

# Extended Cargo Retention - Gulf Region



Recent disruption to shipping operations in the Gulf region, together with the current risks associated with transits of the Strait of Hormuz, has resulted in vessels being unable to discharge or complete intended voyages within normal timeframes. Consequently, cargo may remain on board for significantly longer than originally planned, whether due to restricted access to ports, delays in discharge, or limited safe operating options.

It is recognised that Masters, officers and crew should be fully familiar with the day-to-day care and handling of the cargoes that they carry. This Risk Alert is therefore not intended to restate standard practices, but to highlight the additional challenges that may arise where cargo is retained on board beyond its intended voyage duration, particularly in sustained Gulf heat and with restricted trading options.

In these circumstances, the primary exposure arises from cargo being held beyond its expected carriage period and outside its normal operating envelope, increasing the likelihood of deterioration, instability, or quantity and quality disputes on outturn, even where cargo was soundly loaded and managed.

While this Risk Alert is issued in the context of ongoing disruption to transits in the Gulf, the considerations set out below are equally applicable to any situation involving extended onboard cargo retention in heat-sensitive or operationally constrained environments.

## Key Cargo Risks and Considerations

### Containerised cargo (reefer and non-reefer)

#### Potential issues:

Sustained heat exposure may affect both perishable cargoes and goods not normally considered temperature sensitive. Internal container temperatures can rise significantly above ambient levels, potentially exceeding 50°C in exposed conditions, increasing the risk of deterioration, decomposition, deformation or loss of efficacy.

Extended carriage may also impact the effective shelf-life of perishable and other sensitive goods, including certain pharmaceutical and medical products, particularly where cargo remains on board beyond the originally anticipated voyage period.

Continued exposure may give rise to secondary hazards where the characteristics of a cargo change over time. This may include decomposition or instability not normally encountered within standard voyage durations, and in some cases escalation such as self-heating or release of heat or gases.

Longer residence onboard may increase the likelihood of moisture-related damage, while sustained sunlight exposure may contribute to degradation of certain cargoes and packaging materials (actinic effects). Certain cargoes such as lithium-ion batteries present a low-frequency but higher-severity escalation risk where exposed to elevated temperatures over time.

### **Considerations:**

- Review available cargo manifests to identify units potentially more susceptible to heat or instability, recognising the limitations of cargo descriptions and the risk of misdeclaration.
- For reefers, where feasible increase the frequency of visual checks of container stacks (deck and accessible bays) during prolonged anchorage. Early indicators may develop gradually (e.g. odour, unusual machinery noise, vapour haze, bulging panels, staining, or container door deformation). Preserve set-points, return-air temperatures and alarm histories.
- Ensure reefers remain powered and monitored, with any interruptions clearly recorded.
- For non-reefers, remain alert for external indicators such as bulging or deformation around doors, leakage, distortion, heat damage or smoke.
- Where thermal monitoring is used (handheld or fixed), document time, location, ambient conditions, readings and other pertinent information to support subsequent causation discussions.
- Be aware of the escalation indicators that can be associated with suspected “hot” containers such as localised distortion, paint blistering and vapour release and initiate appropriate mitigating actions.
- An awareness of cargo sensitivities and shelf life, especially where mitigating measures may affect cargo condition or contractual obligations.
- In the event of immediate risk to the vessel, crew or environment, appropriate safety measures should not be delayed, with full records maintained and all relevant parties notified as soon as possible

## **Grain and agricultural dry bulk cargoes**

### **Potential issues:**

Extended carriage can increase the risk of cargo sweat, mould development and spoilage, particularly where ventilation cannot be optimised over time.

There is also potential for secondary hazards associated with longer carriage periods, particularly in organic or biologically active cargoes. Microbiological activity can generate heat and moisture over time, potentially leading to self-heating and deterioration of cargo condition.

### **Considerations:**

- Continue ventilation practices where conditions permit.
- Maintain clear, detailed records of ventilation decisions and the rationale for non-ventilation (e.g. high dew point, sand/dust conditions, weather/sea state, security restrictions).
- Where fumigation has been undertaken prior to sailing, preserve documentation such as dosage, exposure time, sealing checks, gas readings and safety signage. Delays extending beyond the effective treatment period or circumstances where re-treatment is contemplated, may affect the validity of treatment.
- If holds remain closed for long periods, apply enclosed space and atmosphere testing protocols before any opening/inspection. Document constraints where normal monitoring routines cannot be followed.

- Note that claims are often determined by whether cargo care decisions can be demonstrated as reasonable in the prevailing conditions, supported by timely detailed record keeping and appropriate engagement with Owners, Charterers and Cargo Interests where cargo condition, treatment or discharge planning may be affected.

## **Coal, pet coke and similar dry bulk fuels**

### **Potential issues:**

These cargoes may be susceptible to self-heating and deterioration over time, which may escalate if monitoring is reduced or conditions differ from those at loading.

Extended carriage may increase the likelihood of progressive changes within the cargo mass, particularly where initial conditions at loading evolve over time.

### **Considerations:**

- Maintain monitoring routines as far as safely achievable. Where instruments allow, retain time-series records for temperatures and gas readings (O<sub>2</sub>/CO/CH<sub>4</sub> where applicable), as trends may be more significant than isolated values.
- Avoid actions that may unintentionally escalate risk, such as indiscriminate ventilation in inappropriate conditions or repeated opening/closing of access points introducing oxygen.
- Record constraints where access or monitoring is limited (security posture, weather, operational restrictions) and consider indirect monitoring where practicable.

## **Petrochemicals, chemicals and hydrocarbons (including crude oil and refined products)**

### **Potential issues:**

Prolonged carriage in sustained high temperatures may increase the risk of cargo degradation, instability or off-specification outturn, particularly where normal cargo management routines are disrupted or where carriage duration materially exceeds the originally anticipated voyage period.

Some cargoes rely on chemical inhibitors or 'doping' to maintain stability. Inhibitors can have a finite effective lifespan and may degrade or deplete over time, potentially increasing the likelihood of polymerisation, decomposition or specification drift.

In extended retention scenarios, stratification (layering) and sedimentation may develop, which can affect representative sampling, discharge performance and outturn quality discussions.

For hydrocarbons, repeated heating and cooling cycles may contribute to evaporation and vapour losses (including volatile component / light-end losses), increasing the likelihood of quantity measurement variances and outturn disputes. Extended onboard storage may also promote sediment settling, particularly in crude oils, potentially increasing ROB and affecting discharge operations.

### **Considerations:**

- Maintain cargo system integrity and monitoring routines as far as practicable, including cargo temperatures, tank atmosphere condition and pressure trends.
- Record heating instructions, circulation routines (if any), temperature deviations, venting events, operational delays, and any departures from standard cargo management procedures.

- Where inhibitor effectiveness may be relevant (e.g. reactive monomers, styrenics or ‘doped’ cargoes), notify Charterers, terminals and Cargo Interests promptly if carriage duration or conditions may affect inhibitor performance, expected quality or discharge characteristics.
- Maintain clear records of tank conditions, temperatures, venting activity and ROB calculations to support both quality and quantity (outturn/ROB) discussions.
- Avoid unauthorised interventions beyond standard monitoring (such as inhibitor replenishment, additional circulation or sampling) unless expressly instructed and documented by Owners, Charterers and Cargo Interests, noting that contractual authority may be limited.

## **LNG cargoes**

### **Potential issues:**

Extended onboard retention may increase exposure to natural boil-off gas (BOG) generation, particularly where vessels are required to drift, anchor, or operate at reduced power for prolonged periods. This can result in BOG being generated at a rate exceeding that which can be consumed as fuel under normal operating conditions.

Where BOG cannot be fully utilised, reliance may be placed on reliquefaction systems (where fitted) or controlled combustion to maintain safe tank pressures. Such conditions may give rise to quantity variance, cargo loss or performance-related disputes, particularly where carriage extends beyond expected voyage assumptions.

Extended retention may also lead to non-standard operating profiles for cargo systems, including sustained operation of compressors, re-liquefaction equipment or gas combustion units, which may affect system performance and increase the potential for operational or claims exposure.

### **Considerations:**

- Maintain cargo system integrity and monitoring routines, including tank pressures, temperatures and BOG generation trends.
- Record plant operating modes, including any use of reliquefaction systems or controlled combustion, together with the reasoning for their deployment.
- Ensure clear and contemporaneous records of operating conditions, including external constraints (e.g. instructions to wait, drift or delay discharge).
- Where prolonged delays are anticipated, ensure early communication with Owners, Charterers and Cargo Interests regarding potential BOG implications, anticipated operating constraints and any need for instructions or consultation on discharge planning.
- Where practicable, ensure that actions taken to manage BOG are consistent with safety requirements and contractual arrangements, noting that operational limitations may restrict available mitigation options.

## **Livestock carriers**

### **Potential issues:**

Extended onboard retention of live animals may increase welfare, mortality and claims exposure, especially in sustained heat and where discharge, resupply or veterinary support is delayed. Prolonged carriage may also strain ventilation, watering, feeding, bedding and waste-management systems.

### **Considerations:**

- Monitor ventilation, water, feed and bedding closely, and record any constraints on normal husbandry.
- Increase welfare checks where practicable, with clear records of animal condition, mortality and remedial measures.
- If delays may outlast available supplies or veterinary support, notify Owners, Charterers, Cargo Interests and relevant authorities promptly.
- Maintain biosecurity and sanitation measures, and keep clear records of instructions, limitations and stakeholder communications.

### **Vehicle carriers**

#### **Potential issues:**

Extended delay in the region may increase exposure to risks from elevated temperatures, fuel leaks, cargo deterioration or slackening of lashings, especially where vehicles are tightly stowed and access for inspection or firefighting is limited. Electric and hybrid vehicles may present additional challenges due to their State of Charge.

#### **Considerations:**

- Maintain fire detection and fixed firefighting systems in a ready state and record any limitations affecting patrols or response.
- Increase checks for heat, smoke, odour, leakage or visible damage where practicable.
- Check securing and lashing arrangements and adjust/tighten as appropriate.
- If electric or hybrid vehicles are carried, keep clear records of alarms, overheating indicators and any resulting firefighting actions.
- Where available, retain EV battery state of charge (SOC) data and raise early queries where unusually high levels may affect risk assessment or stowage decisions.
- Notify Owners, Charterers and Cargo Interests promptly if circumstances may affect cargo safety, condition, or discharge planning, and maintain a clear record of any instructions or consultations.

### **Project cargo, steel and general cargo (including deck cargo)**

#### **Potential issues:**

Prolonged exposure to heat, humidity and marine atmosphere may accelerate corrosion of steel cargoes, degradation of protective coatings/package/coverings, and deterioration of lashing and securing arrangements.

For machinery and project cargo, extended delays may increase the risk of moisture ingress and associated condition disputes.

#### **Considerations:**

- Where safe and accessible, monitor for condensation and chloride-driven corrosion risk due to day/night temperature swings, and for water pathways created by pooled tarpaulins or blocked drains/scuppers.
- Maintain periodic records of condition, including dated photographs showing cargo markings and stow location where practicable.

- For machinery/components, check (where possible) sealing integrity, Volatile Corrosion Inhibitor (VCI) packaging indicators and protective greases. If deterioration is suspected, notify interested parties early and document any instructions received, noting that unauthorised opening of crates or re-preservation may shift responsibility unless agreed and documented.
- Pay particular attention to torn coverings, chafed lashings and any securing deterioration, and record any constraints affecting access or inspection.

## **Overall Operational Considerations**

### **Risk assessment**

Masters are encouraged to undertake a practical risk assessment addressing the implications of prolonged cargo retention and extended anchorage, including cargo-specific sensitivities and any operational/safety constraints affecting normal cargo care.

Where entry into cargo spaces may be required, robust enclosed space entry precautions and atmosphere testing protocols should be applied.

### **Monitoring, record keeping and reporting**

Where cargo is already loaded, the focus should be on maintaining awareness of cargo condition, identifying early indicators of deterioration or instability, and ensuring clear, contemporaneous records of cargo monitoring data, operational decisions (e.g. ventilation, system use) and any constraints on normal practices.

Timely reporting should be made to relevant stakeholders where issues emerge, including Owners, Charterers and Cargo Interests, as well as regional or port authorities where required. Where cargo conditions, treatment, handling, or discharge planning may be affected, vessels should seek and record instructions or consultation responses as appropriate.

### **Early escalation**

Any emerging cargo concerns should be brought to the attention of shoreside management at an early stage, so that the vessel can benefit from:

- improved crew awareness and preparedness, supported by timely consideration of appropriate contingency options
- access to technical and operational support, including specialist advice where required
- alignment between stakeholders (Owners, Charterers, Cargo Interests) through early engagement, information sharing and consultation where cargo care, carriage decisions or discharge planning may be affected
- early engagement with relevant stakeholders, including regional or port authorities where approvals may be required
- appropriate steps to protect the Owners' position and management of potential claims exposure

## **Operational readiness**

Extended delay does not reduce the need for diligence. Vessels should remain ready to resume / conduct cargo operations at short notice where opportunities arise, including readiness of crew, cargo systems, documentation and communications.

- maintaining cargo-related equipment and systems as far as practicable
- undertaking routine maintenance where possible and documenting any deferred work arising from the delay
- record and report any limitations or degradation in equipment, or constraints affecting readiness to discharge or load

Sustained delay may also increase crew workload, fatigue and safety exposure. Cargo care measures should therefore be managed consistently with safe manning, vessel safety priorities and maintaining operational readiness over an extended period.

## **Summary**

The current environment does not introduce fundamentally new cargo risks but amplifies existing ones by extending exposure to heat, time and operational constraints beyond normal voyage expectations.

The emphasis should therefore be on preserving safety, protecting cargo as far as reasonably possible within the prevailing constraints, maintaining situational awareness, ensuring early communication with shore management and relevant stakeholders (including Owners, Charterers, Cargo Interests and authorities where necessary), and maintaining robust documentary records of monitoring, decisions, instructions and consultations to support the vessel's position in the event of later scrutiny or claims.