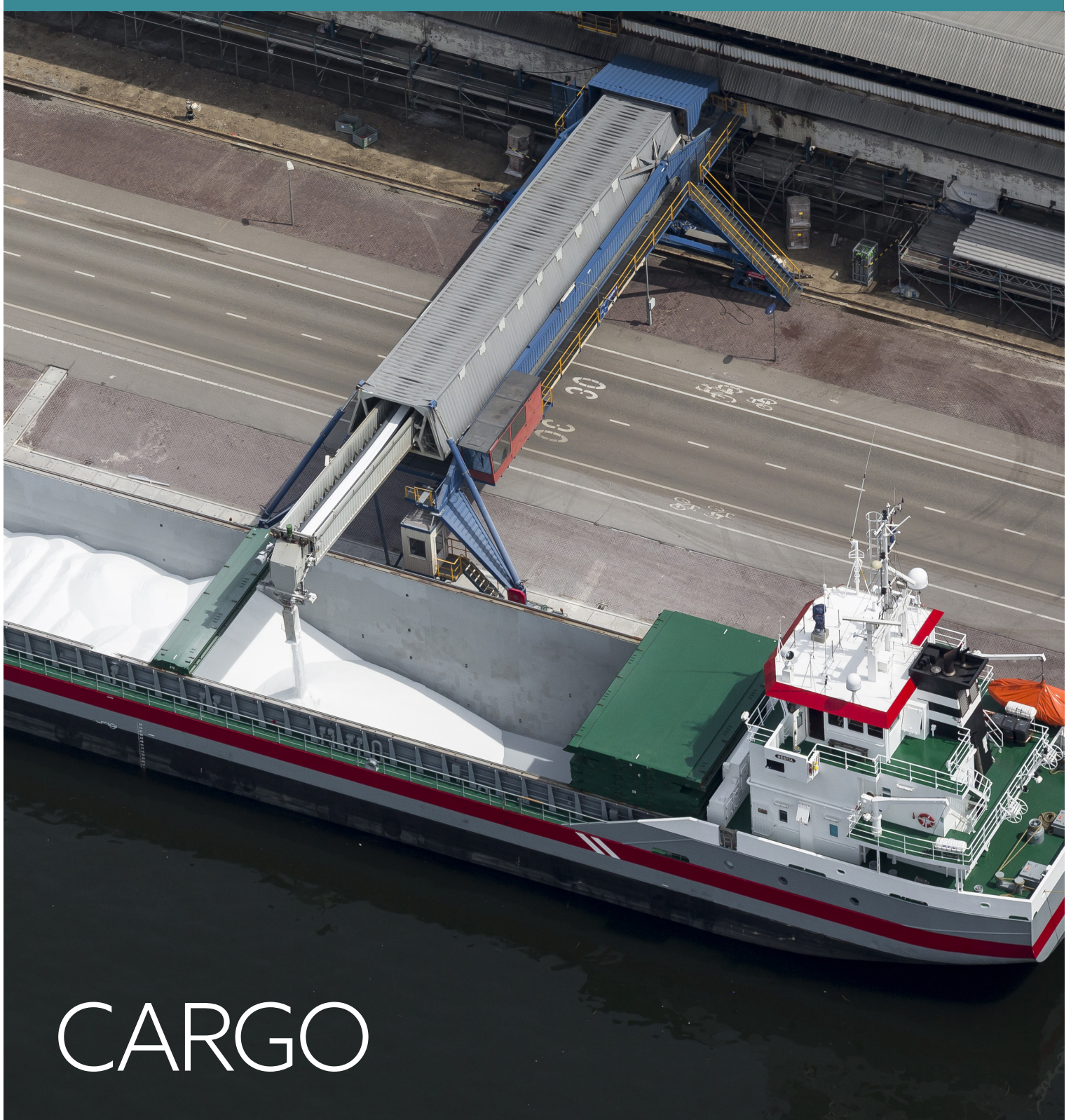


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Fertilizers from China



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Fertilizers from China

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Introduction

Claims and disputes related to the carriage of fertilizers from China are quite common. They generally arise from cargo shortage, caking, impurities caused by strips of plastic (usually from bags in which the urea is transported to load on board the ship), wet damage and pollution.

This briefing provides Members with an overview of the problems and includes loss prevention advice which can aid in reducing claims and disputes.

The port of Yantai handles 70% of the total volume of exported fertilizer. Urea accounts for 98% of all fertilizer shipments from Yantai.

Storage and Loading at Wharf

Prior to loading, fertilizers are usually packed in 50 kg bags. Occasionally, they are packed in 1 ton bags. Urea bags are very strong with an inner plastic layer and an outer woven nylon layer. The bags are usually sealed by a sewing machine. Storage methods at different ports may vary. Major ports like Yantai are known to employ a standardised system of storing bagged urea. Bags are stored on dunnage with a layer of canvas laid over the dunnage so as to avoid bags coming in direct contact with the dunnage. The covering system normally entails all round bundling of 4 layers of bags followed by another 4 until a desired stack height is achieved. Upon completion of the stack, the entire stack is again covered with a second layer of canvas. It should be borne in mind that not all ports may employ such methods.



Urea in 50kg bags



Urea in 1 ton bags



Urea bags professionally stored prior to shipment

Urea is normally loaded on ships in bulk or bagged form. The bagged loading is generally quite straightforward, but for loading of urea in bulk, two methods are used.

Method 1

Huge steel meshed screens are placed over the hatch squares. The mesh openings are usually 2 cm x 2 cm. Hatch covers are usually kept in a tented position so that they are very close to the steel screen. Gaps between two screens are usually covered with urea bags. These measure are primarily intended for stevedore safety and to prevent caked fertiliser from falling into the holds. Once these arrangements are in order, several bags of urea are lifted onto these screens using a ship or shore crane by net slings. Stevedores standing on top of these steel screens usually cut open these bags individually and drop the urea through the mesh into the cargo hold. Caked cargo is usually broken down manually using shovels, mallets, etc. Therefore, cargo dropping into the hold will not have any caked cargo, the size of which would be in excess of 2 cm x 2 cm.

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Fertilizers from China (cont.)



Steel meshed screen arrangement on hatch opening



Urea being loaded onto conveyor



Steel screens with mesh



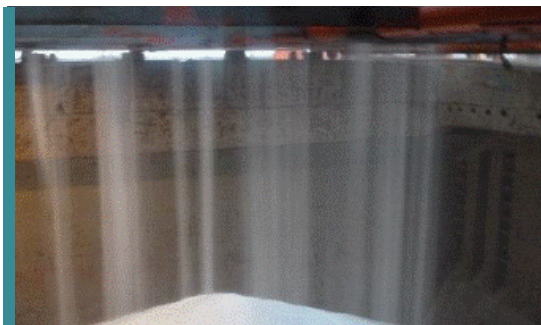
Overview of conveyor and steel mesh



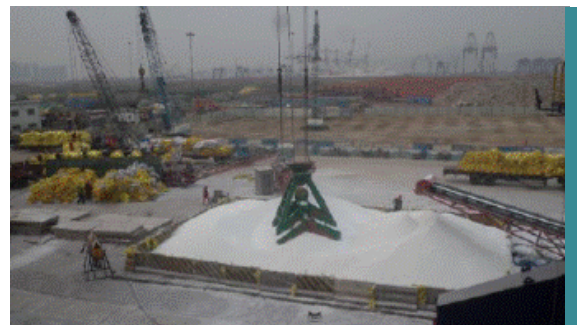
Urea bags being opened on the screens



Conveyor dumping cargo at loading berth



Urea dropping into the cargo hold



Cargo is being lifted by grab

Method 2

Bags are cut open on steel screens placed on top a conveyor belt. The conveyor belts transport the urea to a grinder unit where all caked urea is grounded. This urea is then transported back to the storage area by a conveyor belt. Grabs are then used to load this cargo on board.

Fertilizers from China (cont.)



Cargo is loaded by grab

Cargo Shortage

The most common type of claims are as a result of cargo shortage. For bulk loading, the bill of lading (B/L) quantity is usually ascertained by draught surveys arranged by the shipper. It is normal for the draught surveyors to protect shipper's interests. As a result, the B/L quantity may not reflect the actual amount loaded on board.

Disagreements over sea water density, draught readings, ballast water soundings and density are usual. In cases where such disagreements arise, it is common practice to shift the vessel to an anchorage whilst negotiations are ongoing. This will affect the vessel's schedule and further losses could be incurred.

Cargo Shortage - Loss Prevention

1. Owners should try to reach an agreement with charterers beforehand that the cargo quantity reflected on the mate's receipts (MR) or B/L should be ascertained by a joint draught survey amongst owners, charterers and shippers.
2. Hydrometer should be calibrated. The calibration certificate and previous calibration records should be available on board. For example, on a handy max bulk carrier, an error in density of 1 kg / m³ can easily result in a 50 - 60 tons difference.
3. Draft readings should be agreed upon at the draft reading stage so as to avoid potential disagreements at a later stage. In case of a disagreement, another set of readings should be immediately taken and efforts must be made to reach an agreed reading. If practicable, consider taking short video clips of the draft readings. This contemporaneous evidence could come in handy at a later stage in case of disputes. For example, on a handy max bulk carrier, an erroneous reading of the mid-ship draft value by 1 cm can easily result in a 50 - 60 tons difference. Combined with faulty density readings, this difference could be much more.
4. If the initial draught survey calculation reveals an abnormal constant, a fresh survey should be conducted immediately. This process should be repeated till such time that the reason for the abnormal constant is either found or until a

normal constant figure is arrived at. Shippers' surveyors are known to be quite adamant on using the calculated constant (K) which is derived after initial draught survey. On many occasions, the calculated constant is much less than the constant which the vessel has previously used (calculated constants are even sometimes in the negative). This naturally puts the vessel at a risk of cargo shortage at discharge port. Surveyors are reluctant to agree to use a constant stated in a vessel's trim & stability booklet / hydrostatic particulars. For determining accurate constants, it is crucial to ensure that vessels have no list and minimum trim to reduce the possibility of errors in ballast water and bunker figures. Pressing up of ballast tanks again after adjusting the vessel's trim should be considered.

5. In case of having to conduct a fresh draught survey, the Master should have the steel screens removed until the draught survey calculations are completed to the satisfaction of all parties.
6. The Chief Officer must conduct thorough intermediate draught surveys and compare readings with shore figures if possible so as to have an idea of the final loaded quantity before the final draught survey.
7. After final draught survey and in case of short loading, the Master must request shippers to load the balance cargo. If shippers agree to load, the Master must then ensure that the quantity being loaded is to his satisfaction either by conducting a tally of the bags or monitoring the drafts. If shipper refuses to load, the Master must inform all parties immediately.
8. If possible, after completion of loading, the Master must request for a joint survey to seal all hatches.
9. For further guidance on draught surveys, refer to North's Loss Prevention guide on draught surveys.

Cargo Caking & Impurities

Some caked fertilizer is brittle and is easy to crumble by hand or with mallets. Some is not brittle. As the steel screen mesh size is usually 2 cm x 2 cm, it is usual to find caked cargo smaller than this size in the cargo holds. Larger pieces are also known to "slip in" through small gaps in the hatch cover and mesh. In spite of taking usual precautions, it is usual to find more than 2% of the cargo in caked condition due to the characteristics of the fertilizer.

While bags are being cut by the stevedores on top of the steel screens, it is common for plastic strips from these bags to inadvertently mix with the cargo and drop into the hold. Some ports specially employ stevedores who are assigned to keep picking out these plastic strips on a regular basis. It is however impossible to collect all the strips. Entire empty plastic bags have also been known to find their way into the cargo holds through gaps between the hatch cover and mesh. This has led

Fertilizers from China (cont.)

to large claims in the past after this plastic damaged some agricultural equipment that it was put through.



Caked Urea



Caked urea visible in cargo hold



Impurities from plastic bags

Cargo Caking – Loss Prevention

1. Since the caking of fertilizer and the presence of impurities is perceived to be an unavoidable problem due to the loading method employed, owners should try to reach an agreement with the charterers beforehand so that the MR and B/L can be claused accordingly. Though shippers are reluctant to have any remarks inserted on the MR or B/L, this is the most effective way of protecting ship's interests.
2. As far as is practicable the Master should have crew members standing by at each hold for monitoring of loading operations.
3. Any caked cargo that cannot be crumbled should be rejected by the ships staff and a watchful eye should be kept to ensure that such caked pieces do not "slip into" the hold.

4. Any impurities noted by the ship's crew should be immediately brought to the attention of the stevedores who should remove these impurities immediately.
5. Crew members should also frequently check the condition of the bulk cargo loaded inside the cargo hold to monitor for caked cargo and impurities. Any hard and large caked cargo and impurities should be brought to the attention of stevedores and removed immediately.
6. If practicable crew members should take as many photos as possible to record the cargo condition.

Wet Damage

The steel screens deployed on the top of the hatch openings are large structures which take on an average 20 – 30 minutes to deploy / remove. In case of sudden onset of rain, the hatch covers cannot be closed due to the presence of these steel screens thereby exposing this water sensitive cargo to rain. The situation can be worsened if the screens are on multiple hatch openings.



Steel Screens

Cargo Wet Damage – Loss Prevention

1. Weather forecasts should be carefully monitored and hatches should be closed in time before the onset of rain.
2. The effective used of radars can be considered to monitor the presence of rain.
3. Only the required hatches (where loading operation is in progress) should be kept open.
4. Try to reach a common understanding with the stevedores with regards to when loading should be allowed and when loading should be suspended as opinions may vary and could lead to disputes.
5. Accurate records of weather conditions should be maintained in the ships log books.

Fertilizers from China (cont.)

Pollution

Though most of the empty urea bags are properly disposed, it is common for several of these bags to find their way into the sea.



Urea bags dumped by stevedores in the sea

Pollution – Loss Prevention

1. Pictures of empty bags being thrown or blown in the sea can be taken and kept as evidence.
2. Consider bringing the issue to the attention of the stevedore foreman and request him to have these bags removed.
3. Consider lodging letters of protest to protect vessel's interest.
4. In serious cases, consider writing to the China MSA highlighting the problems faced.

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Published November 2016.