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British Marine Aggregate Producers Association

Common Measures & Contractor Minimum Standards for the Management of Health, Safety & Environmental Protection during Ship Repair Operations.

The measures set out below shall be regarded as best practice and where practicable adopted by all Association member companies when undertaking major works, dry-docking and refits of their vessels, with the objective of achieving from prime contractors and shipyards, a common standard of delivery in Health, Safety and Environmental protection performance during the execution of ship repair operations.

1. Contractor Selection

- 1.1 Due regard & weighting shall be given to a contractor's previous safety and environmental performance when undertaking the selection of contractor or shipyard for the award of a repair contract. Safety, Environmental and Management accreditations shall contribute towards weighting.
- 1.2 A Management Systems (MS) audit of a prime contractor or shipyard shall be undertaken by each member company prior to the award of a first repair contract by the respective company.
- 1.3 For any subsequent work, a pre-contract meeting shall be undertaken between the respective member company and any previously employed prime contractor or shipyard, including meeting with key contractor's personnel having SHE & operational responsibility.
- 1.4 Prior to the award of a repair contract, a member company shall establish that a satisfactory level of competence exists in use and understanding of the English language by the proposed contractor's management team.

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- 1.5 Each member company shall verify the nationality groups to be employed by the prime contractor on the proposed contract and shall identify any potential communication conflicts or difficulties which may arise, together with any measures in place to overcome safety or environmental protection risks.
- 1.6 The principles for management of work shall be agreed in advance of the award of a repair contract;-
 - (i) The contractor will be responsible for the management of work to HSE/national requirements whenever the vessel is located at or adjacent to the contractor's premises.
 - (ii) The Company/ vessel's Master will be responsible for the management or work to Merchant Shipping (MS)/ MCA (COSWP) requirements (or equivalent International/European standards) whenever the vessel is located remote from the contractors premises.
- 1.7 A pre-contract meeting or MS audit shall verify to the extent necessary in each case;-
 - (i) The existence of operational procedures e.g. for docking vessel, lifting operations, management of flammable gases, use of cherry-pickers, access to dock bottom, restrictions when blasting & painting etc.
 - (ii) The availability of established/ documented Safe Systems of Work e.g. working at height or within enclosed spaces.
 - (iii) The availability, effective and established use of documented Risk Assessments (RAs).
 - (iv) The use of an established and effective Permit to Work (PTW) System.
 - (v) A review of accident reports & implementation of corrective actions.
 - (vi) An overview of the contractor's accident categorisation, stats, trends and causation analysis.
 - (vii) Procedures for identifying/ reporting near miss/hit, hazard identification.
 - (viii) The duration of employment, training history & competence verification of the contractor's workforce.
 - (ix) An evaluation of the contractor's track record wrt HSE investigations & insurance (negligence) claims made within the previous 5 years.
 - (x) The contractor's contingency planning arrangements, particularly with respect to fire, flooding, recovery of personnel from locations within a vessel & evacuation of all personnel from a vessel.
 - (xi) Procedures for emergency preparedness & local arrangements for contact with the Emergency services.
 - (xii) The contractor's ISPS or other security provisions.

- 1.8 Each member company shall, prior to the award of a repair contract, establish with the prime contractor or shipyard, the following;-
 - (i) Procedures for the management of statutory responsibilities e.g. PUWER, COSHH, LOLER etc (including equivalent International/European standards).
 - (ii) Procedures for the calibration & certification of equipment including special tools and lifting equipment.

2. Management of Work

- 2.1 Where practicable, a single gangway or point of access to the vessel from the wharf or dockside shall be provided for the workforce. A separate access to the crew accommodation for the exclusive use of crew may be provided if necessary.
- 2.3 A second gangway or point of access may be provided for use in emergency only.
- 2.4 A tally system shall be utilised to monitor & account for all personnel (without exception) on board the vessel during the refit.
- 2.5 Where provided, use of the tally system shall be rigorously enforced with sanctions applied. A 3rd failure to comply with the tally system by an individual shall result in exclusion of the person from the vessel for the duration of the refit.
- 2.6 To ensure a minimum level of ISPS compliance and general security provision, a security watchman (contracted) shall be utilised at the gangway when no perimeter security is available at contractor's premises or wharf.
- 2.7 One member of the ship's crew or a person employed for the purpose shall be up and awake at all times during the refit on a 24/7 basis, (the watchman).
- 2.8 When contractor's personnel are on board and work is in progress, a ship's officer shall be up and awake (duty officer).
- 2.9 During periods when work is in progress on board, a ship's officer shall be appointed to dedicated safety/security/environmental monitoring duties (duty officer).
- 2.10 The duty officer may change throughout the progress of work, however the relevant person shall be identified in the vessel's log/watch rota.
- 2.11 The duty officer may, but shall not necessarily be the vessel's On Board Safety Officer (OBSO). The safety monitoring duties and those of the OBSO are separate and distinct.

- 2.12 The principle responsibility of the duty officer is to observe operations and act to curtail or prevent any unsafe, hazardous or polluting conditions or behaviours.
- 2.13 Except to the extent of his/her own accountability, the duty Officer shall not be held personally 'responsible' for any accident or incident which occurs on board the vessel.
- 2.14 A daily work planning meeting shall be held early in the working day to plan/ discuss all operations for the following 24 hours, particularly those which may result in a safety conflict between the vessel's and contractor's personnel. All dangerous occurrences/ near miss/hits must be addressed at the daily meeting as first agenda item.
- 2.15 A meeting separate from the planning meeting may be held to issue permits and resolve potential permit conflicts.
- 2.16 At the contractor's premises, all enclosed space entry must be authorised through the contractor's PTW system. Individual company instructions may require the issue of an additional vessel PTW to all contractors directly employed by the Company who are required to enter enclosed spaces.
- 2.17 The management of all directly employed contractors brought on board the vessel by the owner/operator whilst at the prime contractor's premises shall be the owner/Master/Senior ship-board officer's responsibility. Directly employed contractors shall comply with the prime contractor's requirements whilst on his premises.
- 2.18 When the vessel is remote from the prime contractor's premises all personnel, irrespective of their employer, shall comply with the Master's instructions and owner or operating company's procedures absolutely.
- 2.19 The contractor shall at all times be required to make adequate provision for the recovery of hazardous or polluting substances drained/ recovered from ship's systems.
- 2.20 The contractor shall at all times on completion of work be required to remove from the vessel, any hazardous material or substance brought onto the vessel or generated during the course of work.
- 2.21 Ship's staff shall be responsible for undertaking all necessary isolations & blowing down of stored energy systems on board and shall provide relevant assurances to contractor's personnel. All isolations shall be logged in the relevant ship's records.
- 2.22 A 'tag out' system shall be employed by contractor's & ship's staff, jointly where necessary, to facilitate safe re-commissioning of systems.

- 2.23 All workers shall be advised that they are empowered to halt any hazardous behaviour which comes to their notice without fear of reprisal. This authority shall not be exercised in a malicious or vexatious manner.
- 2.24 All workers shall be advised that the reporting of accidents, dangerous occurrences and hazardous conditions is mandatory.
- 2.25 An evacuation of the vessel and personnel muster drill to test the contractor's contingency planning arrangements may be undertaken by the company with or without prior notice during the course of the repair period. This drill shall be logged in the ship's records.

3. Physical conditions

- 3.1 The gangway or access arrangements shall be provided by contractor whilst vessel is located at or adjacent to the contractor's premises.
- 3.2 The vessel's gangway shall not be used for access by contractor's personnel during repair operations. (An exception to this requirement shall be permitted upon first arrival of the vessel at the contractor's premises and immediately prior to departure when the availability of manpower or cranes may be restricted or unavailable).
- 3.3 The vessel's gangway must never be used to traverse the space between the edge of a dry dock and a docked vessel.
- 3.4 Wherever practicable the gangway should be securely landed directly upon the vessel's deck and secured to the ship's structure. Ship side rails should be cropped to facilitate this requirement where necessary.
- 3.5 Where it is not possible to land the gangway directly upon the vessel's deck then the landing position shall be confirmed to be of sufficient strength, and an adequate, secure and stable means of transferring from the gangway to the deck shall be provided (no piles of pallets etc.).
- 3.6 The gangway and immediate surrounds shall be adequately lit during the hours of darkness.
- 3.7 There shall be no obstructions either on board or ashore in the immediate vicinity of the gangway.
- 3.8 The gangway shall be provided with an adequate safety net or be closely fenced at the sides over its entire length to a height of at least 1.8 metres above the tread area. Provision shall be made to prevent anyone stumbling at the head or foot of the gangway from falling into the dock or water.

- 3.9 Upon arrival of the vessel and prior to the bulk of the workforce being permitted access, the vessel shall be surveyed by a representative of the ship and contractor's staff for significant unguarded falls from height either overboard/ into the dock, into the hopper or from a higher to a lower position onboard or within the vessel.
- 3.10 All identified significant potential falls from height shall be hard fenced with scaffolding or tensioned steel wire rope. Adequate stanchions and intermediate rails shall be provided in any such guarding. Any fall hazards subsequently created during works such as by the removal of structure or equipment must be similarly guarded.
- 3.11 Lesser potential falls from height such as those resulting from the removal of machinery space plates or the opening of tank lids shall be efficiently guarded to a similar standard as that above or at least by a patent device or temporary barrier comprising stanchions and panels or netting similar to that used by utility companies during street works ashore.
- 3.12 The use of rope, rags and/or hazard tape only, to warn of fall from height hazards is explicitly prohibited during repair works.
- 3.13 All operational openings in ships rails and bulwarks (gates etc.) shall be secured against accidental opening by two methods of closure.
- 3.14 All open hatches and soft patches not provided with a coaming shall be hard fenced with scaffolding to a minimum height of 1100 mm above the adjacent deck. Sufficient stanchions and intermediate rails to be provided to prevent accidental falls into such openings.
- 3.15 Hatches and other openings provided with a coaming must be efficiently fenced to a minimum height of 1100 mm above the adjacent deck area.
- 3.16 The practice of walking on conveyors as access routes to move about the vessel during refits shall be prohibited. This requirement shall be made clear to the contractor's employees at the outset of the repair period, appropriate notices should be posted where required.
- 3.17 Significant access and egress routes to all parts of the vessel and all emergency escape routes shall be identified by ship's staff to the contractor's personnel. The degradation or obstruction of all such routes, for example by oil, spillage, cables, hoses, machinery parts and debris or garbage shall be prevented throughout the repair period. The condition of all such routes shall be actively managed by the use of 'S' hooks and cable bridges where necessary.
- 3.18 All work at height shall be undertaken from a working platform appropriate to the task. Significant works shall in general be undertaken from a properly constructed scaffolding platform. Lesser tasks may be undertaken from a basket, cradle, mobile elevated work platform (MEWP) or an appropriate ladder.

- 3.19 Scaffold working platforms shall be fully boarded and equipped with adequate rails, toe boards and access arrangements to efficiently protect workers from fall from height. Sufficient lifts of scaffold shall be provided appropriate to the task.
- 3.20 All scaffolding structures shall be inspected weekly and tagged in accordance with company and national requirements.
- 3.21 A personal harness shall be worn and 'clipped on' for all work undertaken from cradles, baskets and MEWP's. Where the cradle or basket is suspended from a crane a separate 'harness line' shall be employed.
- 3.22 Scaffolders shall be required to wear a personal harness and 'clip on' when outside of a safe area and/or at risk of falling from height.
- 3.23 A suitable arrangement shall be provided to gain access to the vessel's cargo hopper by the contractor's personnel when required. These arrangements shall preferably comprise an inclined gangway or a scaffolding tower provided with a suitable number of lifts with adequate landings and inclined ladders provided.
- 3.24 Inclined ladders providing access directly from the bottom of the hopper to the coaming or use of the vessel's in service hopper access arrangements by contractor's personnel during refit work is expressly prohibited except for the most minor access requirements.
- 3.25 All openings in the hopper bottom which present a fall from height risk or which may cause a worker to stumble shall be efficiently fenced or covered. Temporary openings such as drainer boxes under maintenance may be guarded using portable panels and stanchions. Permanent openings such as dump valve apertures and duct keel doors shall be guarded with fixed fencing or covered with materials of sufficient strength to bear the weight of persons walking upon them and secured against dislodgement.
- 3.26 Any pressurised fire hose connected to the vessel's fire main in accordance with a contracted general service provision shall be connected and routed well clear of the gangway and principal access/egress route on the vessel. Any such hose shall only be disconnected on the written authority of the Master or Senior ship-board officer.

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