YOUR PARTNER FOR

HELIDECK LIGHTING SYSTEM

TD/PM CIRCLE & H LIGHTING
FLOOD LIGHTS
PERIMETER LIGHTS
OBSTRUCTION LIGHTS
ILLUMINATED WINDSOCKS
STATUS LIGHTS
Very little differentiates the early seafarers from the high-tech vessels of today. The sea is still fierce and frightening; in fact even worse as today’s shipping and activities go further north than the boldest seamen of the past. More than ever, you need to put your faith in your skilled personnel and craftsmanship of your key suppliers. Quality manufacturers of marine products have the know-how to select materials and to combine them to provide you with top-notch products that you can depend on, and bet your life on, because that is what this ultimately is all about.

EXPERIENCE ENVIROMENT - REQUIRES HIGH QUALITY PRODUCTS

Brass and stainless steel are probably the most widely used metals for marine components. Although brass for decorating products is selected for its shiny surface, TRANBERG as a quality manufacturer of outdoor lighting and navigation aids, prefer brass due to the non-corroding and stable properties. In the extreme environment that the sea presents, with seawater, wind, rain, heavy waves, high and low temperatures, and sometimes extreme sunshine, it doesn’t take long to understand why these materials are simply the best. But there is more to durability than just the known fact that plastic turns brittle in a very short time. The constant pounding of water flooding the products, or ice build-up that needs to be hacked off the lanterns or junction boxes, are two extreme, but very common factors to take into account when selecting the right products for a vessel that will sail the seven seas.

Stainless steel is probably the safest choice for a non-corroding material onboard a vessel. In addition it has excellent mechanical properties which makes it withstand impacts. Tranberg supplies several types of marine products that are made of stainless steel such as decklights, floodlights and searchlights. These products are normally very exposed to wind and sea, which is why we use a layer of powder coat paint to fully cover all sides of the products. This is a paint that is hardened at 185 °C, and which naturally withstands high temperatures after being cured. More importantly, the paint sticks very well to the stainless steel surface, which is partly due to the fact that stainless steel expands only half of that of aluminum. This is why aluminum products often shed the paint after only a few months into service.

Glass

Another material that for years has acclaimed a reputation for high durability is glass. This is due to the ability to withstand both high and low temperatures, and a hard surface that withstand tear and wear significantly better than the more inexpensive plastic. Transparency and colour stability are probably the two most important elements for a lantern lens, all while the lantern is still one of the most important navigational instruments onboard. If paint gets on the lens, it is not a problem to clean it with chemicals and the salt particles will not grade the glass and reduce the visibility.
TRANBERG DEVELOPS, MANUFACTURES AND DISTRIBUTES:

HEATING SYSTEMS
Heat trace / De-Ice systems
Design engineering
Supervision
Control, monitoring and distribution panel
Material supply
Energy saving temperature controllers
Junction boxes
Heating cables
Connection accessories
Mechanical protection
Enclosure heaters
Protection and heating of instruments
Tube trace

SOUND AND LIGHTING SYSTEMS
Navigation, signal lights and control systems
Searchlights and control systems
Floodlights and control systems
Luminaires, obstruction lights and control systems
Helideck lighting and control system
Typhoons
Electrical heating equipment for winterization
Installation material

ENCLOSURE SYSTEMS
Junction boxes / Instrument enclosures
Cable glands
Panel building
Switches and distribution systems
High voltage enclosure systems for subsea umbilical

Tranberg was established in 1901 and is located in Stavanger, the “oil capital” on the west coast of Norway. Due to the oil industry, oil companies and offshore vessel ship owners have found their base in Stavanger. This has made it possible for Tranberg to develop and test products in close cooperation with our customers.

Since the start, Tranberg has designed, manufactured and supplied high quality electromechanical products for use on ships and offshore installations. Equipment capable of performing under all climatic conditions, from arctic cold to tropical heat, is a special feature for products produced by TRANBERG. High product quality and durability have been developed by TRANBERG through delivery of equipment to the demanding maritime and offshore markets for the last 100 years.

Our flexible production and dedicated workers have made it possible to adapt to quickly changing developments and increased demand for smaller equipment with total lower lifetime cost and products suitable for use in arctic environment.

Tranberg's Quality Management System is certified by DNV.

Manufacture and supply of products with reliable quality for their purpose shall continue to be the image of TRANBERG.

In 2006 Tranberg became a member of the R. STAHL Technology Group. R. Stahl is one of the global market leaders in explosion protection business, and with the integration into this group, Tranberg is now tied up to their international distribution network. Within the R. STAHL Technology Group, Tranberg will serve as the competence center for lighting and de-icing on ships, and for process heating systems.
The helideck windsock and light system manufactured by Tranberg are designed to meet the toughest conditions in the helicopter landing areas. All Tranberg helideck products are in line with latest CAP437.
**TRTRANBERG HELIDECK LIGHTS ACCORDING TO INTERNATIONAL STANDARDS**

Helideck equipment manufactured by Tranberg is delivered to offshore installations, oil tankers, ships, hotels and hospitals all over the world. Helideck equipment from Tranberg is used for operation on elevated and non-elevated helidecks onshore and offshore in extreme environments.

The light gives pilots a visual awareness of their position relative to the helideck.

CAP 437 is issued by the UK’s Civil Aviation Authority (CAA) and describes the standards for offshore helicopter landing areas. As such, it is considered worldwide to be a world leader in the field, and is considered best practice and dominant to operational safety of offshore helidecks.

All Tranberg Helideck Lighting products comply with, and often exceed, all requirements set by CAP437.

### CHLITE TD/PM CIRCLE & H IDENTIFICATION LIGHTING SYSTEM

CHLITE Touchdown/Positioning Marking (TD/PM-Circle) and Lit Heliport Identification Marking ("H") system according to the latest CAP437 Standards for Offshore Helicopter Landing Areas.

### HELIDECK STATUS LIGHT SYSTEM

**HelLED**

A helideck status light system should be installed if a condition can occur on an installation which may be hazardous for the helicopter or its occupants (i.e. gas alarm). The status light signaling system should be visible 360° around the offshore structure with a flash rate of 120 flashes per minute. The system shall be fully automatic and controlled by means of a control panel in combination with the platform gas detection system.

### PERIMETER LIGHTS

The colour of the perimeter lights are changed from yellow to green and there are additional requirements to the vertical beam angle of the light and the light intensity is increased from 25Cd to 30Cd.

**TRANBERG** can offer a LED perimeter light which will have a very long lamp life of 50,000 hours, which will result in maintenance savings.

The lights should be equally spaced at intervals of not more than 3 meters around the perimeter of the helideck.

### OBSTRUCTION LIGHTS

Obstruction lights for use on top of windsocks – cranes derricks – bridges and other obstructions. According to CAP437: Omnidirectional steady red lights of at least 10 cd intensity should be fitted at suitable locations to provide the helicopter pilot with visual information on the proximity and height of objects which are higher than the landing area and which are close to it or to the LOS boundary. This should apply, in particular, to all crane booms on the installation.

### FLOODLIGHTS

In the absence of sufficient cultural lighting, the CAA recommends that installation owners consider a deck level floodlighting system consisting of four deck-level xenon floodlights (or alternative lights having the same photometric specification) equally spaced around the perimeter of the helideck. Floodlights may be used for the purpose of providing a source of illumination for on-deck operations, such as refuelling and passenger handling.

### ILLUMINATED WINDSOCK

A wind direction indicator (windsock) should be provided and located so as to indicate the wind conditions at the offshore location. The windsock should be visible during the approach of the helicopter to the deck. The windsock should be illuminated for night time operations.

### HELIDECK CONTROL SYSTEM

The TEF 4500 Commander Utility Helideck Lights Control System (HLCS) is a complete control system for all helideck lights. Based upon the Commander Utility technology, this control system allows the control panel to be installed in the bridge or radio equipment room, while the enclosure with all other necessary components may be installed further away. Between the two a simple Cat 3 ++ cable ensures that the industry-proven RS-485 network provides a reliable two-way communication.
TRANBERG
YOUR PARTNER FOR
HELIDECK LIGHTING

ALL HELIDECK LIGHTING PRODUCTS
FROM TRANBERG:

• Compact and rugged construction
• Resistance to vibration
• Integrated terminal box
• Quick opening for installation
• LED perimeter lights with very long operating life (max. 50,000 hours)
• Products certified for use in Zone 1, Zone 2 and Safe Area
• All products complies with ICAO Annex 14 Vol. II and CAP 437
• LED perimeter lights in compliance with IMO on 150 mm height restriction of IMO

LIGHT CALCULATIONS

To document that Tranberg lighting on helideck is according to standards, light calculations will be delivered by Tranbergs technical department.

REFERENCES

All major helideck manufacturers in the world:
- Aluminium Offshore, Singapore
- Bayards Aluminium, Netherlands
- Marine Aluminium, Norway
- Maritime Products, Norway
- Kapp Aluminium Tretum Offshore, Norway
- Marine / Oil&Gas newbuilding market - worldwide
- Replacement market - worldwide. Rig owners, Shipowners, Oil Companies
CHLITE TD/PM CIRCLE & H IDENTIFICATION LIGHTING SYSTEM ACCORDING TO THE LATEST CAP437 STANDARDS

CHLITE Touchdown/Positioning Marking (TD/PM Circle) and Lit Heliport Identification Marking (“H”) system according to the latest CAP437 Standards for Offshore Helicopter LANDING Areas.

The CHLITE Helideck Lighting Solution is a cooperation between Calzoni S.r.l. – founded 1834 in Bologna-Italy (today an L-3 Company) and Tranberg - founded 1901 in Stavanger - Norway (today member of the R.Stahl Group).

Combining the extensive company experience of Calzoni S.r.l. – addressing the extremely demanding Aerospace & Defense market and Tranberg AS, which is the worlds leading helideck lighting solution provider for Maritime and Oil & Gas offshore applications – resulted in a superior product which is designed and manufactured for hazardous and non-hazardous areas within the international maritime and Oil & Gas offshore industry.

The CHLITE Helideck Lighting Solution has been tested extensively inhouse to meet the high quality and reliability standards of Tranberg and Calzoni. The main customer benefits are maintenance free Helideck Lighting Solution, which is extremely easy and fast to install, since no over-deck junction boxes are required.

FEATURES
• Quick installation
• Maintenance free on deck
• Factory sealed LED lighting element
• No electrical components on deck surface
• Easy to install: Minimum impact on helideck surfaces with no over-deck junction boxes
• Extremely low profile (20mm), under the required specifications
• Versatile Installation: Cable routing above deck or below deck
• No metallic parts: Corrosion free high performance resin suitable for both aluminium and steel decks
• Antislip surface
• Low power consumption
• High Reliability
• CAP437 Compliant 7th Ed. with Amendment
• ATEX and IECEx certified, suitable for Zone 1 and 2
• Operational temperature -30°C + 55°C
• Ingress protection IP66 (EN 60529)
CHLITE TD/PM CIRCLE & H IDENTIFICATION LIGHTING SYSTEM

Developed with close guidance from the CAA and in full accordance with the latest requirements of CAP437, Tranberg’s CHLITE TD/PM Lighting System provides the optimal solution to meet the latest requirement on illumination of the Circle and H. The Lit Touchdown/Position Marking (TD/PM Circle) and Lit Heliport Identification Marking (“H”) system are designed according to the CAP437 Standards for Offshore Helicopter Landing Areas - Appendix C.

Material: Corrosion free high performance resin
Light intensity: According to CAP437, 7th Ed.
Dimensions light element: 750x125mm, height 20mm
Dimensions power box: 650x900x300mm
Ingress protection: IP66 (EN 60529)
Electrical power: H overall System < 100 W
C overall System < 100 W
Supplied by the Power Box (Safe Area)
Operational temperature: -30°C + 55°C
Installation interface: M6 fixing, optional interface layer for irregular surfaces
Certiﬁcates:
CAP437 Compliant 7th Ed. with Amendment
ATEX certiﬁed, suitable for Zone 1 and 2
Marking: Ex II 2G Ex mb IIC T6 Gb
IECEx- CES 15.0002X
Marking: Ex mb IIC T6 Gb

Dear Mr Berg-Hagen

Tranberg Circle and H lights (product name CHLITE)
HCA have evaluated the Tranberg CHLITE in regards to the specifications set forth in the latest revision of CAP437. During this evaluation process Tranberg have submitted all and every required document regarding accredited test results and certificates related to the system, as well as completed a standard questionnaire from HCA relating to specific aspects of this lighting system.
HCA have concluded that the Tranberg CHLITE lighting system from Tranberg fully meet the specifications in CAP437 Appendix C. Consequently, HCA accepts the Tranberg CHLITE system.
Please note, it remains the responsibility of the installation or vessel operator to ensure the lights are mounted/fixed to the helideck using an appropriate method.

For and on behalf of
Helideck Certification Agency Ltd
Alex Knight
Managing Director
## Representatives

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