

### Regulations governing recycling of ships





## 2009 Hong Kong Ship Recycling Convention

IMO **global convention** aimed at setting standards for recycling of ships.

Entry into force 26 June 2025, with phased application for ships in service and immediate application for end-of-life ships and ship recycling facilities.

**Enforcement through** flag state and port state control inspections.



## EU Ship Recycling Regulation

**Regional regulation** setting requirements for in service ships calling at EU ports (regardless of flag) and EU flagged end of life ships.

Entry into force 2013, with **phased application from 2018**.

**Enforcement through** flag and PSC **inspections**.



#### **Basel Convention**

Global but **not maritime specific**. Controls on the transboundary movements of hazardous wastes.

Ships going for recycling are defined as waste and must comply with BC requirements even if still operational.

**Enforcement** between exporting and importing state being in place. **Not flag related**.

Complex regulatory framework which needs sorting out ...

## **Hong Kong Ship Recycling Convention**





## Inventory of Hazardous Materials

#### All in-service ships to comply with:

- Flying the flag of a state party to the Convention, or
- Calling at a port in a country that is a party to the Convention.

#### When?

- New builds: From 26 June 2025.
- Existing ships: By 26 June 2030, however, we strongly recommend the next harmonised survey after 26 June 2025.

#### What is required?

- A valid Inventory of Hazardous Materials (IHM).
- An International IHM Certificate, valid for 5 years, issued by the RO or flag State.



#### **Final Survey**

### All in service ships going for recycling to comply if:

- flying the flag of a state party to the Convention, or
- being recycled in a country party to the convention.

#### When?

Any ship going for recycling on or after 26
June 2025

#### What is required?

- IHM part I and valid certification
- IHM parts II & III
- a ship specific recycling plan from an authorised recycling facility
- An international ready for recycling certificate. Valid for 3 months. Issued by RO or flag State.



## Ship Recycling Facility Certification

All **recycling facilities** operating in countries party to the convention.

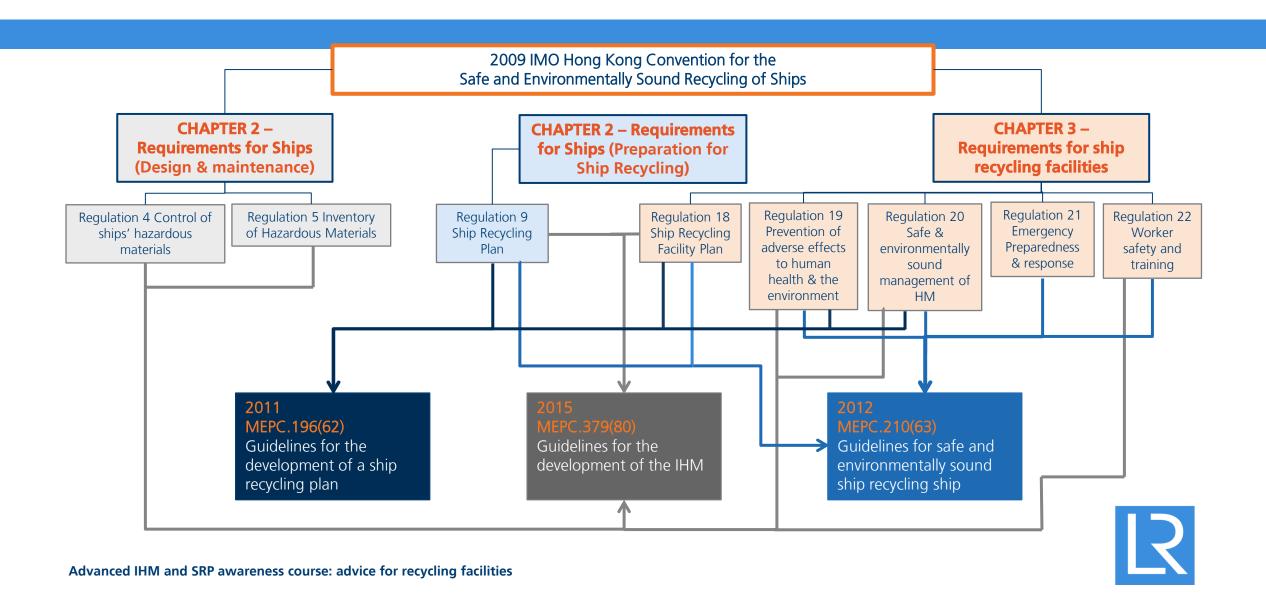
#### When?

**SRF certification** need certification from **26 June 2025.** 

#### What is required?

- Ship Recycling Facility Plan
- Produce ship specific recycling plans
- Access to appropriate medical and waste treatment facilities.
- Be authorised by their competent authority
- Hold a valid Document of Authorisation for Ship Recycling (DASR).

### IMO Hong Kong Convention, 2009: Regulations & Guidelines

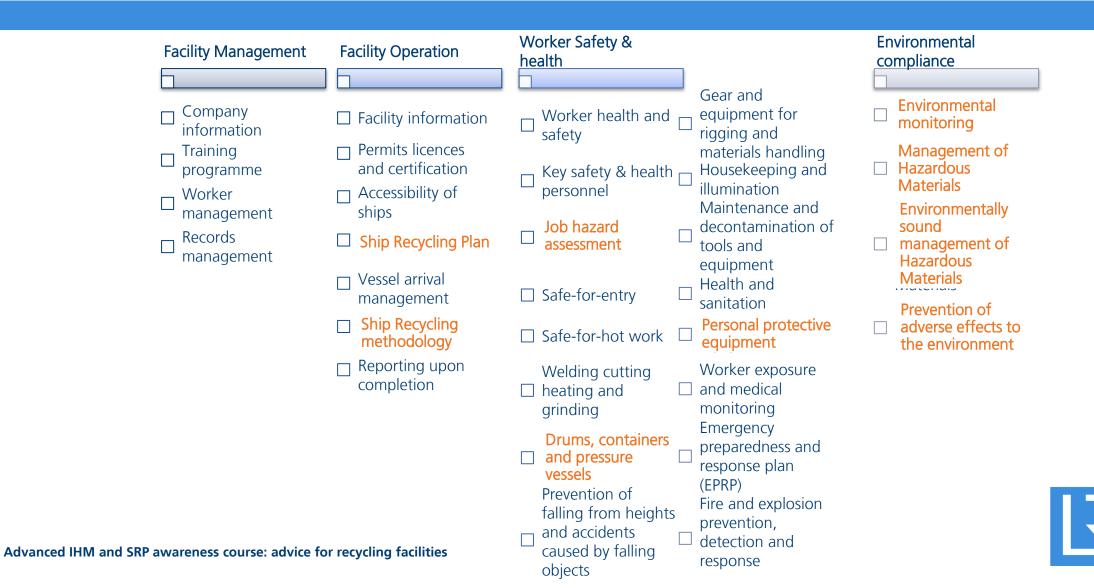


## Hong Kong Convention 2009: The responsibilities of the ship owner & recycling facility





## Guidelines for Environmentally Sound Ship Recycling (MEPC.210(63))





## The process for existing vessels and those at build

#### **EXISTING VESSELS**

Shipowner submits IHM Desktop IHM approval Onboard verification survey checking IHM against onboard items

Statement of Compliance (SoC) issued with a 5-year validity and the shipowner maintains IHM

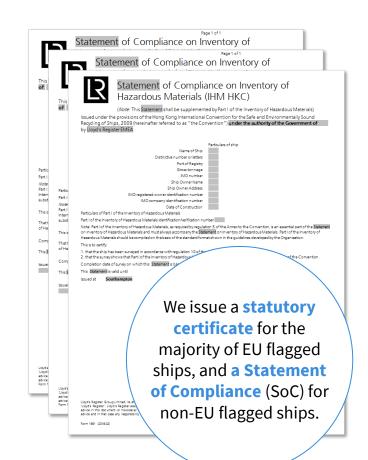
#### **AT BUILD**

Shipbuilder compiles IHM based on MD and SDoC

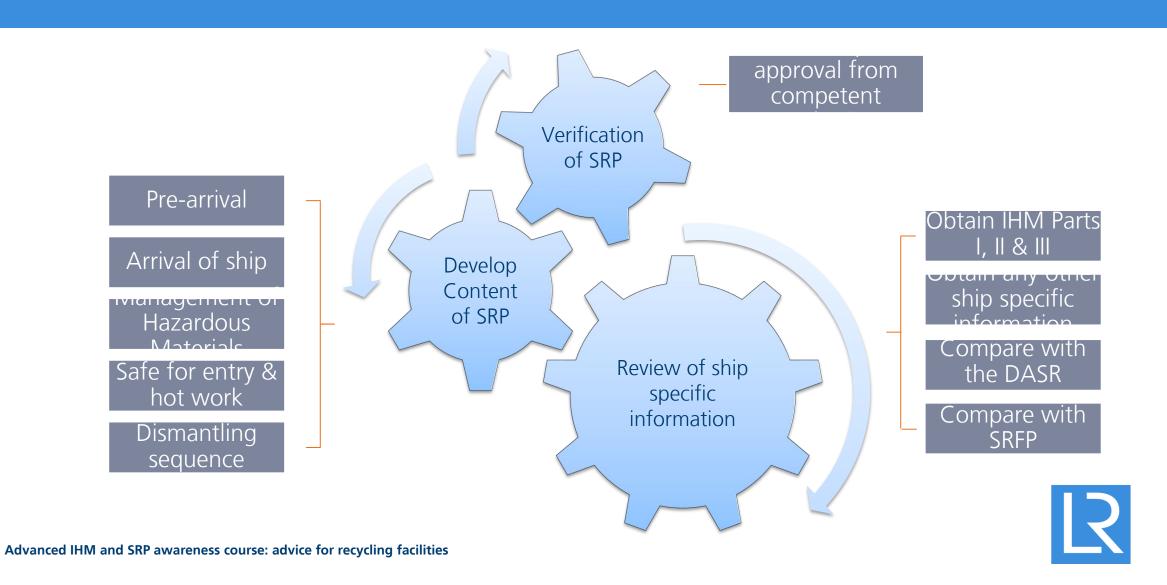
Site surveyors review paperwork/ undertake onboard checks

Site surveyors approve IHM and issue SoC

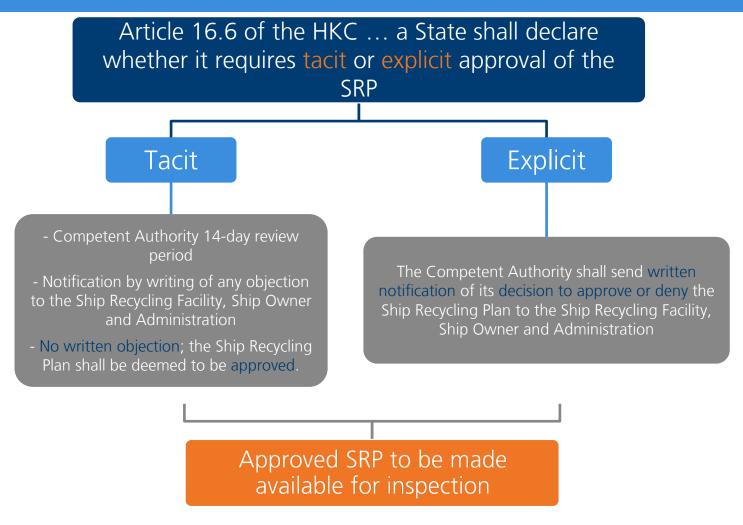
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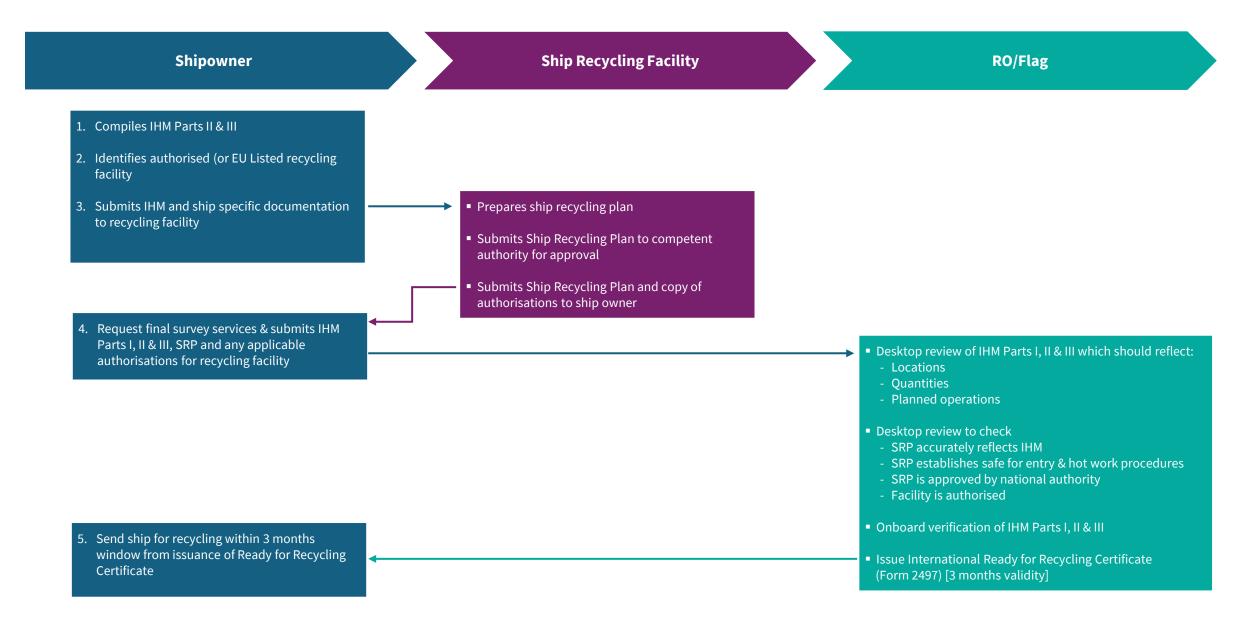
## Guidelines for Environmentally Sound Ship Recycling (MEPC.196(62))



### Approval of the SRP







## Sample Process - Ship Recycling, the Responsible Ship

- Selection of a HKC-compliant SRF
- Provision of IHM Part
- Provision IHM Part II and III (Table Cand D)
- Agreement on processing of recycling, e.g.
- Review of ship specific documents by SRF for:
- · Ships dimensions and type
- IHM, DASR, SRF or RRC
- Preparation of ship specific SRP acc. to IMO Guidelines.
- Request Final Survey from Classification Society for issuance of Ready for Recycling Certificate (RRC)
- IHM Part I, II, III and SRP
- Provision of RRC to SRF

- Prepare for inspections and clearance
- Collection of documents required for clearing the ship
- On arrival at final destination ensure full clearance by relevant governments.
   Applying HSE Procedure phase

Step 1 – Ship Owner



Step 2 – Ship Recycle Facility



Step 3 – Ship Owner



Step 4 – Ship Recycle Facility



#### Arrival of ship at SRF

- Hired master steers ship under guidance of a pilot
- Ship is secured in its position
- HazMat
- Batteries are delivered to approved recyclers

- Decontamination and recycling of the ship including HSE measures
- Removal of equipment and components.
- HazMats incl. gas freeing and tank cleaning, removal of oil.
- Dismantling sequence to be prepared bearing in mind that no blocks shall fall in the intertidal zone.
- Removal of equipment and components.
- Material Management:

Step 6 – Ship Recycle Facility



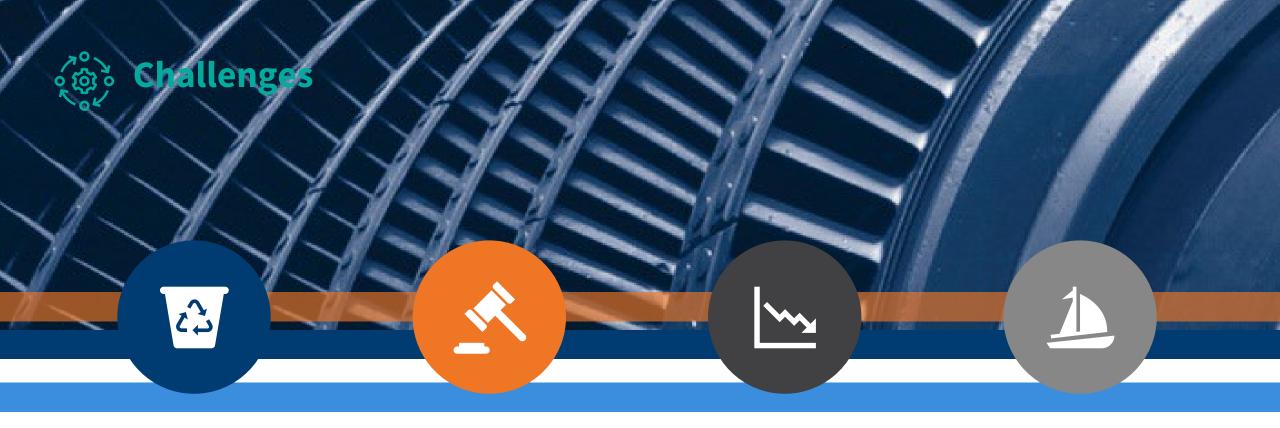
- Clean up of SRF. After finalization of ship recycling, prepare and send reports and documentation to owner:
- Incident reports
- Waste manifests
- Completion reports
- Statement of Completion



Lloyd's Recycle Facility



g together fer world



Requirement of the hong kong convention: IHM surveys and certification are to be carried out and recycling only allowed at authorized facilities

Basel convention and basel ban amendment: controlled movement of hazardous wastes across international borders and prohibits export of from OECD states to non-OECD member states.

Limited growth capacity of yards globally for post panamax vessels

China is no longer accepting foreign flagged ships to be scrapped



Working together for a safer world

# Safety and Environment: Pictures 2009 - 2014 Facility Management???



## Safety and Environment: Pictures 2009 - 2014 LR Visit in 2010 ???



A ship recycling facility in Bangladesh (Robin Townsend).



(HMS) Rodney, Revenge and Nelson being broken in Inverkeithing in 1949. (© RCAHMS (Aerofilms Collection). Licensor www.rcahms.gov.uk)



Barefooted workers carry plates manually (Robin Townsend).

to a huge public outcry what had been an unregulated



A mixed asbestos and glasswool landfill (Robin Townsend).



An oil pit on the beach (Robin Townsend).



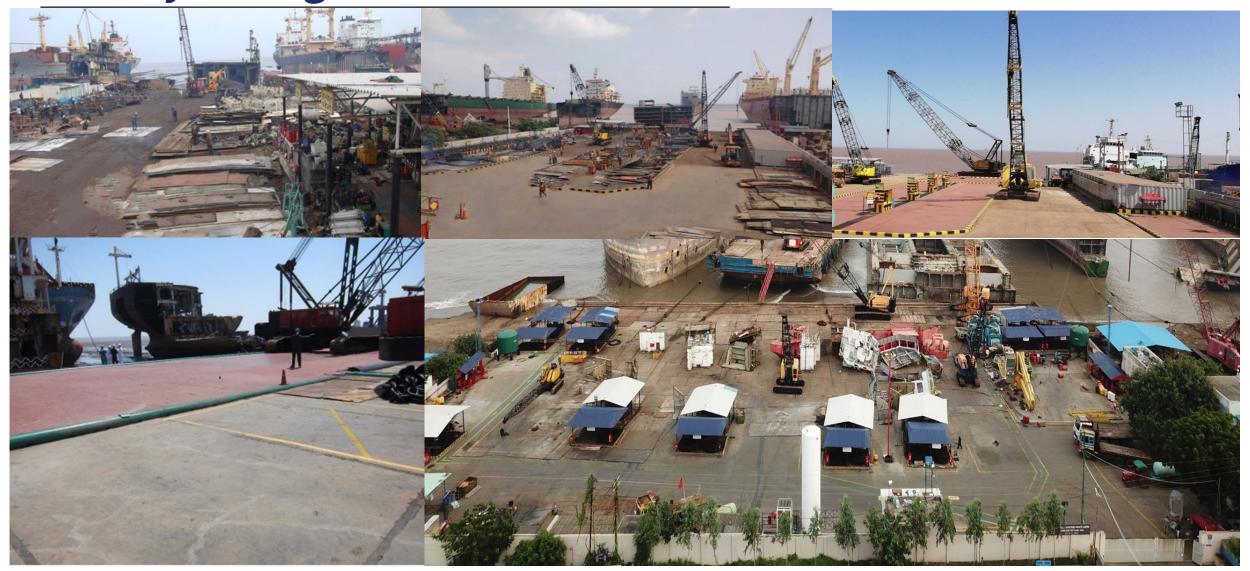
#### **Ship Recycling**

Practice and regulation today



Lboyd's Register | Facility Operation

# Safety and Environment: Pictures 2015 – 2020 Facility Management



## Improved training and external trainers

Enclosed space entry/rescue training

Working at height training





## Fire-fighting training



## Working over water training



Health and Wellbeing: Hospital, PPE, Fire Brigade





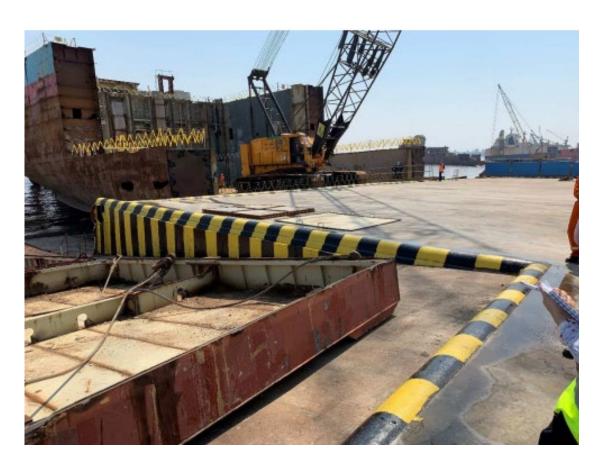


WASTE ASBESTOS STORAGE AREA.

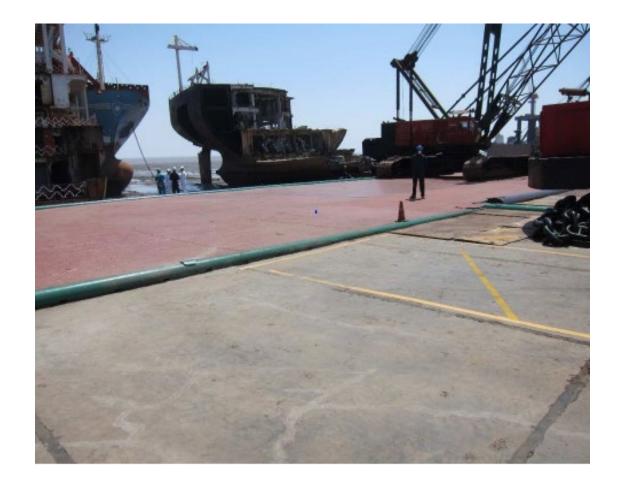


## India Ship recycling methodology

Indian yards adopt the beaching/intertidal landing method. Primary cutting of the hull is mainly conducted in the intertidal zone using the interior of ship as an impermeable floor.



Secondary cutting on impermeable floor with drainage.



### PPE

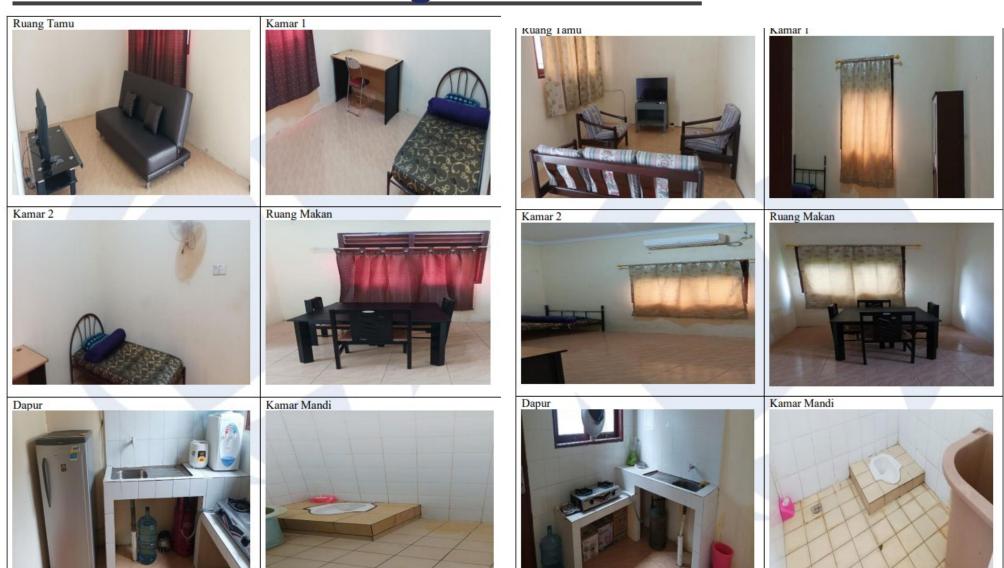
Helmets, shoes, safety goggles, gloves and respiratory masks worn by cutters.



Trained workers with full body PPE.



## **Health and Wellbeing: Accomodation**



# Health and Safety: Work at Height, Over Water Handling of Hazardous Materials

#### Rescue equipment













EXIT



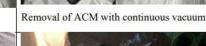
Pictures of Enclosure Room for removal of ACM on Vessel



Enclosure Room from outside



Removal of ACM with spraying of water









Vacuuming done across the area after the work is completed

#### Lloyd's Register

### Developments in Infrastructure of LR Certified yards- HKC Compliance+ EUSRR (Present)

Impermeable re-enforced concrete with drainage, use of double layered steel structures in intertidal zone, use of crane barges, heavy-duty cranes & winches, slag catchers, better facilities for workers, correct PPE and downstream waste mgmt.



2019





# Thank you

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