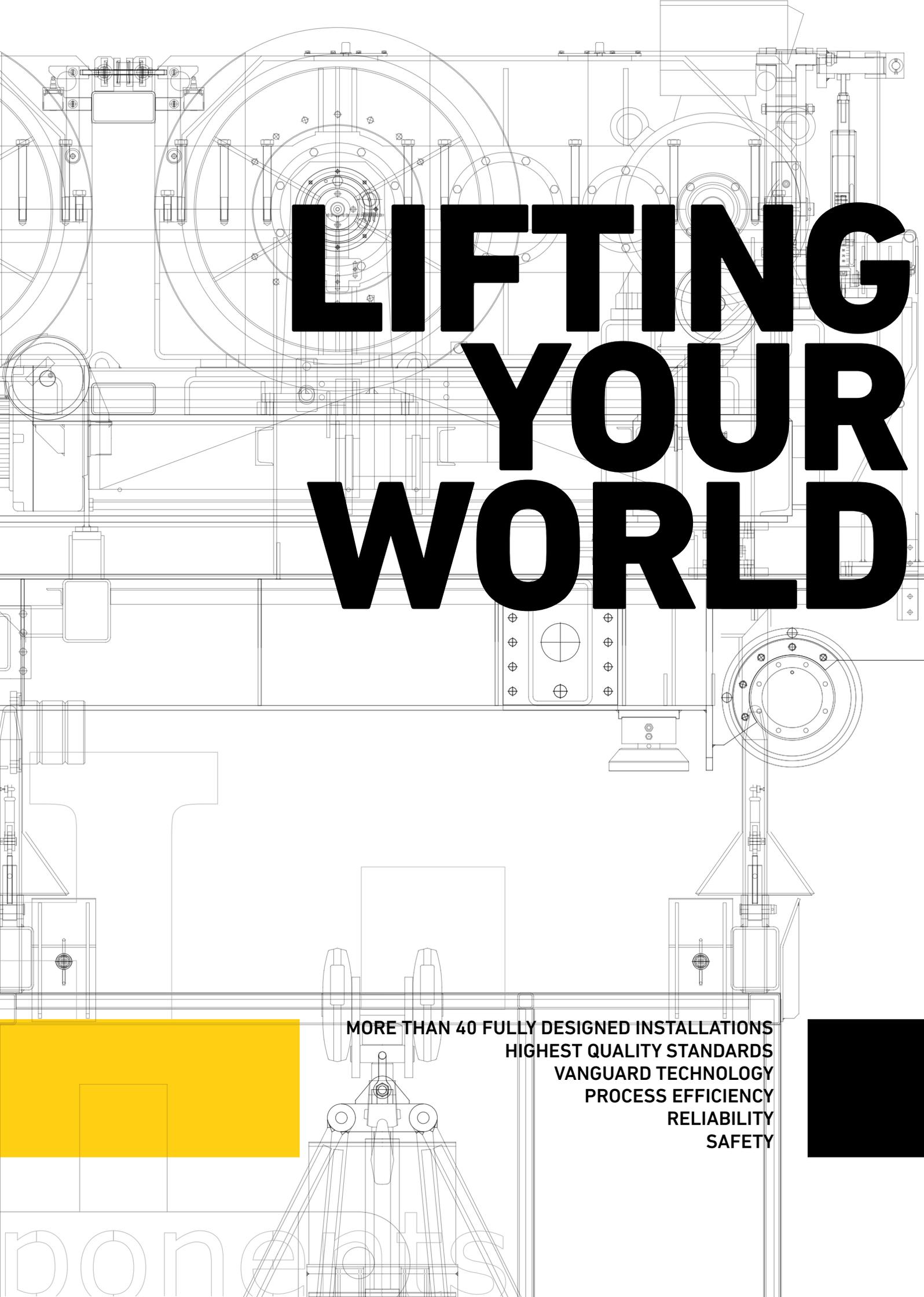


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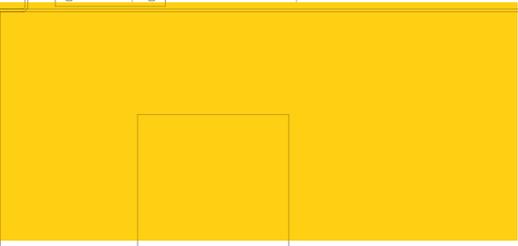
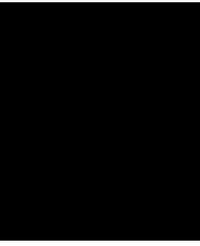
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Cranes & Com

A detailed technical drawing of a mechanical system, likely a crane or hoist, rendered in black lines on a white background. The drawing shows various components such as gears, pulleys, shafts, and structural frames. The text 'LIFTING YOUR WORLD' is superimposed over the central part of the drawing.

LIFTING YOUR WORLD

A solid yellow rectangular block located in the lower-left quadrant of the page.A solid black rectangular block located in the lower-right quadrant of the page.

**MORE THAN 40 FULLY DESIGNED INSTALLATIONS
HIGHEST QUALITY STANDARDS
VANGUARD TECHNOLOGY
PROCESS EFFICIENCY
RELIABILITY
SAFETY**

bonnet's

Excellent Equipment



GH GROUP

GH is one of the global leaders in the lifting industry, who has been always driven by the following belief: "science and technology should support development of civilization", sparing no efforts to promote high technology in each aspect of lifting sector, that has an important position among other industries. Over the course of more than half a century of development GH has been a reference in lifting business, step by step reinventing the business, each time more powerfully. GH is recognized as the world's leading supplier of the lifting equipment, spare parts and services for many industries.



GH is a family owned company with deep roots in its business basics: safety, efficiency, robustness, environmental protection and user-friendly low-maintenance design. GH is persevering on integrating all these elements into every single aspect of GH products' development and manufacturing.

GH MISSION is to PROMOTE CUSTOMERS' EFFICIENCY & PROFITABILITY by offering TAILOR-MADE SOLUTIONS. Focused on continuous R&D and innovation it is minimizing clients' operating costs and easing negative impact of industrial production on environment.



GH choice is to design its products entirely in house and promote commercial components to maximize possibility to substitute parts in order to mitigate end users risks. There is a clear message behind this belief: GH provides high quality and high value added service to enhance users' experience by offering the lowest risks and best performance in the market.

EXPERIENCE

GH equipment meets the demand of customers of Waste Treatment plants through GH global project experience. Highly qualified team is able to deliver solutions that will fit the needs and requirements of Waste Treatment Plants of any throughput and size.

INTEGRATED SOLUTIONS

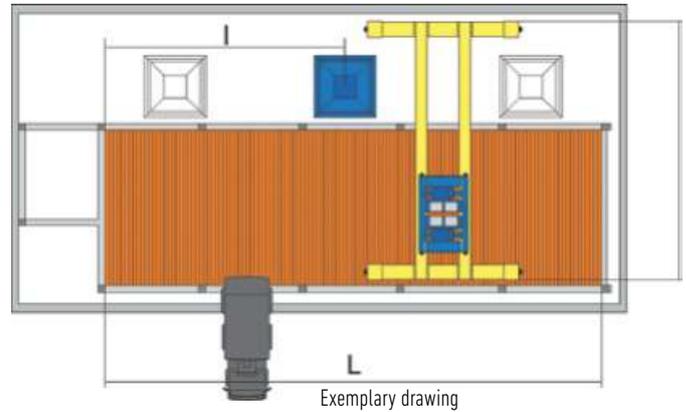
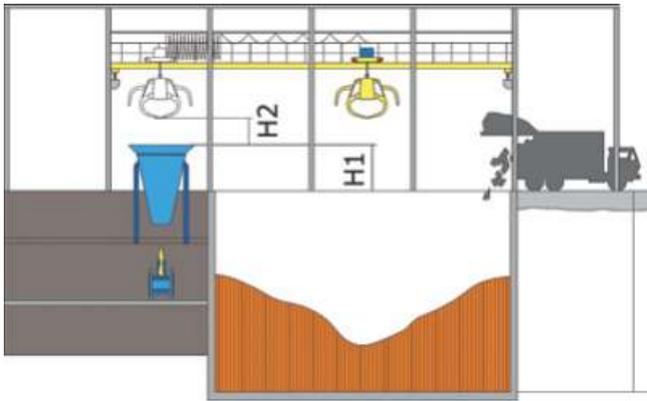
From the design stage GH offers to our customers tailor-made solutions. GH IS BEING ABLE TO SUPPLY ALL THE CRANES INVOLVED IN THE TYPICAL INSTALLATIONS OF THE SECTOR. The solutions are integrated with the complete process required by our clients.



PROCESS EFFICIENCY

Nowadays in plants, especially where strict compliance with environmental rules is a must, cranes are the key elements to ensure an efficient handling and optimized output process. GH products and services ensure an optimal process from the arrival of the material, through the handling until its separation. GH provides tailor-made products specially designed to meet our customers' process requirements and needs, use of GH turnkey solutions enables to extend operating time.

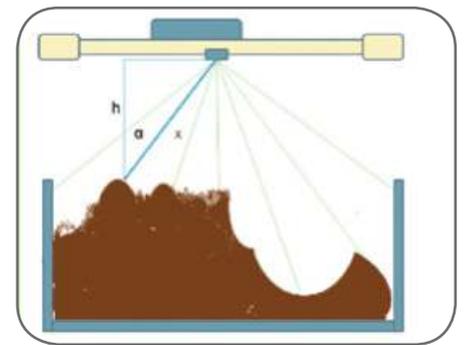
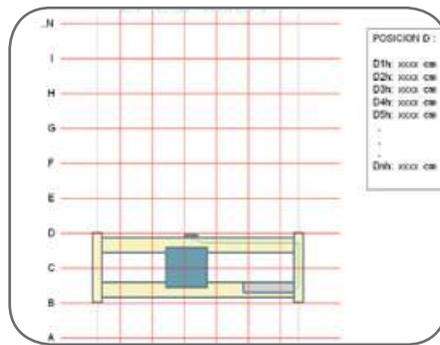
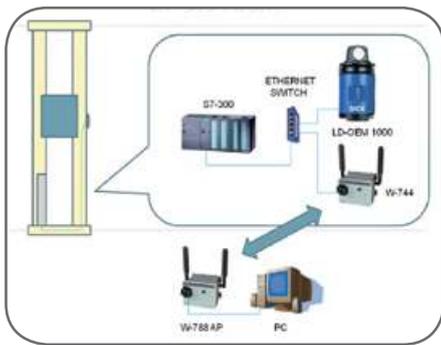
WORKING CYCLE



IMPORTANT INFORMATION TO BE DEFINED

- ✓ Grab resting area
- ✓ EOT crane parking area
- ✓ Available length to park the festoon cable trolleys
- ✓ Crane maintenance access location

AUTOMATIC CRANES EXPERTISE

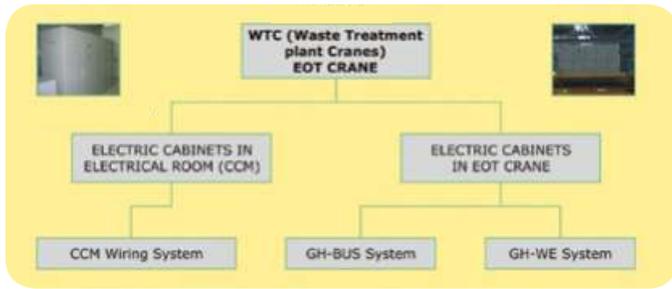


Each time the waste handling crane crosses predefined positions, either forwards or backwards, it carries out scanning and updates waste level of each position.

PLC compares the data obtained and records the smallest level registered (h).

Knowing that each data/position is assigned to the specific long travel and cross travel coordinates, the coordinates for the automatism are obtained (x, y, h).

DIFFERENT TYPES OF ELECTRICAL INSTALLATIONS



TWO DIFFERENT CONFIGURATIONS

ELECTRO HYDRAULICALLY DRIVEN GRABS

The orange peel grab or the clamshell grab are driven by an electrohydraulic unit, consisting of an electrical motor, a pump and hydraulic valves, which supply oil under pressure through duly protected hoses, to the cylinders operating teeth or shells. All these units are integrated in the orange peel grab or the clamshell grab body.

The orange peel grab or the clamshell grab's electrical supply is carried out through a spring reel or motorized cable reel, depending on the hoisting height and speed.

Nowadays, most of the waste treatment cranes (WTC) are equipped with this type of grabs.

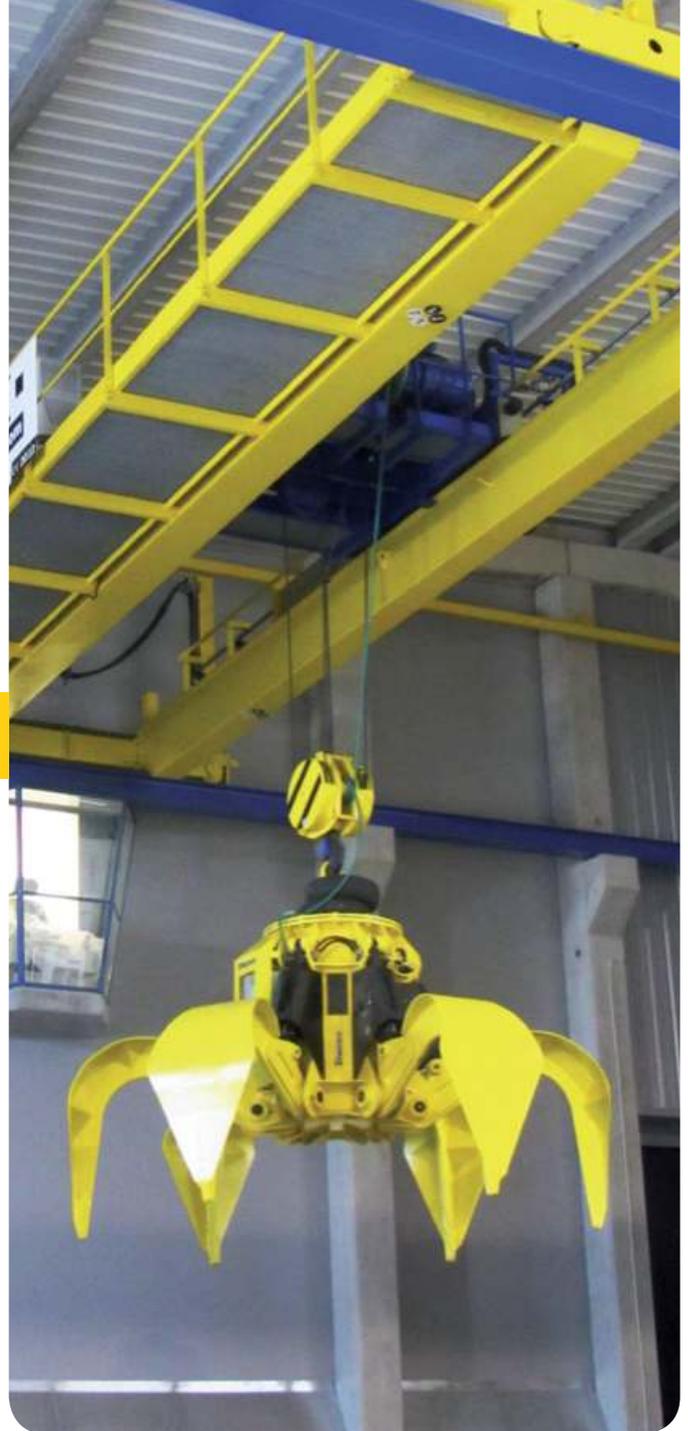
ELECTROHYDRAULIC DRIVE MAIN CHARACTERISTICS

- Higher control of the working process.
- Lighter trolley and thus lighter crane for the same capacity.
- Simpler electrical solutions.
- Better side approaches.
- Better filling rate, due to a better nailing into the waste mass.
- Shorter grabs replacement times.
- Smaller height needed for grabs installation.

MECHANICALLY DRIVEN GRABS

The mechanically driven orange peel grab or the clamshell grab are generally equipped with four ropes. They are based on two closing ropes and two suspension ropes.

This is why it is necessary to have a special lifting system with two drums. Both drums must make movements, sometimes in the same direction and sometimes in the opposite direction.



MECHANICAL GRAB MAIN CHARACTERISTICS

- As a general rule, higher opening and closing speed.
- Shorter maintenance time.
- Frequent replacement of closing ropes required.
- Since the grab seldom works horizontally, it can affect the rope systems.

WASTE TREATMENT CRANES (WTC)

GH

Your partner in business

GH is aware of the important role of cranes, that whenever needed they must be operational. Layout of handling areas, backup cranes and complete working cycle are key elements taken into account by GH sales team and expert engineers. GH offer includes automated cranes equipped with the latest technology to maximize the return on investment of our customers.

BOILER AND TURBINE MAINTENANCE CRANES

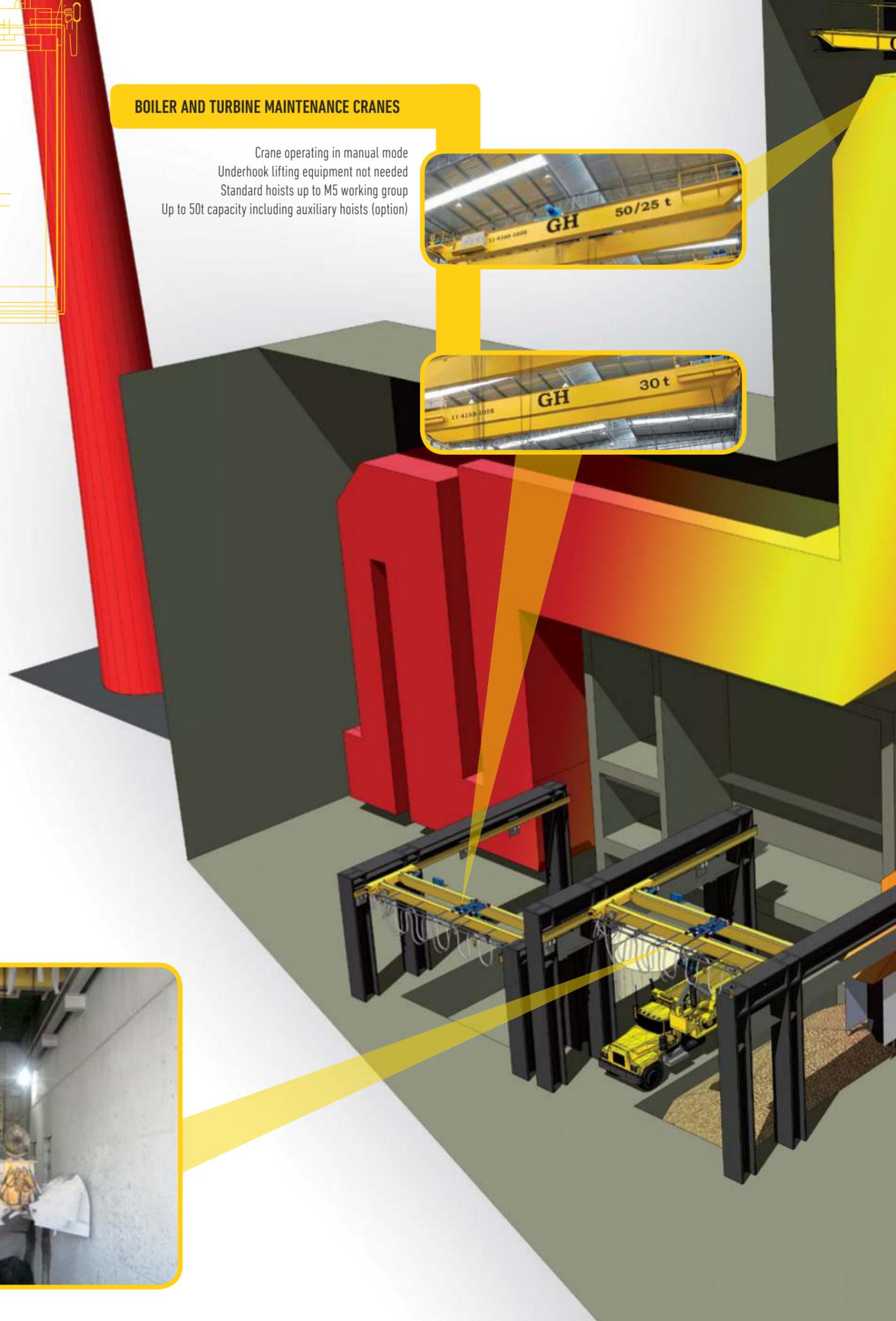
Crane operating in manual mode
Underhook lifting equipment not needed
Standard hoists up to M5 working group
Up to 50t capacity including auxiliary hoists (option)

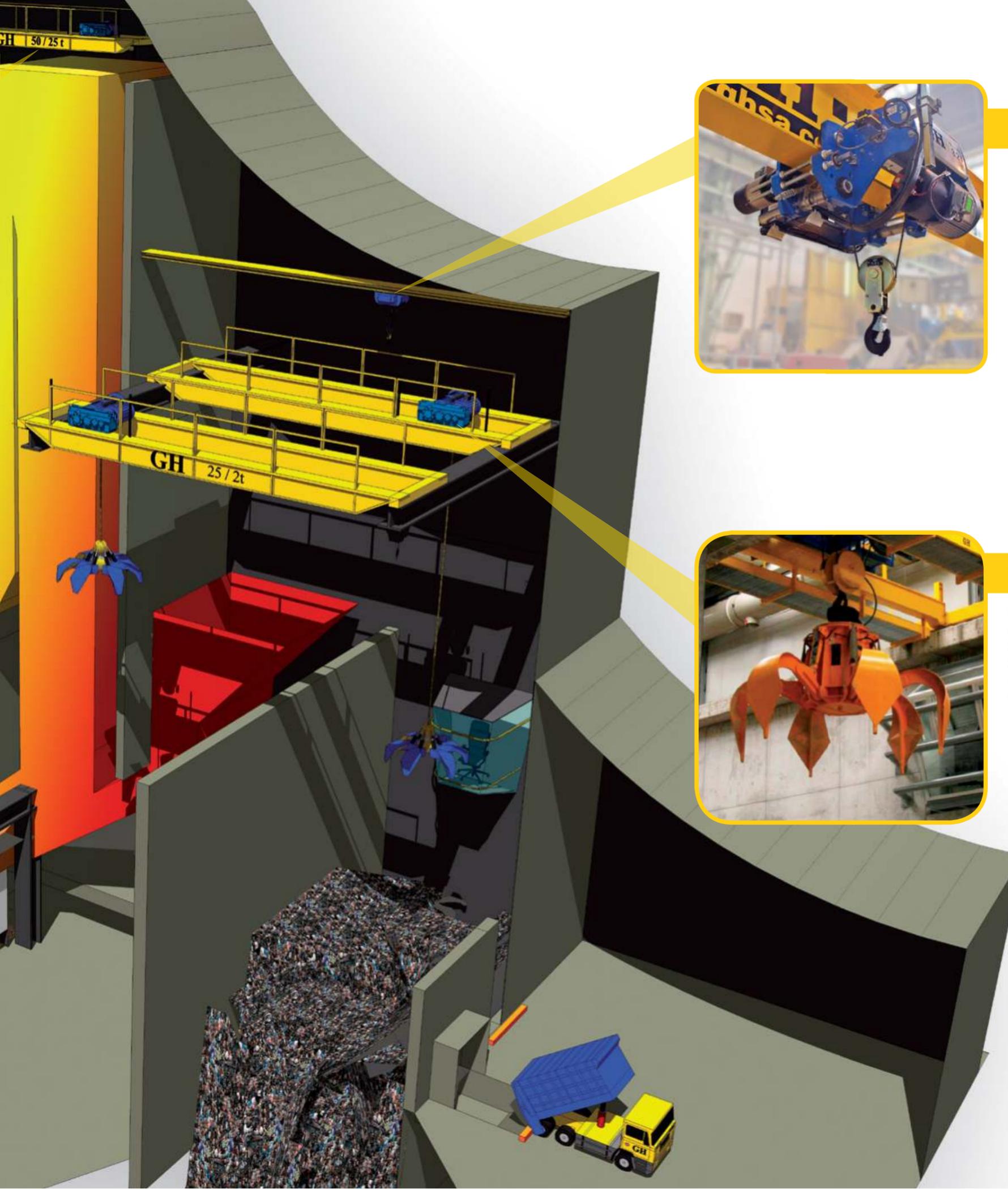


SLAG CRANE

Crane operating in manual mode
Clamshell grab as most convenient underhook lifting equipment
Standard hoists up to M6 working group

Suwnica pracująca w trybie ręcznym
Chwytnak dwułupinowy jako najodpowiedniejszy osprzęt
Zastosowanie standardowych wciągników do GNP M6





MAINTENANCE HOIST

Usually capacity up to 5t
 M4 working group needed
 Used for maintenance of the main waste handling crane



WASTE HANDLING CRANES

Process crane ensuring handling of demanded capacity defined in tons / year (cycle)
 Semiautomatic or automatic cranes
 Solution with trolley in M7-M8 working group highly recommended
 Crane redundancy recommended

TYPICAL INSTALLATIONS

WASTE TO ENERGY (WTE) PLANTS

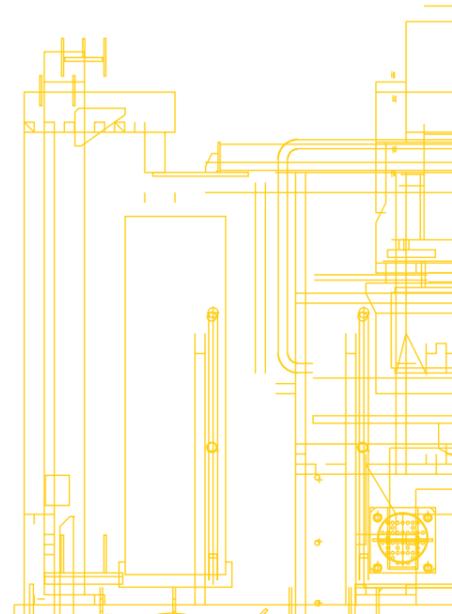
- Waste handling cranes
- Slag (ash) handling cranes
- Maintenance crane for boiler area
- Service hoists

BIOMASS PLANTS

- Biomass handling cranes
- Maintenance cranes for boiler area
- Service hoists

COMPOST PLANTS

- Waste handling cranes
- Service hoists



GH has supplied cranes, with its design and technology, to more than 40 waste treatment plants all over the world.

WASTE HANDLING CRANES REFERENCES



TURKEY

ANDRITZ

Double girder WTC of 6,3 t.
Sludge transport.
Annual performance 120.000t.



SPAIN

CEMENTOS ALFA

Double girder WTC of 5t.
Annual performance 80.000t.



PORTUGAL

METROCOMPOST

Double girder WTC of 6,3 t.
Annual performance 120.000t.

SWEDEN

SVENSKA LIFT

Double girder WTC of 8t
Biomass handling.
Annual performance 120.000t.



FRANCE

URBASER NANTES

Double girder WTC of 6,3t.
Annual performance 100.000t.



CHINA

ZUNYI XINHUAN

Double girder WTC of 8t.
Annual performance 140.000t.



“ In 2003 we bought GH waste treatment crane. Over 11 years it has shown high reliability and very good quality in all aspects. Thanks to a minimum maintenance required its operational cost has been really low. ”

Comments from the person in charge of the plant Zunyi Xinhuan.



RELIABILITY

GH cranes are known for their durability and reliability, which are the most important factors in any industry, but even more important, when dealing with process cranes such as « waste handling cranes ». The whole process depends mainly on those cranes and only the best performance is acceptable.

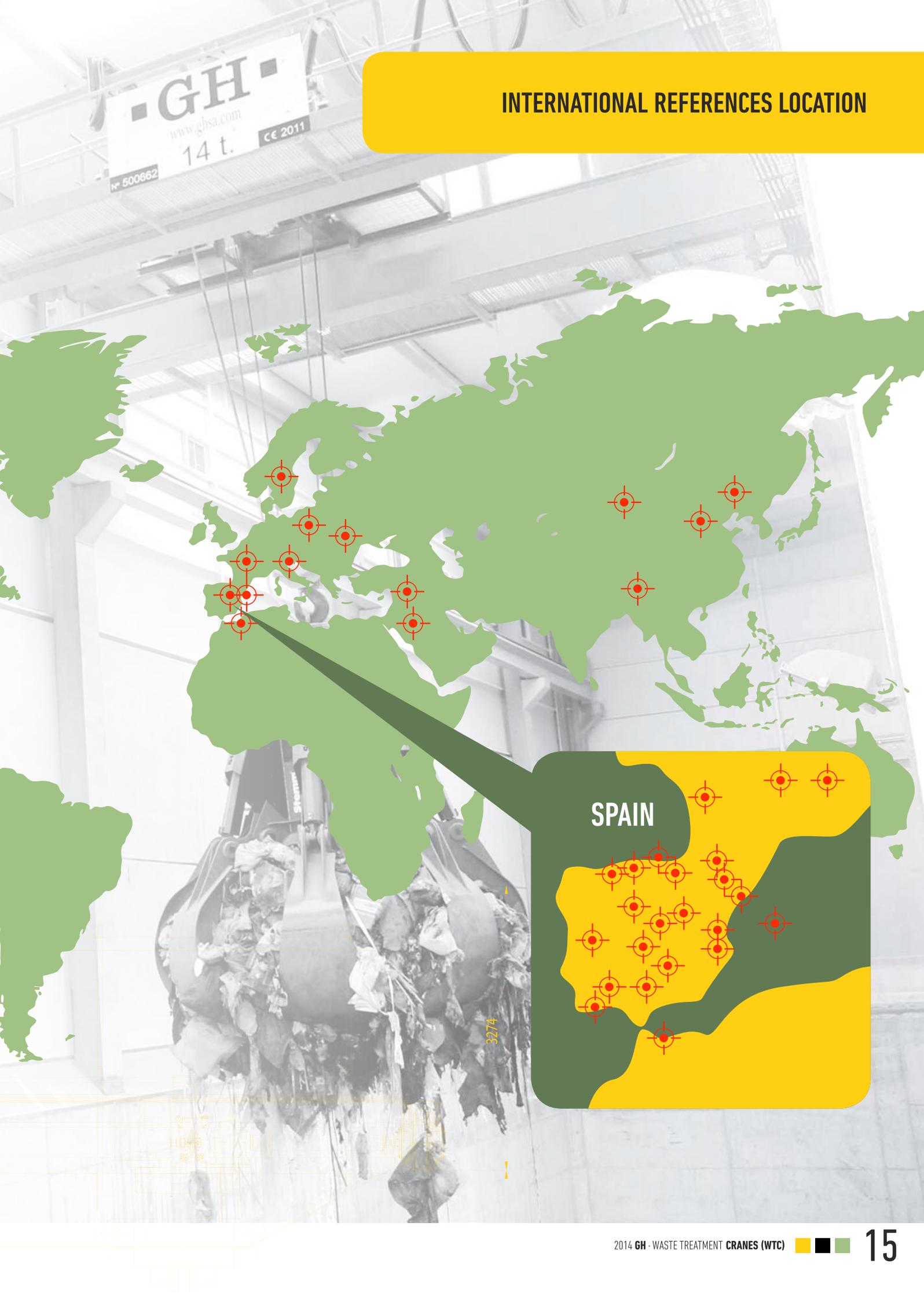
SERVICE

Service and maintenance plays a key role in our GH product strategy. Every crane should be inspected and maintained before any problem occurs in order to avoid downtimes and to reduce the impact of the operating costs on our customers' profits. GH cranes use the best design, delivering the highest quality product, meet even higher requirements than most of the competitors, to ensure additional features, reduce maintenance cost and extend working life of the investment.

SAFETY

GH is not only concerned with safety of the lifting equipment and the load handled, but also is committed to improve the safety performance of the entire production system.

INTERNATIONAL REFERENCES LOCATION



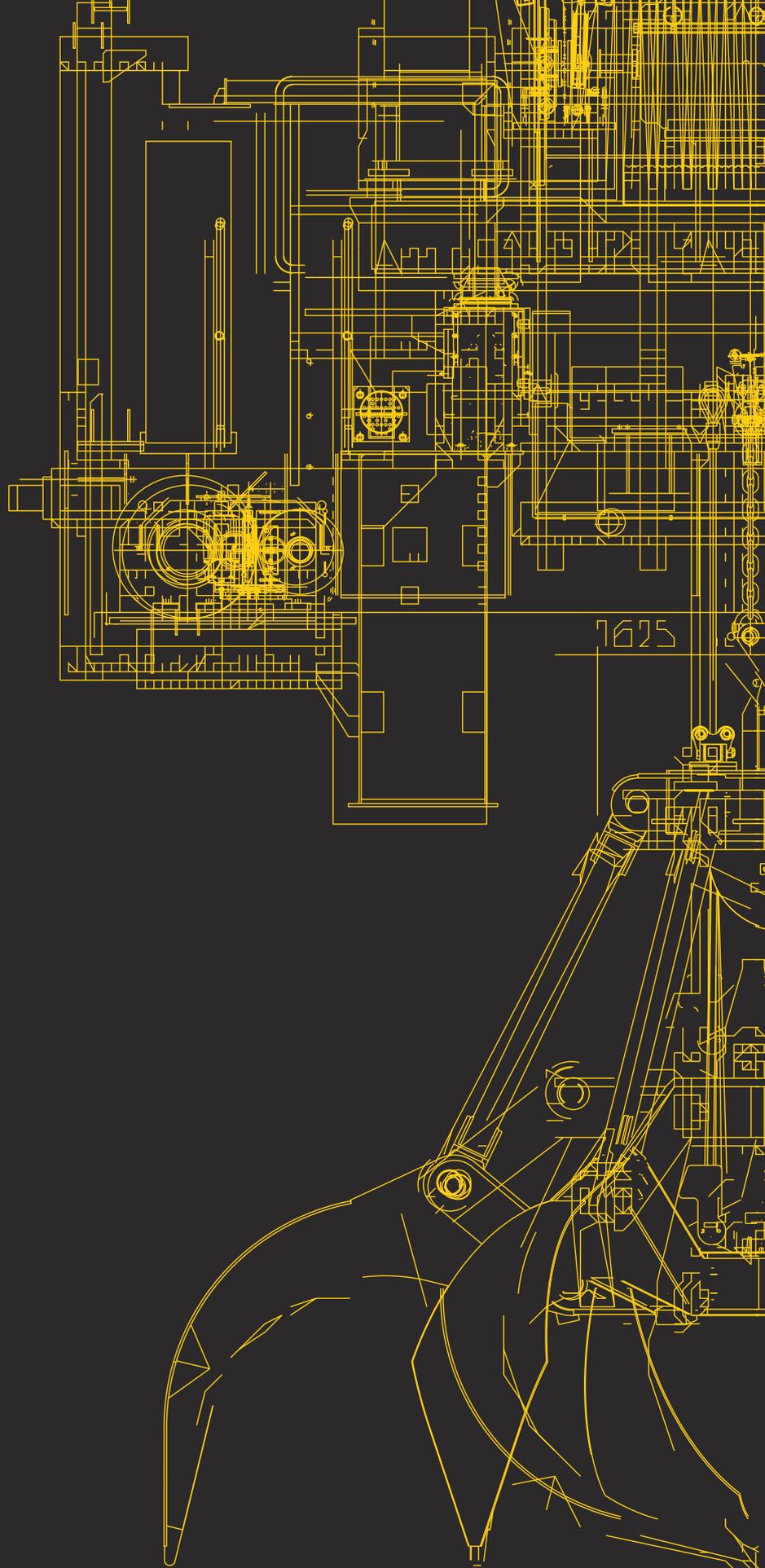
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CRANES & COMPONENTS



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