VIKING
LIFE-SAVING EQUIPMENT

A SHIPOWNERS GUIDE

Polar Safety

Specifying life-saving solutions under the Polar Code

The Polar Code

With more and more ships navigating Arctic and Antarctic waters, the IMO is taking proactive steps to enhance the safety of seafarers while protecting the pristine Polar environment.

As a result of this work, the new Polar Code came into force on 1 January 2017, featuring several mandatory goal-based requirements in extension to existing SOLAS, STCW and MARPOL conventions.

In the years to come, yards, owners and operators have their work cut out to secure compliance.

About this guide

From the very first draft, VIKING Rules and Regulations experts have made a significant contribution to the development of the Polar Code.

As a global leader in maritime safety, we're dedicated to raise the transparency of the Code, making it as simple as possible for everyone to remain safe and compliant.

The Polar Code consists of an introduction (general mandatory provisions) along with Parts I (safety) and II (pollution prevention).

This guide exclusively addresses Part I, which contains mandatory provisions and recommendations on safety measures.

INDEX

FRONT PAGE PHOTO: SARex

PHOTO: SARex

A pedigree of Polar safety

VIKING has decades of experience when it comes to Polar safety. Working with special forces, navies, arctic research vessel owners, specialized arctic shipping companies, expedition cruise operators, harsh environment offshore operators and SAR services, we know what it takes to specify efficient safety solutions for

We were first to develop special Polar liferafts operational down to -50° C, while our Polar immersion suits are tested down to -60° C. Both solutions are widely in use with operators navigating cold and icy waters today.

Also, we have developed special winterized marine and offshore evacuation systems for safe mass evacuation in cold climates, while our exhaustive portfolio of life saving appliances serve as a guarantee that we can put together complete firefighting and safety packages, including personal and group survival kits as specified in the Code.

SARex tested

VIKING has actively contributed and participated in all editions of the SARex expedition arranged by the Norwegian Maritime Authority, revealing potential gaps between existing safety equipment and the demands of the Polar Code. With the 2018 acquisition of Norsafe, we now also lead the way in winterized lifeboat solutions for offshore and maritime applications.

Here, our equipment was put through extensive and realistic full-scale tests, building on our unique insight for understanding Polar risks and how best to mitigate them through equipment performance.

"Like the Poles themselves, Polar safety is uncharted territory to many operators.

We are delighted to share our experience and best recommendations for risk assessment, mitigation and product selection. Also, we're happy to welcome anyone interested in Polar safety for dialogue and knowledge sharing"

Benny Carlsen,
SVP Global Sales, VIKING

PHOTO: SARex

Deciphering the Polar Code

The Polar Code acknowledges that Polar water operation may impose additional demands on ships, systems and operations beyond existing SOLAS requirements.

QUESTION: What are the special safety risks in Polar waters?

ANSWER:

- Ice and ice accretion
- Severe weather conditions
- Low temperature
- Extended periods of darkness or daylight
- High latitude
- Remoteness (limited nearby SAR resources)
- Lack of ship crew experience in Polar operations
- Lack of suitable emergency equipment

QUESTION: How does the Polar Code address these risks?

ANSWER: Polar Code applies a risk-based approach, adopting a holistic method in reducing identified risks. It differs from existing IMO regulations by using a goal based structure and standards.

This means less focus on prescriptive regulations and more on achieving goals (reducing risks) supported by related functional requirements. This allows standards to improve and progress as best-practice evolves.

QUESTION: How do goal based standards work?

ANSWER: Goal based standards consist of at least one goal, functional requirements associated with that goal, and verification of conformity that rules and regulations meet the functional requirements.

Compliance is achieved through approval by a relevant flag state or classification sociefy that a ship design and safety arrangements meet class requirements or other standards which may offer an equivalent level of safety.

Individual suppliers (VIKING included) cannot self-sufficiently approve specific equipment as Polar Code compliant, but rather recommend and supply solutions based on extensive experience.

Securing compliance

QUESTION: Who must comply?

ANSWER: The Polar Code is mandatory for all cargo ships larger than 500 tonnes and all passenger vessels carrying more than 12 passengers operating on international or domestic voyages within the IMO-defined boundaries of the Arctic and Antarctica - regardless of season and temperature.

QUESTION: How are Polar waters defined?

ANSWER: Polar waters cover the areas north of 60°N and south of 60°S although there are slight deviations for Arctic waters intended to include the entire southern exposure of Greenland. Areas that are ice free throughout the entire year are not included (e.g. Iceland, Norway and the Kola Peninsula (figures 1 and 2).

QUESTION: What is the deadline for compliance?

ANSWER: Compliance is mandatory for all new vessels built after January 1 2017 and for all vessels regardless of year built at the first certificate renewal inspection after January 1 2018. All ships must comply no later than January 1 2023.

QUESTION: Who is responsible for compliance?

ANSWER: Responsibility for compliance with the regulations, functional requirements and eventually the goals of the Code rests with the shipowner (existing vessels) and shipyard (new vessels).

QUESTION: Where to turn for assistance?

ANSWER: Many established marine classification societies offer resources, expertise and guidance to help shipowners achieve compliance with the Polar Code.

Figure 1, Arctic waters

Figure 2, Antarctic waters

Important considerations for Polar shipowners

QUESTION: When it comes to Polar safety, what should shipowners consider first?

ANSWER: The main thresholds for regulations that may influence the operational risk assesment (and compliance) are based on these conditions:

- Vessels intended to operate in ice
- Vessels intended to operate in low air temperatures
- Vessels intended to operate in areas exposed to ice accretion

QUESTION: What's important when it comes to ice?

ANSWER: Several requirements of the Code are only applicable for vessels that are ice strengthened or intended to operate in ice. When it comes to safety and life-saving equipment, consideration should be given to:

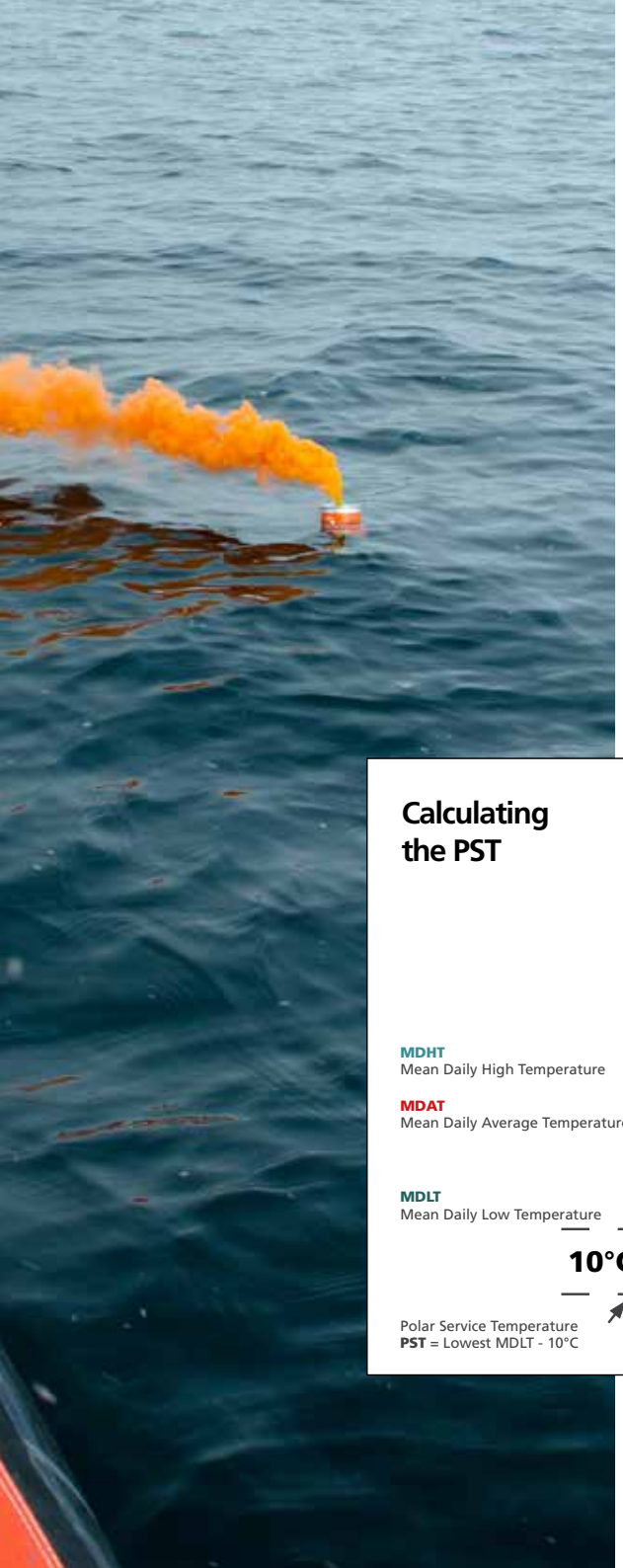
- Protection of life-saving installations from ice ingestions from sea water (ice accretion)
- Means for safe evacuation in ice-covered waters
- Special training for crew

QUESTION: What's important when it comes to operating in low temperatures?

ANSWER: Recognizing the additional risks to materials, equipment, and human performance when operating in low temperatures, the Polar Code is the first IMO instrument to introduce an actual "design temperature" concept - the Polar Service Temperature.

The Polar Service Temperature (PST) definition introduced in the Code is a harmonized approach that will help standardize temperature requirements (more information overleaf).

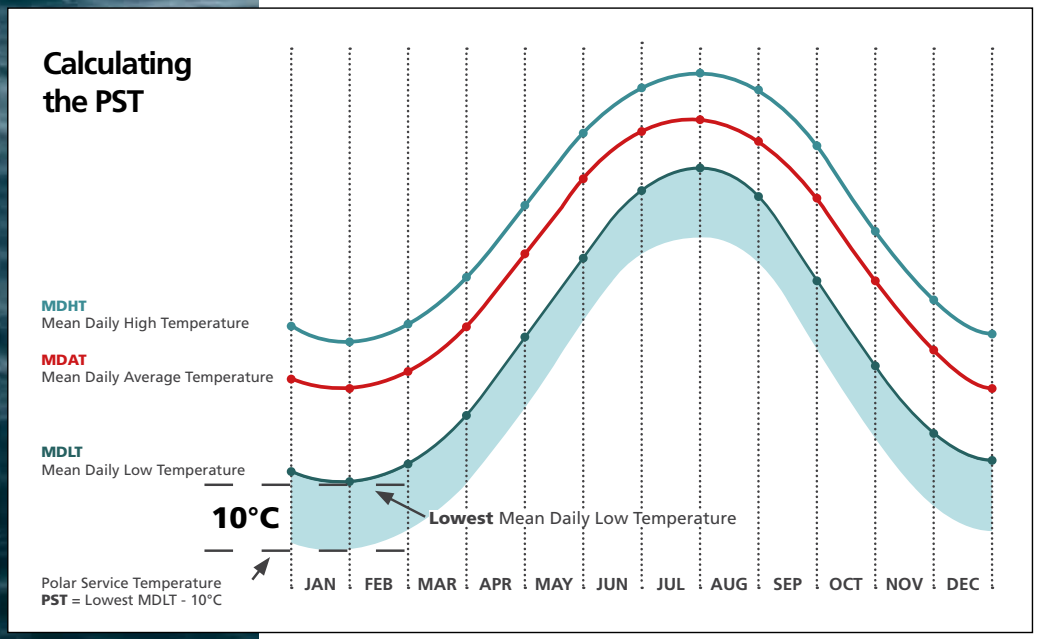
PHOTO: SARex



Polar Service Temperature

QUESTION: What is the Polar Service Temperature and how is it calculated?

ANSWER: Polar Service Temperature (PST) is a new term introduced by the Polar Code. The PST is referenced when specifying demands for equipment and systems.



Calculation of the PST is based on the Mean Daily Low Temperature (MDLT) for the intended area and season of operation.

The MDLT is a statistical mean of daily low temperatures for each day of the year. Ships that operate where the lowest MDLT is below -10°C must specify a PST set at least 10°C below the lowest MDLT.

QUESTION: What are the implications of the PST for life-saving appliances?

ANSWER: The PST is referenced by several regulations in the Polar Code. When it comes to safety and life-saving equipment, notable examples include:

- Survival systems and equipment shall be fully operational at the PST
- Materials used for ship structures, exposed machinery, electrical installations, and fire safety systems shall be suitable for operation at the PST
- Fire safety systems and appliances shall be available/effective at the PST

Figure 3: Setting an appropriate PST based on available data

"The full scope of life-saving resources must be adequate for 5 days of survival"

PHOTO COURTESY OF ROYAL ARCTIC LINE

What does the Polar Code mean for ship safety?

The Polar Code states regulations for lifesaving appliances above and beyond the minimum requirements of SOLAS and the LSA Code. It follows a logical order beginning with escape, then evacuation, and ultimately survival.

QUESTION: What does the Code say about escape?

ANSWER: Escape routes, survival craft and their launching appliances must remain accessible and safe, taking ice and snow accretion into consideration.

QUESTION: What's required for Polar evacuation?

ANSWER: Firstly, the survival craft must provide the crew with a means of safely evacuating the vessel, considering typical hazards of the Polar regions (page 4).

The key components of a safe evacuation rely on the effective mustering and boarding the escape craft.

The crew and passengers should be protected from the elements and the craft large enough for persons with protective clothing and survival kits.

QUESTION: What is required when it comes to survival?

ANSWER: The Code only permits the use of partially or totally enclosed survival craft. Personal thermal protection devices (such as thermal protective aids, anti-exposure and immersion suits) must be provided for everyone on board and take into consideration immersion into frigid waters.

Importantly, appropriate survival resources must be provided to support survival on land, water or ice for the maximum expected time of rescue (at least five days).

"Expedition cruise activity in Polar regions has increased massively in the recent years. This development is expected to continue"

Special considerations for passenger operators

Each year tens of thousands of tourists visit the areas covered by the Polar Code, and as these regions become ever more accesible, these figures are expected to just keep growing.

The vast majority of passengers travel on board ships covered by the SOLAS convention, both dedicated “expedition ships” and more conventional cruise vessels. The advent of the Polar Code is a safety milestone for operators sailing in Arctic and Antarctic waters. It means that for any operator, experienced or new, there is a clear outline of the hazards and risks that need to be considered and mitigated.

While experienced operators may need to review, adapt and formalise current procedures, newcomers face a more challenging journey towards compliance.

Undoubtedly, Code requirements such as those for equipment supporting five-day survival, ice-proof evacuation solutions, let alone the availability of immersion suits for everyone on board vessels carrying hundreds or thousands of people, remain steep challenges to be managed.

Specifying life-saving solutions under the Polar Code

Liferafts, lifeboats and MES

The Code only permits the use of enclosed survival craft.

VIKING SOLUTIONS

VIKING was the first to offer dedicated Polar liferafts operational down to minus 50 degrees celcius.

See page 14.

When it comes to lifeboats, we offer a full scope of tried and tested winterized solutions under the VIKING Norsafe brand.

See page 18.

While not addressed directly by the Polar Code, Marine Evacuation Systems (MES) are subject to requirements similar to those for other survival craft. VIKING has long supplied winterized MES solutions for use in cold and icy regions - including some operating under strict RMRS regulations.

See page 22.

Marine fire equipment

All equipment relevant to firefighting must remain accessible and operable at all times. It should not be incapacitated by cold temperatures or obstructed by ice and snow.

VIKING SOLUTIONS

VIKING supplies a complete range of marine firefighting equipment along with heated storage solutions for mitigating ice related risks.

See page 24.

Survival kits

To support the requirement for minimum 5 days survival upon escape and evacuation, the Polar Code mandates the carriage of group (GSK) and personal (PSK) survival kits based on the number of people on board.

VIKING SOLUTIONS

VIKING offers an exhaustive range of lifesaving appliances. PSK and GSK packages can be specified as standard package solutions or fully customized in accordance with Code and client requirements.

See page 26.

Personal protection

The Polar Code states that adequate thermal clothing must be provided for all persons on board. Additionaly, an insulated immersion suit or thermal protective aid must be provided.

VIKING SOLUTIONS

VIKING strongly recommends the use of immersion suits when operating in Polar regions. For cargo vessels, the use of such suits is already a mandatory requirement.

We have the most extensive range of SOLAS approved immersion and anti-exposure suits in the industry. Our VIKING YouSafe™ Blizzard, Polar Immersion suit is widely used by cold-water shipping operators today.

See page 28.

VIKING patented Polar liferafts

For safe escape and evacuation in Polar regions, VIKING recommends our patented Polar liferafts.

Based on VIKING quality standard SOLAS liferafts, Polar liferafts are packed in special containers with built-in heating.

Available in sizes from 6-35 persons, they are designed and tested to withstand extremely harsh conditions and function at a PST as low as -50°C.

A Polar liferaft package typically consists of liferafts along with specially selected cradles, relays, cables and boxes suited for Polar conditions.

The emergency pack contains extra rations of food and water. In order to comply with Code requirements for five-day survival, additional rations and equipment is to be carried on board in group and personal survival kits.

See page 22.

VIKING Polar liferafts comply with Russian winterization regulations and are certified by DNV, TC Canada, RMRS and USCG.

Patents include: DK Patent No. 17671681 and CN Patent No. 101795934B.

Polar liferafts share the same footprint as standard SOLAS liferafts.

PHOTO: SARex

"Field tested at all SARex expeditions and used by cold water shipping operators worldwide"

Heated containers

Our special Polar container is equipped with internal heating mats that serve the dual purpose of keeping the liferaft as well as the container ice-free, ensuring that the system is always ready for deployment.

When the temperature drops below 5°C, a thermal control box activates the heating mats. For extra safety, the control box can be connected to the ship's alarm system. When the temperature outside the liferaft rises above approx. 5°C, the control box automatically deactivates the heating to save power.

Thermal control box

Thermal control box in corrosion resistant GRP.

Special heating box for Hammar® HRU.

The liferaft heating mats are attached to a specially designed thermal control box holding a separate RMRS type approval.

The box is installed near the liferafts and keeps the power supply safe. Each box supports 1-2 liferaft units. It is equipped with a termperature controlled relay, set to turn off automatically when the air temperature rises above +5°C.

The hydrostatic release unit (HRU) is protected by a special heating box monitored by a 'HRU heat guard' function in the control box.

The box also features an independent circuit for detecting and reporting functional errors such as short/open circuits and operating failure.

All cables, boxes and connectors are waterproof and IP67 certified.

The control box contains:

- Temperature control relay
- Auxiliary relay
- Circuit breaker relay
- Power disconnector
- Anti-condense heating element
- Terminal block
- HRU heat guard
- Independent error detection circuit

Liferaft content

VIKING Polar liferafts are equipped with SOLAS required equipment and rations + 30%. This is assumed to last for 3 days survival.

Additional water, food and equipment to support survival for the 5 days required in the Polar Code must be carried in a PSK and GSK.

VIKING RECOMMENDS:

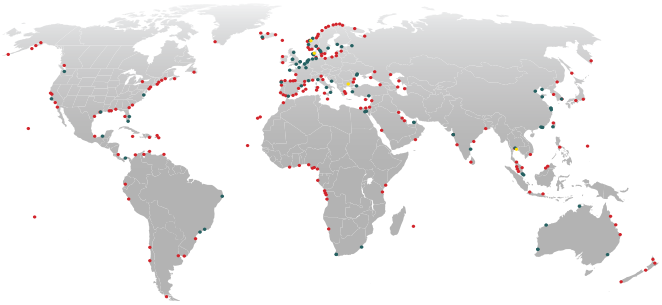
Due to additional Polar equipment (GSK and PSK) requirements, it is strongly recommended to downgrade the number of persons per liferaft.

PHOTO COURTESY OF ROYAL ARCTIC LINE

Liferaft deployment in a Polar environment

VIKING Polar liferafts come in a throw overboard and a davit launched version. Taking into regard the extremely low water temperatures and general climatic conditions present in Polar areas, VIKING recommends davit launched liferafts for use in Polar Code regulated areas, as these provide for 'dry shod' evacuation.

Davit launched liferafts are inflated and boarded at deck level, then launched to sea level or directly onto ice.



Global service network

Several of our 275+ global servicing stations offer service for VIKING Polar liferafts.

Lifeboat and rescue boat solutions

VIKING supplies Polar Code compliant lifeboat, rescue boat and davit solutions for all types of demanding maritime and offshore applications.

As an industry leader in winterization technologies for lifeboats and rescue boats, we hold years of experience in developing equipment specifications and standards for Polar operations.

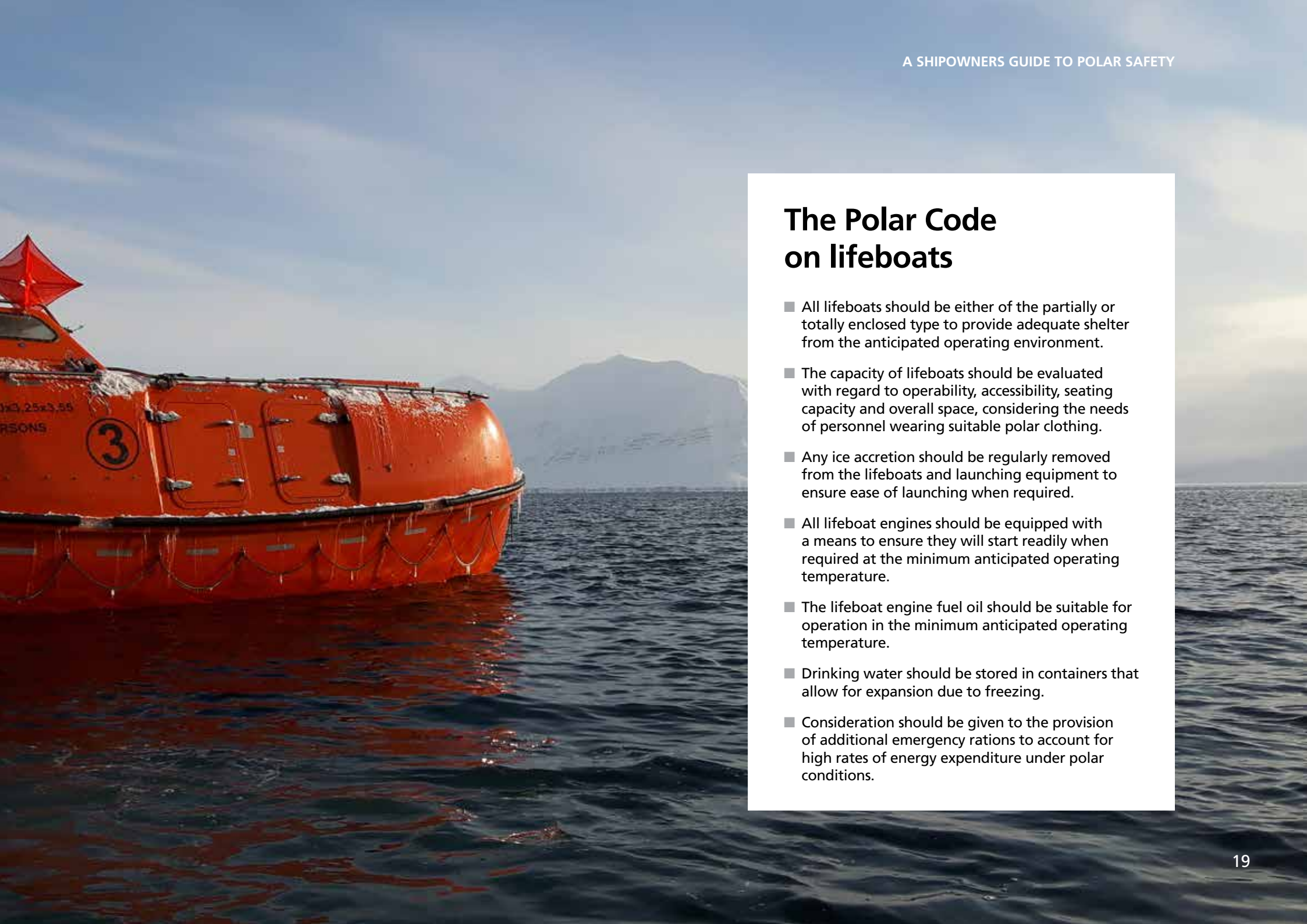
VIKING has performed work for tanker operators, research agencies, coast guards and navies around the world to provide Polar Code lifeboat and rescue boat equipment.

We can provide a risk-based assessment which defines the required specification and capacities. This work is defined by 3rd parties, who issue documents of Polar Code compliance.

Polar safety experts

Beyond cutting-edge products and solutions, we're happy to offer ship- and offshore asset owners expert advice on:

- Project risk assessment of any polar activity
- Mitigation of all possible risks by product adaptations and/or safety instructions and rescue, evacuation and maintenance guidelines.
- Provision of VIKING Norsafe work certificates for products documenting Polar Code (or other winterization standards) compliance based on the polar water operational manual for VIKING Norsafe lifeboats, rescue boats and davits (project specific document).



The Polar Code on lifeboats

- All lifeboats should be either of the partially or totally enclosed type to provide adequate shelter from the anticipated operating environment.
- The capacity of lifeboats should be evaluated with regard to operability, accessibility, seating capacity and overall space, considering the needs of personnel wearing suitable polar clothing.
- Any ice accretion should be regularly removed from the lifeboats and launching equipment to ensure ease of launching when required.
- All lifeboat engines should be equipped with a means to ensure they will start readily when required at the minimum anticipated operating temperature.
- The lifeboat engine fuel oil should be suitable for operation in the minimum anticipated operating temperature.
- Drinking water should be stored in containers that allow for expansion due to freezing.
- Consideration should be given to the provision of additional emergency rations to account for high rates of energy expenditure under polar conditions.

Tested to perform

Before the acquisition by VIKING in 2018, Norsafe was the first lifeboat supplier to have executed full scale tests and trials during the first joint stakeholder SARex in freezing water off Svalbard inside the Polar Circle.

Using a standard VIKING Norsafe Miriam 8.5 lifeboat, the expedition simulated a full scale escape, evacuation and rescue operation, to accommodate a minimum five-day survival with the lifeboat acting as a habitat. During this scenario, a risk assessment method was established to gain full understanding of the potential issues involved.

In addition, we conducted tests to address lifecycle issues with LSA equipment which may be exposed to polar conditions. This included a full-scale study to determine how to avoid the loss of warmth from a heated lifeboat in conditions of minus 30°C.

Full scale test studies were also carried out to test the performance of installed sprinklers when used in icy conditions.


55 PERSONS
3


3


VIKING
NORSAFE

VIKING VEC PLUS™ POLAR

Outside and in, the VEC Plus™ Polar is designed to match the functionality and aesthetics of modern expedition class cruise ships.

VIKING VEC Plus™ Polar is a unique chute-based marine evacuation solution focused on technical simplicity, reliability under harsh conditions and a user-centric design.

The system includes 40% fewer mechanical components than earlier MES designs and is loaded with advantages and integrated cost-efficiencies for installation and servicing.

Released by gravity and featuring measures for controlled descent, the system will launch safely onto ice as well as water. Also, based on findings from the SARex expeditions in Svalbard, the entire system including the associated liferafts, has been modified and reinforced to match the extreme conditions under which it may be required to save lives.

Marine evacuation systems

With more than 1300 systems currently in operation worldwide, VIKING is the global leader in chute and slide based Marine Evacuation Systems. MES became part of our range in 1984 and we've supplied solutions to vessels operating in freezing conditions ever since.

An early model VIKING MES deployed in icy waters

Beyond having the largest share of MES solutions in the market, VIKING also leads the way in terms of selection and capacity.

With models ranging from a mini-slide for evacuating up to 153 passengers to ultra-high capacity chute systems capable of moving 908 passengers to safety in just 30 minutes, we cater to passenger and cruise vessels of any type and size.

All systems are supported by our unique global service network and cost-effective Shipowner Agreements to ensure effective turnaround time and constant readiness.

A heritage carved in ice

Founded in Denmark and with the likes of Greenland and Iceland as our "local markets", VIKING has always been well positioned as a supplier of safety solutions to cold water shipping operators.

Today, our MES solutions are trusted by many Nordic cruise and ferry operators that navigate freezing waters on a daily basis. We have also supplied advanced 'means of rescue' type MES for Russian icebreakers - all fully tested and approved according to strict Russian Winterization Code standards under the RMRS.

Last but not least, we supply dedicated mass evacuation systems for offshore rigs and platforms operating in harsh Polar regions.

VIKING VEC Plus™ Polar system ice tested at -30ºC

Polar MES solutions

The VIKING range of MES solutions is constantly evolving to match the latest safety requirements, including the Polar Code. We have recently launched a series of dedicated Polar MES solutions based on our VEC Plus™ concept.

Contact VIKING for more information

"Like all other deck based safety equipment, fire safety systems must be protected from ice accretion that occurs when temperatures are low and there is a source of water for wetting exposed parts of the vessel"

PHOTO COURTESY OF ROYAL ARCTIC LINE

Marine fire safety under Polar conditions

QUESTION: What are the risks related to fire safety when operating in a Polar environment?

ANSWER: Safety critical firefighting systems and equipment are in many aspects susceptible to Polar hazards. Ice accretion can hinder access to controls such as valve handles or control panels; water can freeze inside exposed piping; fire extinguishers and hoses can freeze and become ineffective; and crew assigned to firefighting teams could be wearing bulky cold weather clothing, affecting their ability to use equipment.

The Code mandates that systems and materials for firefighting remain accessible and functional at all times. Effectively, this means they should not be incapacitated by means of freezing above the PST, or buried under ice or snow, obstructing accesibility in an emergency.

Compliance can be demonstrated by design features or operational mitigation measures (including storage in heated areas and special compartments).

VIKING solutions

VIKING supplies an exhaustive range of firefighting and fire safety solutions recommended for use in harsh maritime and offshore environments. While many of our products remain operable at a low Polar Service Temperature, we can supply heated storage solutions for the rest.

Firefighting

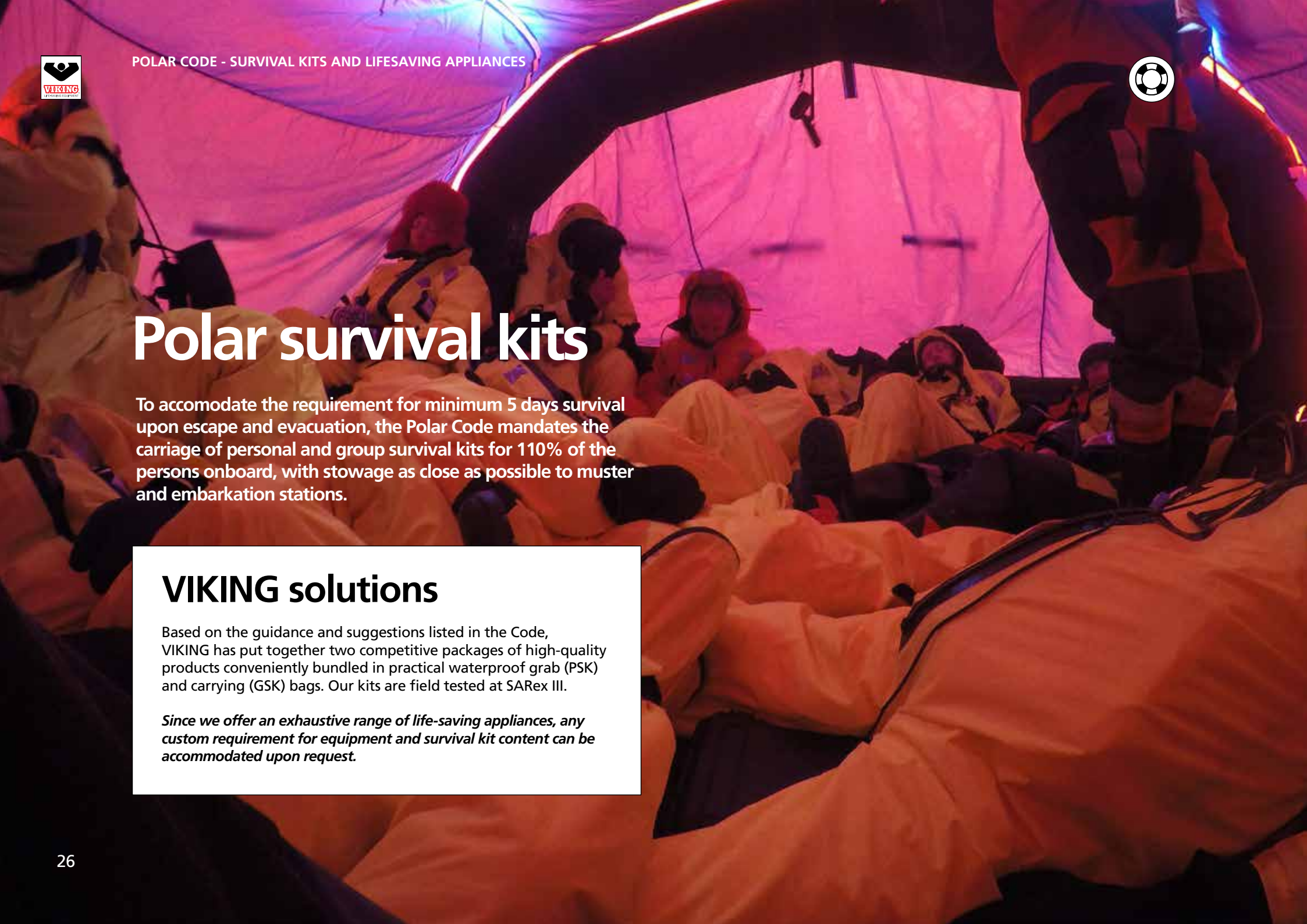
VIKING offers a complete range of highly efficient fire extinguishers and accessories for any type of fire. We also supply a wide portfolio of fire hoses, branch pipes, foam applicators, couplings, adaptors, breathing apparatus and EEBDs.

Heated cabinets

VIKING supplies a full range of heated cabinets to keep your immersion-, fire- and work suits, lifejackets plus other critical safety and firefighting equipment from freezing or accumulating ice. Our heated cabinets are ATEX approved.

Fire suits

VIKING manufactures everything from top of the line combined immersion and fire suits, to traditional marine fire suits according to both EN469 (SOLAS, FSC) and NFPA (USCG) standards. We also supply complete marine firefighter safety packages and accessories.



Polar survival kits

To accomodate the requirement for minimum 5 days survival upon escape and evacuation, the Polar Code mandates the carriage of personal and group survival kits for 110% of the persons onboard, with stowage as close as possible to muster and embarkation stations.

VIKING solutions

Based on the guidance and suggestions listed in the Code, VIKING has put together two competitive packages of high-quality products conveniently bundled in practical waterproof grab (PSK) and carrying (GSK) bags. Our kits are field tested at SARex III.

Since we offer an exhaustive range of life-saving appliances, any custom requirement for equipment and survival kit content can be accommodated upon request.

VIKING standard Group Survival Kit (GSK)

Shelter (tents, storm shelters or equivalent) - sufficent for the maximum number of persons
Thermal protective aids or similar - sufficient for the maximum number of persons
Sleeping bags - at least one between two persons
Foam sleeping mats or similar - at least one between two persons
Shovels - at least two
Sanitation (e.g. toilet paper)
Stove and fuel - sufficient for the maximum number of people and the anticipated time of rescue
Flashlights - one per shelter
Water/windproof matches - two boxes per shelter
Whistle
Signal mirror
Water containers and water purification tablets
Spare set of personal survival equipment
Group survival equipment container (waterproof, floatable and movable across ice)

VIKING standard Personal Survival Kit (PSK)

Protective clothing (hat, gloves, socks, face and neck protection etc.)	Pen knife
Skin protection cream	Polar survival guidance
Thermal protective aid	Emergency rations
Whistle	Grab bag
Drinking mug	

PHOTO: SARex

Pictures for illustration only. Specific content (colour, brand etc.) may vary

Polar immersion suits

The Polar Code mandates thermal protection to be available for all passengers and crew members aboard. VIKING recommends the use of insulated immersion suits over, e.g. thermal protective aids.

While many of the options available on the market today would accomodate this basic requirement, the goal based structure of the Polar Code means that actual suit specifications must also take into account e.g. the requirement for minimum 5 days of survival and the risk of immersion in freezing water.

This means that the immersion suits specified for Polar use would have to be of a high standard, both when it comes to quality, functionality and thermal protection.

Specifying immersion suits

VIKING offers protective immersion suits for all requirements, standards and climatic conditions. For Polar applications, we recommend our top-of-the-line VIKING YouSafe™ Blizzard Polar immersion suit made with PU coated Nylon and multi-layer technology. This suit is widely used by cold-water vessel operators today.

The VIKING YouSafe™ Blizzard has double the insulation of a standard suit. Other key features include easy donning and integrated buoyancy. The latter eliminates the extra donning complexity, storage space requirements and reduced comfort associated with the use of a separate lifejacket.

VIKING YouSafe™ Blizzard Polar immersion suit

- Tested to -62 degrees for storage and donning
- 6-hour SOLAS approved multi-layer system
- Built-in buoyancy foam (use without lifejacket)
- Extra thermal insulating liner
- Interior braces for adjustable sizing
- Detachable gloves for easy donning and handling of e.g. emergency equipment and rations.
- Lifting becket, buddy line and emergency light

VIKING YouSafe™ Blizzard Polar Immersion Suit

"The VIKING YouSafe™ Blizzard is field tested at all SARex expeditions and used by cold water shipping operators worldwide."

Excellent choice for boat, MES and SAR crews

VIKING YouSafe™ Hurricane series Anti-exposure, work and immersion suit

Another excellent suit option for Polar applications is the new VIKING YouSafe™ Hurricane series anti-exposure, work and immersion suit that offers superior protection, comfort and freedom of movement under extreme maritime conditions.

A suit for all seasons

- Designed and crafted for tough work applications
- Protects against hypothermia and heat stress
- Fitted and ergonomically enhanced. Waterproof and breathable GORE-TEX® NARVIK™ with stretch-fabric panels
- Knees reinforced with DuPont™ Kevlar®
- Available with or without fully integrated inflatable buoyancy
- Gloves, hood and attached steel-reinforced safety boots
- Lifting becket, buddy line, emergency light and whistle
- Host of design extras, such as print on back, patches etc.

CE

Excellent ergonomics and ventilation. Fully integrated buoyancy.

Tested for Polar performance

Our field experience has shown that 5 days survival under harsh Polar conditions place extreme demands on both human and survival equipment performance.

Therefore, make sure to specify high quality products with a proven track record.

VIKING immersion and anti-exposure suits are tested to perform in a Polar environment:

- Thermal Storage and donning test at -62°C (VIKING YouSafe™ Blizzard)
- Field and in water testing: SARex I, II and III in Svalbard

Your safety is safe with us

In the world of global maritime, safety is first. But to stay competitive in ever more challenging markets, we know that successful operators must continuously maximize efficiencies without compromising performance - even when it comes to safety.

With a Shipowner Agreement, you can trust VIKING to streamline and simplify all aspects of onboard safety and compliance.

We offer several customizable options to ensure that you always have safe and compliant life-saving equipment on board - and that it can be sourced and serviced on a way that suits your operations and preferences.

This way, we replace complexity with flexibility and reduce administration and operational risk - freeing up resources to boost your core business.

VIKING LIFE-SAVING EQUIPMENT

Protecting people and business

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PHOTO COURTESY OF ROYAL ARCTIC LINE

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