



ANDUS *news*

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ANDUS GROUP SERVING THE INDUSTRY

ANDUS *group* companies:

Refractories

Gouda Refractories

Gouda Vuurvast Belgium

Gouda Vuurvast Services

Gouda Feuerfest Deutschland

Steel Structures

HSM Offshore

HSM Steel Structures

Lengkeek Staalbouw

RijnDijk Staalconstructies

Specialties

Armada Mobility

FIB Beer Systems

FIB Industries

ISS Projects Slovakia

Van Voorden Foundry

NEW PROJECTS FOR RIJNDIJK STAALCONSTRUCTIES

At RijnDijk Staalconstructies Managing Director Eric Steijns and Wout van Brandenburg, director Projects, are looking back at two projects that have just been completed. But, more importantly: they are looking forward to two new projects that have recently been acquired.

Eric: "Yes, recently we have successfully completed two projects in the petrochemical field; tank- en pipe racks for TGE in Antwerp and a new built factory for Kemira in Botlek - Rotterdam. Now, we will be focussing on a project for Evonik in Marl and building a land station for TenneT commissioned by Volker Energy Solutions, formerly known as Joulz."

Full Energy

Wout: "To start with the last one: in May we have completed the land station for TenneT in Borssele. Also commissioned by Joulz. The wind energy that has been generated at sea comes ashore there and is being transformed to our national electricity network. In Borssele we delivered and installed the steel support structure and components to the steel work. We produced a.o. 600 galvanised steel beams in about 20 different versions, varying in lengths up to 24 meters and in diameters up to 460 mm. The client was pleased with the execution and planning of the project. This probably has contributed to the contract award for the new transformer station. This project can be compared to the Borssele-project, only this one

will be situated at the Maasvlakte. It is part of the 'Net op zee Hollandse Kust Zuid'-project. In total we will produce around 550 tons of steel; the project will be completed at the beginning of June."

Firm challenges

Eric: "We have already built before for Evonik, in Antwerp. And that too was successful. Goes to show, if you have experience, think along with the client, show decisiveness, comply to the highest safety measures and closely monitor the project, you are ahead of the competition." Wout: "We will now build part of an operational petrochemical complex; two open and one closed process building. And therein lies one of the challenges: there is not a lot of building space so you need to build smart and your logistics need to be at the top of the game. Because there is hardly any room for cranes, lifts and storage of materials. Therefore we have meticulously thought out the assembly with 3D-models and explained the whole process to the client step by step." Eric: "In the end we will have built three buildings equipped with flooring, grilles, cage ladders, handrails,

bridges and, where needed, cladding. In total around 2.000 tons of steel. Completion: end of April. That is another challenge: a very short turnaround."



Eric Steijns and Wout van Brandenburg

PRECISION WORK IN GOUDA

At this moment first tests are conducted with the new automated mixing line at Gouda Refractories. This mixing line by Eirich, experts in stir and mixing installations, is very advanced and has been developed and tailor made in close cooperation with the specialists of Gouda Refractories. With this new line the mixing capacity is being expanded from 4 to 5 lines.



Dianne den Hamer is Head Production and Process Development at Gouda Refractories and has been involved in this project from the very beginning. Dianne: "We produce dozens of different refractory bricks that have been customised for the production process for each client. Sometimes the requirements are so high that extreme high-quality

bricks are needed. Usually those bricks contain a high amount of aluminium oxide. This new mixing line will be primarily used to produce that type of bricks."

Highest requirements

"The complete line consists of the supply of raw materials, weighing systems, the mixer itself and the transport of the complete product to the stone press. The recipe of high-quality bricks is very complex and the dosage is critical. That is why we use an advanced control and weighing system that ensures minimal tolerances in the automated dosing. With this system we can also measure and control the quality. But there's more. The raw material not only needs to be dosed accurately; it also needs to be added in a

specific order to the mixture. Only then the right structure of the grains in the mixture, specific to this high-quality, can be achieved. And to make matters even more complex: this needs to happen at different speeds. Making the correct mixture is in fact a very complex chemical process that needs to be executed very precisely."

Progress in all areas

"Now we are optimising the line and we expect to be operational at the beginning of 2020. That means, after a long development process, we will have substantially expanded our capacity, improved working conditions by the automated supply of raw materials, and have optimized quality control with the

production of high-quality bricks. And it gives me, as a product developer, new possibilities. Very challenging!"



Dianne den Hamer



Arie van Vliet

In general, an incineration installation is opened only once or twice a year to investigate what kind of damages there are to the oven wall covering. And usually those damages are almost always significant: more and more diverse harmful chemical components are in our waste that exposes the refractory lining to conditions they were not designed for. Gouda Vuurvast Services has started this project to gain more knowledge in the unpredictable

THE SMART STONE IS GIVING FEEDBACK

On November 5th Gouda Vuurvast Services has welcomed its relations at the meeting centre of CORPUS in Oegstgeest for its annual business event. CORPUS gives its visitors the chance to travel through the human body and give information about, for example, the mechanisms of metabolism. A perfect location to present the results of the project 'De Lerende Steen'. This innovation project has been started by Gouda Vuurvast Services in 2015 in order to learn more about the processes in waste incinerators.

incineration processes, develop new products and services and to save costs for the client. All from one vision: wouldn't it be wonderful if the bricks could provide us with information on what is going on in the oven?! We could learn so much...

Scientifically studied

In these last 4 years many research and educational institutions have joined this project and it has received (European) government

subsidies. Due to the efforts of all partners a lot of knowledge has been gathered. A test installation has been built to simulate the incineration process and sensors have been developed that replicate the conditions in the oven. This has given scientific insight into the process, why and at what point damages arise and how these damages could possibly be avoided. To put it simply. It has been an important step that has confirmed original thoughts and that gives

direction to the development of new products and services. Gouda Vuurvast Services would like to thank all parties involved and will continue to lead the way in innovation!

THREE NEW CONTRACTS FOR HSM OFFSHORE

When you are awarded with new contracts from loyal and existing clients that can be interpreted as a compliment and a sign of appreciation. But contract awards from three new customers is also very special! And HSM Offshore did just that these last couple of months. No less than 5 new platforms and 3 jackets have been added to the production planning. Amazing job!

In the fall of 2020, the first gas production platform will be installed in the Dutch part of the North Sea. Client: Dana Petroleum Nederland. The platform, a tripod, light weight and unmanned, will extract gas from two fields and will transport the gas to a bigger platform 5 kilometres away. 'Lean and mean' and working fast; you can leave that to HSM Offshore.

Firmly anchored

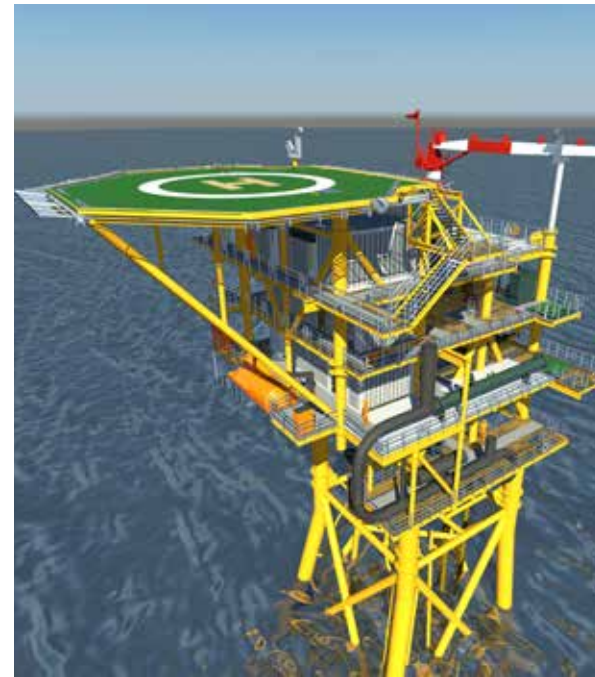
Independent Oil and Gas Group (IOG) also has expressed their confidence in HSM. In April 2021, at 35 kilometres from the coast of Bacton, on the southern English platform of the North Sea, 2 jackets with gas processing platforms will be installed. They will be called Blythe en Southwark. All that within 1,5 years from the contract award.. Talk about a short turnaround! In total this project will contain approximately 3.000 tons of steel. What is particularly

special about the jackets is the way they will be attached to the seabed. At the bottom of the in total 7 jackets big 'suction buckets' will be attached. You can compare them to reversed steel buckets with valves. Once on the seabed the valves will suck out the water in the buckets attaching themselves to the clay seabed. Concrete will be added and the installation of 1.500 tons is firmly attached and could endure any storm. Ingenious!

Smart approach

The third order consists of two platforms for EDF Renewables/NnG Offshore Wind. NnG stands for: Neart na Gaoithe, it is the Scottish expression for 'Force by wind'. It's already in the name: these are wind energy platforms for the coast of Scotland. HSM has acquired this contract in consortium with GE. The platforms contain two decks. The bottom deck will have control facilities and the upper deck will

have the power transformer and the Gas Insulated Switchgears (GIS). This equipment will be the heart of the platform conducting the power to the high-power network on the main land. During production the GIS modules will be built as separate units that will later be hoisted onto the upper decks. Mid 2021 both platforms will be transported to their final destination. A 'self-elevating jack up' will be waiting there to provide accommodation for the employees involved in the 'hook-up'. These same quarters will be used by the employees of the client. Welcome!



Impression IOG-platform

STURDY SLIM BRIDGE

In earlier editions we have already written about the production of the new bicycle bridge between Cuijk and Mook by HSM Steel Structures. This contract has been awarded to HSM mostly because of the elegance in design. True. But a bit difficult to see when you are walking around the production hall at HSM where the separate parts are now being produced.



A steel bridge with a length of approximately 150 meters, built to last at least 100 years. It is quite difficult to imagine. A bit more so when you walk around at HSM. At this moment the bridge is being made in 6 parts of 25 meters long and 7 meters wide. Piece by piece vast constructions that will be assembled these coming months, including bannisters and electrics, so that the entire construction will be 'plug & play'. In May the entire construction will be placed onto

two pontoons and will start his journey to its final destination. Can you imagine... an equivalent of an entire building block of 25 houses going on transport? The elegance of the design will be seen again once installed. But it is also good to have seen the robustness of the construction.

COMPLICATED WORK IN GREECE

In Corinth, a town in the Greek province of Peloponnesus, the oil refinery complex of Motor Oil Hellas is situated. The largest independent refinery of the country with a capacity of 185.000 barrels a day. Early September a 'turnaround' has been conducted where Gouda Vuurvast Belgium had the assignment to replace the lining of the FCC-unit. A very specialist job, where the experience and know-how of Gouda Vuurvast Belgium come into their own.



Philip Knipscheer, managing director of Gouda Vuurvast Belgium: "In the forty years of working here (congratulations Philip! – ed.) this might be one of

the more difficult projects that I have witnessed. With such a factory shut down you have 6 weeks to remove the old refractory lining and to install the new one. This, in itself

is already a challenge, but doing so in Greece adds some logistic issues. Together with the customer you estimate the expected amount of work. But when the unit was shut down, we concluded that it was going to be double that amount. And then you need to consult with your client.

moment we are working on a resembling project for Hellenic Petroleum at that same location. Beautiful, but technically very difficult work. All in all, a great year for us in Greece!"

Nice job

With a tight schedule and a structured approach, we have succeeded to show our specialism and successfully bring the project to a close. This is the third project in Greece this year. Besides replacing the lining of the FCC-unit we have – also for Motor Oil Hellas – on the location of Thessaloniki provided a great number of new-builds with refractory materials. At this

BEST WISHES!

2019 has come to a close and we can conclude that once again, it has been a successful year. We have executed great projects here and abroad, on land, in the sea and everyone has worked very hard to realise those projects safely.

We, as a board, would like to thank everyone for that! Prospects for 2020 are good and the order portfolio is filling up nicely. We wish all of you a happy, healthy and successful year!

Board Andus Group

SHELL EXTENDS CONTRACT LENGKEEK

After an extensive tender procedure Shell has confirmed that they will renew the cooperation with Lengkeek. The new contract will start January 1st 2020 for the duration of 3 years, with an option to extend an additional 2 years. The contract could even have an duration of 5 years with an option to extend for 2 years. Great challenges ahead and with everybody's commitment we will be able to stay the well-known reliable partner for Shell!

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