Jurong Port

No.66 of 2022

13 Jul 2022

To: All Port Users

**ADDENDUM 01 TO 2018 BEST PRACTICE GUIDELINES FOR STOWAGE AND SECURING OF STEEL CARGO**

Since the publication of the "Best Practice Guidelines for Stowage and Securing of Steel Cargo" ("the Guidelines", ref. Port Circular No. 49 of 2018), Jurong Port has been gathering and documenting stowage issues for steel cargos from our daily operations and now shares such information for free to all Port Users in the form of periodic addendums.

This will ensure the Guidelines remain up to date and relevant and continues to serve the purpose of continuously ensuring worker safety, improved cargo integrity and enhanced port productivity over time.

Addendum 01 contains supplementary and additional information regarding steel cargo stowage and should be read in conjunction with the Guidelines. The Guidelines, with the accompanying Addendum 01, will assist vessel Masters' and ships' officers, port captains, load port agents and stevedores, charterers and shippers, in the loading of steel cargo bound for Malaysia and Singapore.

## COMPLIANCE TO ADDENDUM 01

We remind all port users that Addendum 01 is effective from 18 Jul 2022. However, to ensure that all port users have sufficient time to comply, there will be a 3-month transition period (from effective date) during which non-compliance will not attract any penalties.

During this 3-month transition period from effective date, Jurong Port will review each steel shipment onboard prior to discharge. All poor and unsafe stowage observed will be communicated to port users (i.e. agents, carriers, operators, vessel owners, load ports, consignees) and remedial actions will be recommended accordingly.



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Jurong Port will continue to engage the industry and port users to create better awareness amongst all port users and improve stowage and securing of steel cargoes on vessels.

Should any port user have any queries or require further clarification, please do not hesitate to contact Stowage Team (stowage@jp.com.sg)

Your Sincerely
Samuel Siew
President, Operations and Technology
For Jurong Port Pte Ltd.

(This is a computer generated circular and does not require a signature.)

NB – Stowage Guideline Addendum 01 is attached

# ADDENDUM 01 – Steel Pipes, Structural Steel, Combined Stowage & Rebar

This Addendum is written in consultation with Brookes Bell and contains supplementary information to the 2019 *Best Practice Guidelines for Stowage and Securing of Steel Cargoes* (the Guidelines) published by Witherby Publishing. This Addendum is to be read in conjunction with the Guidelines.

Since the publication of the Guidelines, Jurong Port has been gathering and documenting stowage issues for steel cargos from our daily operations and now shares such information for free to all Port Users in the form of periodic Addendums.

Such addendums will eventually be combined into a consolidated and revised version to the Guidelines and republished. Addendum 01 is available on our website (http://www.jp.com.sg/faqs/stowage-requirements/)

# ADDENDUM 01 – Steel Pipes, Structural Steel, Combined Stowage & Rebar

## Rebar

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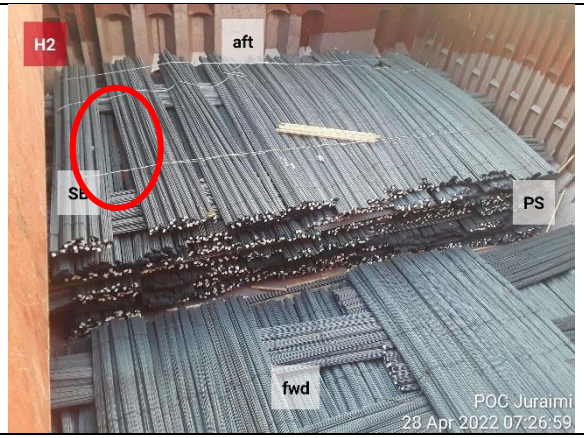
|  |  |
| Hatch 2 stowage of rebar in alternating fore-aft & athwartships directions between tiers.<br><br>Riggers should exercise caution when moving over cargo top due to gaps between tiers (red circle) and safe access across cargo top should be considered when rebars are being loaded in such configurations. ✓ | Recommended stowage of rebar in fore-aft direction. Dunnage laid out between tiers as shown. ✓ |

# ADDENDUM 01 – Steel Pipes, Structural Steel, Combined Stowage & Rebar

## Pipes

For stow of pipes with different length, the longer pipes should be stowed under the coaming while shorter in the open hatch space. Stowing shorter pipe bundles under the coaming (as shown in the photograph above) results in swinging of cargo during discharge, as equipment will be challenging to be used in this area.

Bundled pipes with sufficient length stowed in the open hatch area facilitating vertical lift. The under-coaming area is indicated by a yellow dashed line.

# ADDENDUM 01 – Steel Pipes, Structural Steel, Combined Stowage & Rebar

## Pipes

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<tr>
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<tr>
<td colspan="2">Left photo: Lack of dunnage results in a collapse of the stow.<br><br>Middle photo: Insufficient clearance space under the coaming (riggers need to crawl) to attach pipe hook for lifting. 0 This type of stowage may be facilitated if the upper stow pipes are pre-slung with nylon slings near both ends for direct discharging until sufficient safe clearance/access is formed under the coamings for use of pipe hooks.</td>
<td>Ample clearance at under-coaming for rigger to attach pipe hooks for lifting.<br>No over-stow of cargo.</td>
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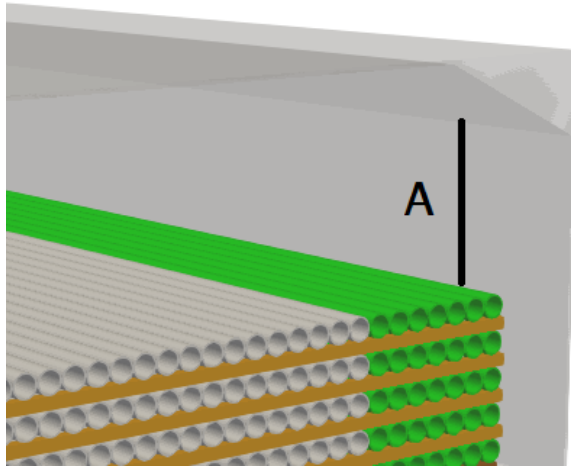
# ADDENDUM 01 – Steel Pipes, Structural Steel, Combined Stowage & Rebar

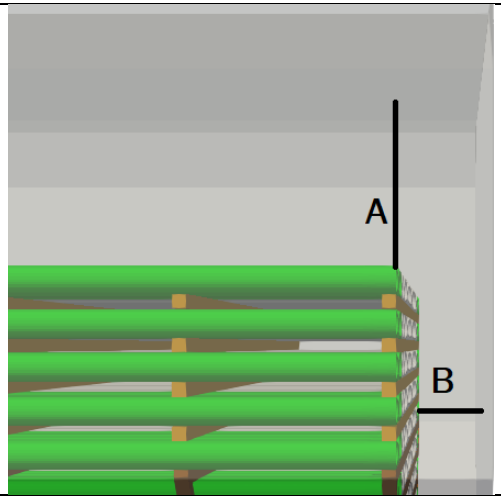
## Pipes




Port/starboard under-coaming areas.
Schematics showing recommended vertical clearance A from top of cargo to underside of overhung obstruction (e.g., undercoaming port / starboard).

This arrangement will ensure sufficient safe clearance for riggers to attach pipe hooks (without resorting to crawling) for discharge or equipment to handle the cargo units.

A = 2m (min)




Forward/aft under-coaming areas.
Schematic showing recommended vertical clearance A from top of cargo to underside of overhung obstruction (e.g., undercoaming area forward / aft)

This arrangement will ensure sufficient safe clearance for riggers to attach pipe hooks (without resorting to crawling) for discharge.

A = 2m (min)
B = 300mm (min), to ensure sufficient gap for proper dunnage between cargo and vessel bulkhead/sides for safe cargo stowage and utilization of pipe hooks and slings.

# ADDENDUM 01 – Steel Pipes, Structural Steel, Combined Stowage & Rebar

## Structural Steel (Flat bar)


3 rows of 4” x 4” wooden dunnage (spaced 1.5m apart) per tier ensures sufficient gap between tiers for forklift handling and prevent sagging of flatbar bundles.
Rubber sheets protecting flatbar against lashing wires. Closeup of wooden dunnage (middle picture).

Correct use of vertical and horizontal dunnage to allow for chain slings to be used safely.

# ADDENDUM 01 – Steel Pipes, Structural Steel, Combined Stowage & Rebar

## Structural Steel (Flat bar)

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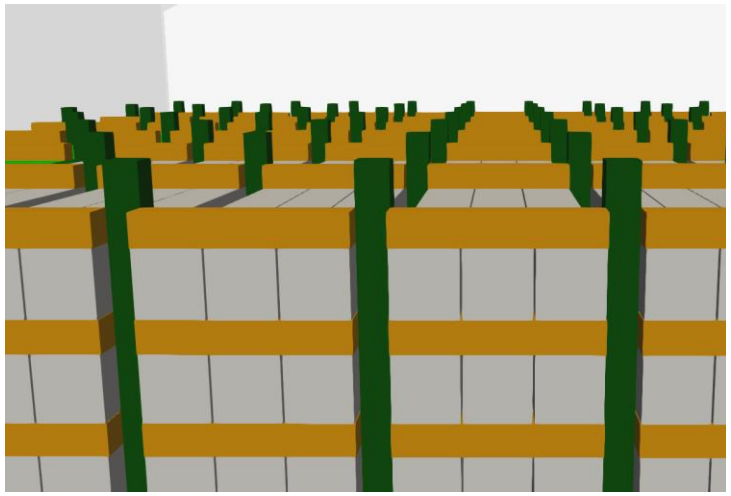
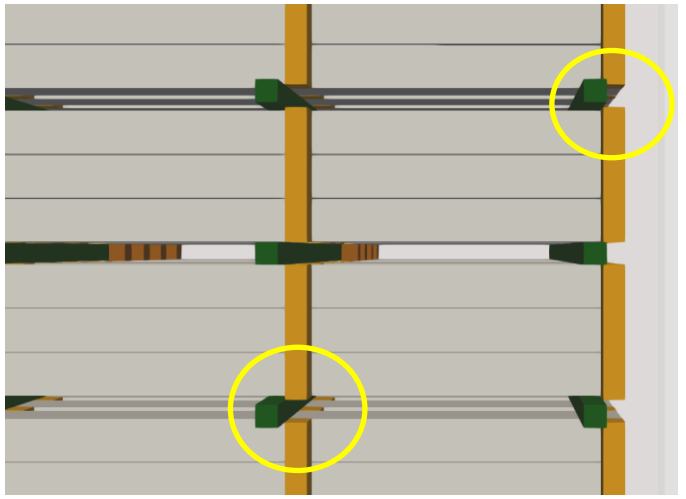
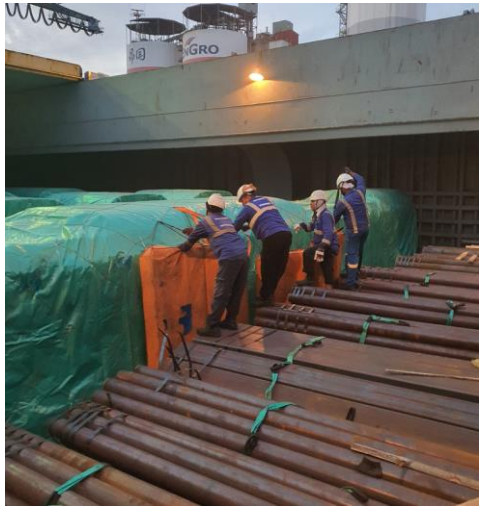
|  |  |
| Schematics showing a forward/aft view of flat bar and dunnage arrangement.<br>Vertical dunnage of 50-100mm thickness to be used for every three horizontal bundles (in green) to facilitate the discharging. Choking dunnage to be used to prevent cargo movement.<br>Each tier should be separated by 3 rows of horizontal dunnage (size 4”x 4”) | Schematics showing a top view of preferred stowage arrangement. Vertical separating and choking dunnage (in green) are used for every three horizontal bundles to form vertical gaps for easy handling.<br>No overlap of horizontal dunnage preferred (yellow circle) to facilitate handling.<br>Ensure sufficient gap (100mm min) for proper dunnage between cargo and vessel bulkhead/sides for ease of discharge and prevent cargo damage. |

# ADDENDUM 01 – Steel Pipes, Structural Steel, Combined Stowage & Rebar

## Combined Stowage of Different Steel Products



An example of incorrect and inconsiderate stowage of two different cargo parcels at a single loading port for discharging at more than one (in this case two) ports – pipes were to be discharged at first port while wagons (green tarp) at second port.

The handling of both stows was restricted because all cargo units were partly stowed under the fore, aft and side coamings. The wagons for the second discharging port were not stowed in the fore and aft areas of the cargo compartment ensuring an easy direct stowage and lifting of the pipes at the first discharging port.

An example of inconsiderate sequence of loading and stowage in view of geographical discharging rotation of the vessel, which required a part discharging and back-loading of the cargo for the next discharging port. (picture shows protective mattress being put up over the wagons to prevent damage during pipe discharging)