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OPERATIONS EXCELLENCE INITIATIVE · PORT OF SOHAR

Housekeeping & Cargo Hold Cleaning

Clean while we work, and bring the right machine into the hold at the right moment.

OPS-INI-HKC-01	Rev 0.1 · Draft for review	Operations · Supervisors & Foremen	Dry Bulk · Break Bulk
Document	Status	Applies to	Scope

Operations Excellence Programme
Owner

1 Purpose

This initiative addresses two problems that end in the same place — a cargo hold that is not ready when the cargo is out of it.

- **Waste and dunnage build up inside the hold** because cleaning starts only after the hold is finished. By then the material has to be handled twice, in a space that is harder to work in than it was an hour earlier.
- **Cleaning equipment arrives late.** The loader is called when the cargo is nearly gone, by which time residue has packed into the sides and corners and has to be taken out by bobcat, by hand, and on occasion from a cherry picker.

Both delay hold handover, and hold handover delays vessel departure. The aim is to keep the hold clean as it empties, and to have the machine best suited to the cargo in the hold before the cleaning becomes manual work.

> **A hold that is cleaned as it empties does not need to be cleaned when it is empty.**

2 Where we stand today

Three things describe the present position, and the third is the one that has to be fixed first.

- **Cleaning runs behind the operation.** It begins once a hold is complete, and in practice often once the whole vessel is discharged. Dunnage and waste accumulate in the meantime and obstruct the gang.
- **Containers are the constraint, not the labour.** Skips are not always available when they are needed, and the skips now supplied are smaller than the ones they replaced, which multiplies the number of trips to the disposal area.
- **None of this is measured.** The productivity report records twelve delay categories across CSO, Vessel and Other. Not one of them covers cleaning. Hold cleaning time therefore disappears into net working time, or is booked against *Other Delay due to CSO*, where it cannot be separated out again.

> **THE MEASUREMENT GAP**
>
> Because cleaning time is not recorded, there is **no baseline**. Nothing in this document can be shown to have worked, and nothing can be shown to have been a problem in the first place — only described. Recording cleaning time is the cheapest item in this initiative and should be in place before any of the operational changes are judged.

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PART A — HOUSEKEEPING AND WASTE REMOVAL · inside the vessel and on the quay

3 Inside the vessel

Cleaning is to be carried out alongside the discharge, not after it. Where manpower does not allow a cleaning party in every hold at once, the minimum standard is that a skip box is placed in each hold, or in the holds carrying the highest priority, so that dunnage and waste go straight into a container instead of onto the tank top.



Dedicated skip boxes — dunnage and steel kept separate at source. Placed inside the hold, they are shifted with the cargo as the hold empties and lifted out full.

The supervisor on the vessel monitors cleaning progress through the shift and ensures it does not interfere with the discharge. Cleaning progress and hold priority are also to be covered on the General Supervisor's shift round, where the condition of a hold is already being looked at for safety reasons.

4 On the quay

Waste removal during the operation

- At each berth, designate a **fixed, safe area clear of the operation** where full skip boxes are set down before they are moved to the disposal area.
- Check the disposal area through the shift and coordinate with Oman Maritime Waste Treatment SAOC (OMWT) to clear full skips, so that an empty skip is always available and the operation is never held up waiting for one.

Suitable containers

- **Skip capacity.** The previous skip boxes hold approximately 9 CBM; the replacement units hold 6–7 CBM. The smaller unit increases the number of lifts and trips for the same volume of waste. The requirement to agree with OMWT is a minimum working capacity of **9 CBM** for general dunnage and waste.
- **Big bags for light waste.** Small dunnage and loose waste go into big bags rather than skips, which reduces the number of skip movements in and out of the vessel.
- **Buffer stock.** Enough skips on the terminal to cover a full shift on all working berths without a nil-stock event.

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5 Part A — current state to future state

Current state	Future state
Cleaning is performed after the operation is complete.	Cleaning is carried out continuously during loading and discharge.
Waste accumulates in the working areas.	Waste is contained at source and removed continuously through the shift.
The number of waste containers is insufficient for operational needs.	Sufficient containers are provided and positioned at each working berth.
No approved housekeeping work instruction is in place.	An approved Housekeeping Work Instruction is issued and briefed.
Housekeeping responsibilities are not clearly assigned.	Responsibilities are assigned by role, as set out in section 8.
Inspection and monitoring are irregular.	Housekeeping is a standing item on the General Supervisor's shift round.
Housekeeping standards vary between work areas.	One standard applies across all operational areas.
Housekeeping performance is not reported.	Housekeeping is measured and reported as set out in section 9.

PART B — CARGO HOLD CLEANING · the right equipment at the right moment

6 Equipment selection and timing

The present sequence is the same on every vessel regardless of what it is carrying: loader late, then bobcat, then men. The proposal is to choose the machine on the **cargo type and its condition**, and to bring it in **before** the residue has set against the hold sides.

Current state	Future state
The loader is deployed when approximately **20%** of the cargo remains.	The loader or excavator is deployed **earlier**, to prevent cargo packing into the hold sides and corners. The trigger point is still to be agreed — see section 7.

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Current state	Future state
Bobcats and men are used to clear the remaining residue.	Equipment is selected on cargo type and condition rather than by fixed sequence.
Hardened or compacted material is difficult to remove.	An excavator is used on vessels carrying hardened or compacted cargo.
Cleaning runs long, and a cherry picker is sometimes needed to reach cargo stuck on the hold sides.	Residue is prevented from setting on the hold sides, so the additional access equipment is not called for.
Hold handover and vessel departure can be delayed by extended cleaning.	Shorter cleaning time, earlier hold handover, and a safer hold to work in.

7 Earlier machine deployment — the open question

The direction is not in dispute: a machine that goes in earlier takes residue out before it hardens. The **figure** and the **method** are not settled, and they are the reason this document is a draft rather than a work instruction.

A figure of approximately **60% of cargo remaining** has been put forward, against roughly 20% today. At 60% remaining, the machine and the grab share the hold for a far longer period than they do now. That is a safety question before it is a productivity question, and it has to be answered before a trigger point is written into any instruction.

TO BE RESOLVED BEFORE APPROVAL

- **Do the grab and the machine work at the same time, or alternate?** If they alternate, the time the grab stands still has to be set against the cleaning time saved. If they work together, everything below applies.
- **Separation.** Exclusion zone around the machine, the grab's working corner, and how the operator is kept out of the grab's swing.
- **Communication.** Who directs the crane while a machine is under it, and by what means.
- **Access and egress** for the machine operator while discharge continues, and the means of escape from the hold.
- **Risk assessment and method statement** covering machine-in-hold during active discharge, approved before first use.
- **Which cargoes it applies to.** Free-flowing material may not need an early machine at all; hardened and compacted material is where the case is strongest.
- **The trigger figure itself.** 60% is a proposal, not a finding. It should be confirmed on a small number of vessels with the time recorded, and set from that.

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8 Responsibilities

Role	Responsibility
Supervisor (vessel)	Ensures skip boxes are in the holds and in use from the start of discharge. Monitors cleaning progress through the shift and ensures it does not delay the operation. Calls for skip exchange before the skip is full.
Foreman (gang)	Keeps dunnage and waste out of the working area at source — into the correct skip or big bag, not onto the tank top or the quay.
General Supervisor	Covers housekeeping and cleaning progress on the shift round, alongside the safety check. Identifies which hold has priority for cleaning and records the berth condition.
Operations planning	Designates the skip set-down area at each berth and maintains the buffer stock of skips across working berths.
OMWT interface	Clearance of full skips from the disposal area and return of empties, to the agreed capacity and response time.

9 How this will be measured

The original intent included performance indicators but did not name them. The following four are proposed, and the first of them is a precondition for the rest.

Indicator	Definition and source
Hold cleaning time	Start and finish of cleaning per hold, recorded on the gang tally. **This does not exist today** — it requires a cleaning line to be added to the productivity report. Without it, nothing else in this section can be assessed.
Hold handover time	Hours from last cargo out of the hold to the hold being accepted. Derived from the same record.
Skip availability	Number of shifts on which a skip was required and not available. Recorded by the supervisor as an exception, not as a routine count.
Berth housekeeping condition	Pass or fail per working berth on the General Supervisor's shift round, with the reason noted on a fail.

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NO TARGETS IN THIS REVISION

Target values are deliberately not set here. A target measured against an unknown starting point cannot be judged met or missed. Targets are to be set after a baseline period — proposed as the first full month in which cleaning time is recorded.

10 Decisions required

Item	Decision needed	To be taken by
Machine trigger point	Confirm whether the machine enters at a fixed percentage of cargo remaining, and at what figure. 60% proposed against 20% today.	Operations Management with HSE
Machine and grab in one hold	Simultaneous working or alternating. Risk assessment and method statement approved before first use.	HSE with Operations Management
Skip capacity standard	Agree a minimum working capacity of 9 CBM with OMWT, and the buffer stock to be held on terminal.	Operations Management with OMWT
Cleaning time on the report	Approve the addition of a cleaning record to the productivity report so that a baseline can be established.	Operations Management
Work instruction	Issue the Housekeeping Work Instruction once the items above are settled.	Operations Excellence Programme

11 Implementation sequence

1. **Record cleaning time.** Add the cleaning record to the productivity report and brief the supervisors on it. Nothing else starts before this, because nothing else can be judged without it.

2. **Establish the baseline.** One full month of recorded cleaning and handover time across dry bulk and break bulk vessels, under the present method.

3. **Settle the skip provision.** Capacity, buffer stock and response time agreed with OMWT. Set-down area designated at each working berth.

4. **Start cleaning in parallel.** Skip boxes into the holds from the start of discharge. This part carries no new safety question and need not wait for the machine decision.

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5 **Resolve the machine-in-hold question.** Risk assessment and method statement, then a trial on a small number of vessels with the time recorded, and set the trigger figure from the trial rather than in advance.

6 **Issue the work instruction and review.** Publish the standard, brief it, and review against the baseline at the end of the first full period.

Prepared by — Operations Excellence Programme

Reviewed by — Operations Management

Approved by — Date