

## **Naturally Wise**

On the west coast of Norway we have battled with the extremes that nature has thrown at us for centuries. We are constantly facing the ongoing challenges to provide safe access and effective communication for one another.

It is this that has given us the drive to overcome the elements and what has inspired us to design, develop and build the worlds leading helidecks for the offshore, marine and onshore industries. Throughout our history, with a team of experts behind us, we have pushed innovation and improved safety to establish our position.



ISO 9001, 14001 OHSAS 18001 & EN 1090-3 CERTIFIED COMPANY



# **Our Experience**

Thanks to over 60 years experience, we have become a world leader within engineering, design and the fabrication of aluminium structures for on and offshore installations. Our experienced engineers and dedicated team of professionals are always striving for the next innovative solution for our clients.

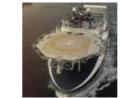
We have extensive knowledge and experience within the fields of extrusion technology, tooling and welding techniques, quality assurance and metallurgy. This enables us to supply products of a consistently high quality. Close co-operation and highly skilled personnel ensure that results comply with all specifications and requirements. This considerable knowledge and experience also enables us to be highly competitive.

#### Offshore Helidecks



- Goliat FPSO, Eni Norge Eldfisk 2/7S, ConocoPhillips
- Clair Ridge, BP
  - Heidrun FSU, Statoil
- Gode Wind, Dong Energy • Dong Hejre, Dong Energy

#### Marine Helidecks



- Edda Accommodation, Østensjø Rederi Olympic Boa, BOA Marine Services
  - Rem Pioneer, REM Maritime
  - Normand Reach, Reach Subsea
  - Ramform Titan, Petroleum Geo-Services Posh Endurance, PAXOCEAN

### Rooftop Helidecks

- - LKH, Wolfsberg, Austria
    - Universitätsklinikum, Essen, Germany
    - JFK Medical Center, Florida, USA

### Key Numbers

Number of years experience	60
First aluminium helideck delivered	1974
Number of employees	300
Fabrication shop in square metres	9,000
The number of Helidecks delivered	530



#### Helidecks Areas

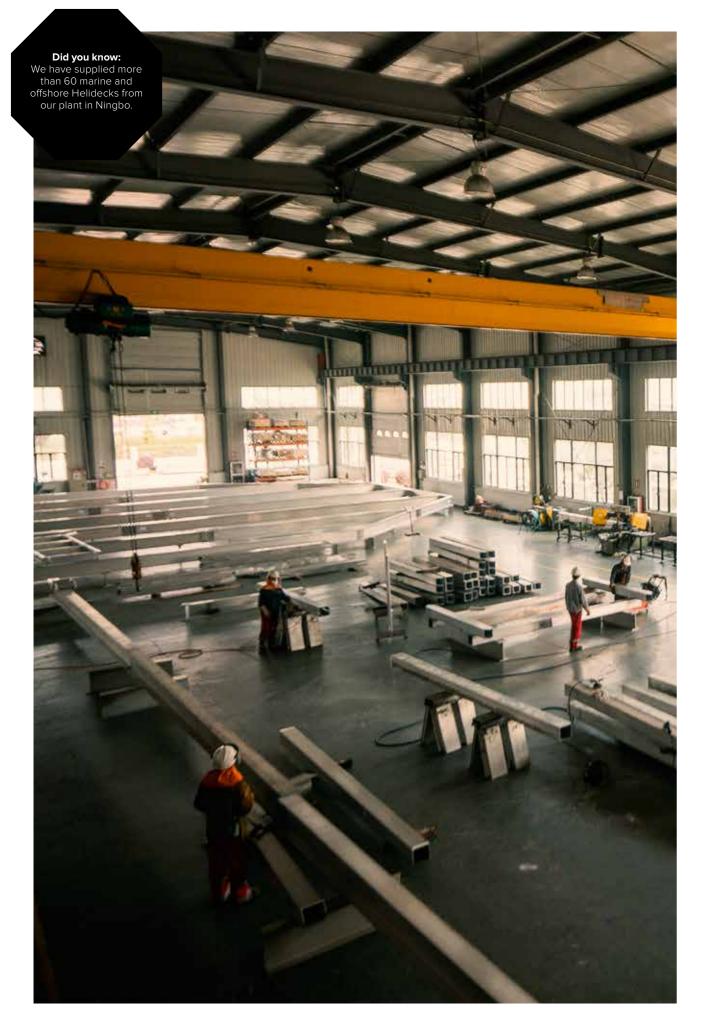
Marine Helidecks	66%
<ul> <li>Offshore Helidecks</li> </ul>	<b>26</b> %
<ul> <li>Rooftop Hospitals</li> </ul>	8%

### HSEQ

Our overall objectives are:

- Zero harm to people
- Zero customer complaints
- Visibly contribute to a sustainable development
- To make offshore access safe and reliable

Haukeland Hospital, Bergen, Norway Rigshospitalet, Copenhagen, Denmark St. Olavs Hospital, Trondheim, Norway



## **Container Kit**

#### Our Container Kits are standard type approved and prefabricated items, packed in containers suitable for world wide transport.

They are specifically designed for our customers to make saving costs in procurement, whilst maintaining the highest safety and quality.

Structural Design Rules: DNV Offshore: DNV-OS-E401 DNV Ship: DNV Rules for Classification of Ships Part 6 Chapter 1 ABS Offshore: ABS Mobile Offshore Drilling Units, Part 3 ABS Helideck: ABS Helicopter Deck and Facilities Lloyds Register: Part 3, Ship Structures CAA UK: UK CAP 437

#### Helideck Types

We supply three standard sizes: small, medium and large that are all type approved within national standards, which means quick and cost effective deliveries.



#### Aviation Authorities and Regulations

UK: UK CAP 437. Norway: BSL D 5-1. Brazil: Normam 27. USA: US Coast Guard. World Wide: ICAO, IMO Modu, SOLAS, National authorities.

### Key Features

- Advanced Aluminium design specialised for container kit delivery
- Various combinations covering the majority of standard rules and regulations
- Standardised documentation
- Detailed step by step assembly plan
- Advanced logistics tracking system on all items

#### Worldwide delivery



We can deliver container kits to all countries around the world.

### Lightweight material



Aluminium helidecks are between 50% - 60% lighter than steel helidecks.

#### Short, fast delivery times

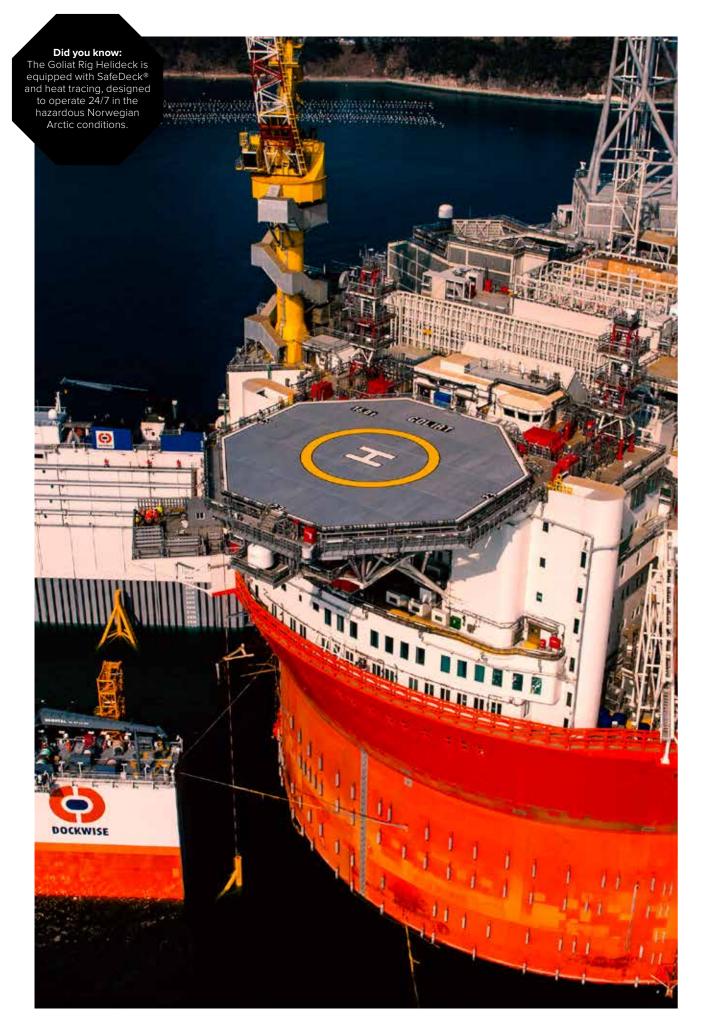


We have type approved helidecks that can be delivered in under 3 months from PO date.

#### Shipped in 40ft containers



40 feet containers for easy transport and handling for all parties.



## Customised

Customised helidecks are designed and built to meet each customer's project specific requirements. Whether this is optimising the structural supports to be lighter or winterizing a helideck for the harsh Arctic conditions or installing a SafeDeck® to enhance safety.

Our team of experts have the vision to see the helideck as a complete system in its environment and can help make the right decisions for your project.

Aluminium helidecks offer substantial maintenance benefits over other materials. The aluminium helidecks are corrosion resistant and have no moving parts, thus minimising maintenance requirements. Life-cycle cost analyses show that the lifetime savings can be significant.

Structural Design Rules: NORSOK: C-002, C-004, S-001 European Standard: EUROCODE 9 DNV Offshore: DNV-OS-E401 DNV Ship: DNV Rules for Classification of Ships Part 6 Chapter 1 ABS Offshore: ABS Mobile Offshore Drilling Units, Part 3 ABS Helideck: ABS Helicopter Deck and Facilities Lloyds Register: Part 3, Ship Structures CAA UK: UK CAP 437

#### Aviation Authorities and Regulations

We can meet requirements according to the customers needs.



#### Key Features

- Turn key solutions/delivery
- Project unique documentation
- All designs are developed and optimised to save weight
- Smart access solutions
- Advanced logistics tracking system on all items

#### Custom made solutions



Collaborating closely with customers to deliver the best solution.

### Lightweight material



Aluminium helidecks are between 50% - 60% lighter then steel helidecks.

#### Competitive delivery times



Keeping delivery times within 40 weeks, from the start to the end.

#### For structural components



No surface treatment and no maintenance is required on structural components.

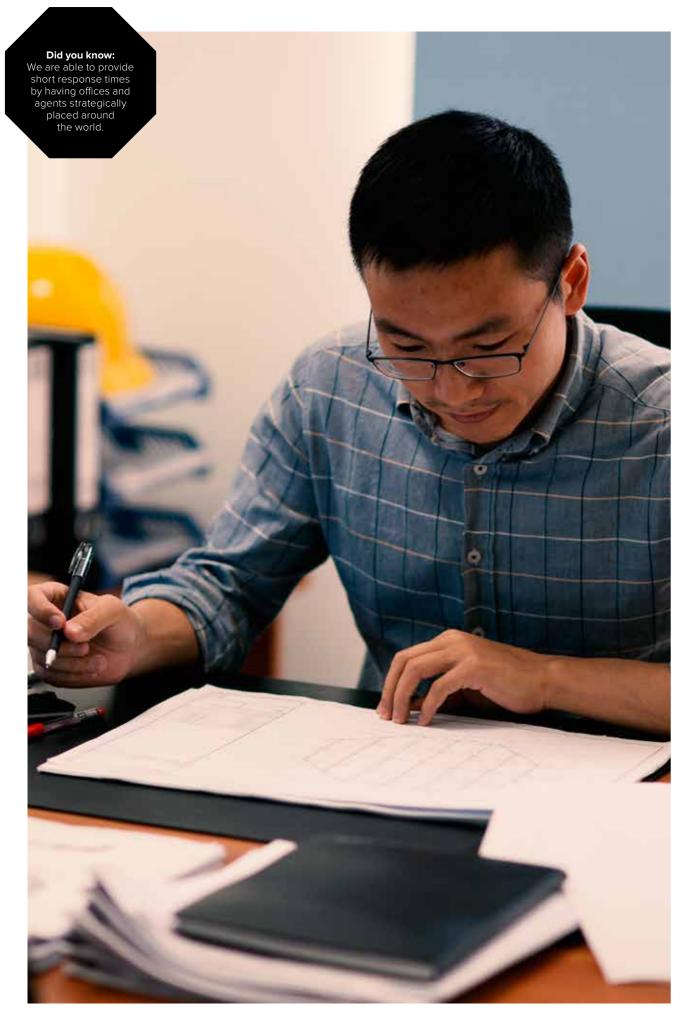


With over 100 landings on Gjøa's helideck, my experience tells me that the quality of the aluminium helidecks from Marine Aluminium is safe and reliable even in the most rough and hostile weather conditions that exist in the North Sea.

### Helicopter pilot Egil Magnus Christiansen

HUSL





## **Service**

#### Our Worldwide team of product specialists have the passion for delivering a high quality service and a problem solving ethos.

This is the very framework of our operation. We assist our clients with adding value to their products life-cycle, and keep them sharp for future competitive advantage.

#### World leading company within engineering

Our aim is to have a long lasting relationship with our customers. This means that we recognise that our responsibility does not end after the delivery of the products, but extends to service, maintenance, spare parts and knowledge to help you maximise the value of your Marine Aluminium products.





#### Technical advisor

We can provide the service of a Technical Advisor for the planning and execution period of assembly/installation at yard as an option. The main task for the technical advisor is to contribute with his expert guidance and to monitor the safety, progress and quality of the works.

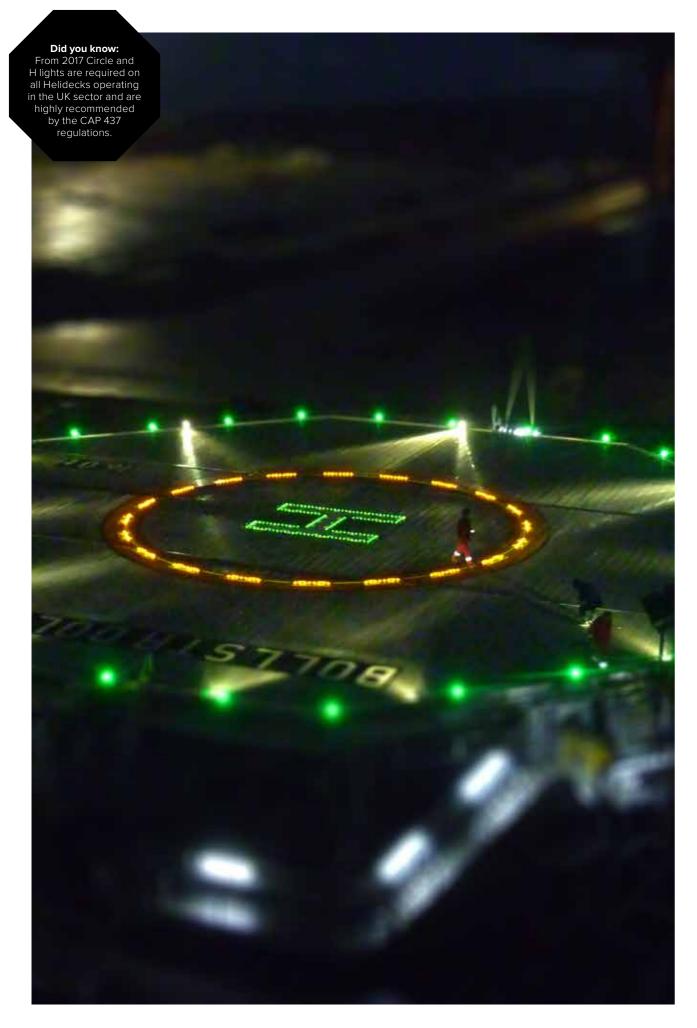


**BELL 214** 19.0d / MTOW 7,936 Kg **BELL 212** 17.5d / MTOW 5,080 Kg **BELL 412** 17.1d / MTOW 5,397 Kg





AW101 / EH 101 22.8d / MTOW 15,600 Kg AW 189 17.60d / MTOW 8,000 Kg AW 139 16.66d / MTOW 6,800 Kg



## Innovation

#### We have always invested a lot of energy and resources to further develop and evolve the safety and practicality within the industry.

#### Helideck Lighting

According to new requirements in CAP437, we have already delivered several helideck circle and H lighting systems, such as the BP Clair Ridge and Bollsta Dolphin platforms. These systems are suitable for:

- Container kits
- Customised helidecks
- Retro-fit on existing helidecks

#### Markings on aluminium

We have developed a new unique marking system for identification purposes on our landing surfaces. Some of the benefits include:

- Fast to apply
- Long life-span
- Correct friction values

#### Winterized helideck

We have developed a system that has the ability to utilise higher temperature for less energy and to re-use spilt water. Some of the benefits of winterization of helidecks based on hot water heating from vessels are:

- Energy efficiency
- Environmentally friendly
- Cost effective

## SAFE DECK

The Marine Aluminium SafeDeck® is a worldwide patented deck system for providing optimal fire-fighting and rescue conditions in accordance with Norsok, DNV and Solas requirements.

#### Recommended uses:

- Helideck with Norsok C-004 requirements
- Helidecks where DNV / SOLAS is required
- Helidecks for unmanned platforms
- Helidecks for platforms without water supply
- Offshore and onshore process plants where there is a risk of hydro carbon leakage
- Tank farms

The SafeDeck® drainage system is a totally enclosed system designed minimise access to O2 and therefore minimise chances of combustion and fire. Burning liquid, which reach the drainage gutter, extinguishes by itself after very short time due to lack of O2.

#### Aluminium equal to steel regarding fire

- Self-draining Surface
- Self-extinguishing Fire Ability
- Structural integrity maintained post fire
- Closed Drainage
- In compliance with the latest rules and regulations from DNV and Norsok



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Ningbo Plant Marine Aluminium (Ningbo) Co. Ltd. No. 89 Jinhe road, Zhenhai, Ningbo, 315221 China

- Local Offices USA, South Korea & Spain.
- Worldwide Agents Our agents are always near you.

#### Close to key markets

Our market covers the entire world and as a result we have delivered to all parts of it throughout our history.



