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certified Original Document. Certified Origin barrels of Marib light crude oil in the 11 center tanks, and with 7 of the wing timed don'tanks partly filled with ballast water. The 24" pipeline from shore and the two oil hoses from the seabed to the FSO turret are reported still oil filled ument (assumed volume approximately 4,500 m3).

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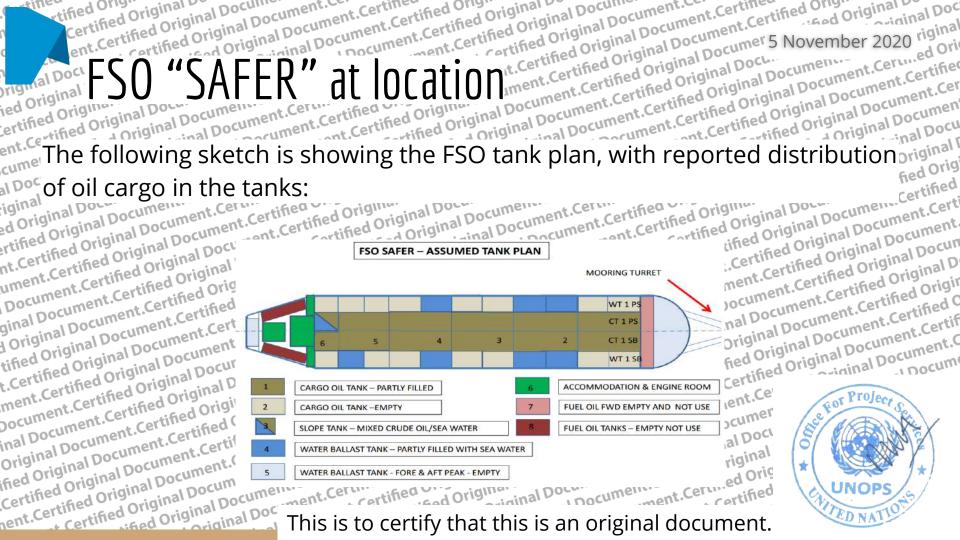
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When the normal operations of the FSO were I were in the common of the FSO were I were in the common of the FSO were in the common of the comm halted, the vessel ran short of fuel, causing the main of steam boilers to shut down, leaving only a small diesel engine generator for supply of electrical power. These cume boilers were initially supplying power for the large oil alphalcargo pumps being used for discharging the stored oil cargo. They are now considered out of order, as they have not undergone any maintenance for 5 years. The boilers were also used for supply of non-flammable inert gas to the cargo tanks, keeping the tanks and nearby surroundings explosion-free. However, due to the lack of topping-up of inert gas to the tanks after the shut-down of the steam boilers, the cargo tanks as well inal D'as the main deck and surrounding area is considered This is to subjected to hydrocarbon gases leaking from the tanks certify that this resulting in danger of explosion or severe fire. is an original document.

Certified Original Document. Certified Origin ertifemaintenance for 5 years has resulted in a further ent.Ce deterioration of the vessel and equipment, as well as or al pocthe oil hoses and pipeline to shore. Docufor FSO Safer, which invalidated all insurance nal Document. Certified Original Original Document. Certified Original Original Document. Certified Original Original Document. Certified Original Original Original Document. Certified Original Original Original Original Document. Certified Original Origin Certified Original Document. Certified Original Original Document. Certified Original Original Document. Certified Original Origin Certified Original Document. Certified Original O

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al Documblife. Efforts are ongoing in cooperation with the Special Envoy of the United Nations Secretary-General for Yemen and OCHA over the last 18 months to facilitate access of an international expert team to inspect the FSO, evaluate and

pocumassess the current condition, undertake light maintenance ginal designed to reduce the risk of an oil spill, and present led Origini

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Efforts to secure access for the expert team are ongoing. This allocument.Certified Original Document.Certified Original Document.Cert nal Docdocument has been developed on the basis of technical deviginal Document original exchanges with the authorities include original exchanges with the authorities, including technical meetings artified Original origi

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Consider Original Document. Tied Original Document. Certified Original Do iginal D spill. The assessment recommendations will provide evidence-based options for the needed and feasible follow-up actions, including their scale and Documscope. Implementation of any of the assessment options would proceed field origin based on consultations with and agreement by the relevant parties and lent. C certin stakeholders following the assessment. fied Original Document. Certified Original Document

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certified Original Document. Certified Origin dipocum light maintenance as far as possible, taking account of personal safety, fied iginal integrity of vessel and systems, practical access, and environmental cert rtified Olimitations.

Docume With reference to the intended light maintenance, It should be noted that no led contain systems and components onboard any ship can ever be restored to entitled or sifiled or ship can ever be restored to entitled or ship can ever be entitled or ship can ever t.Certifie Cerui-Cepermanent working condition, as these systems are de

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The inspections are planned to be executed with the cume following team:

A. Vessel inspections:

- 2 senior marine inspectors
- 1 Chief Engineer with local experience from FSO Safer
- 3 experienced technical inspectors
- l Orig **B. Sub-sea ROV inspections**
- t.Cert 2 ROV operators
- Docur 2 "NDT Operators
- inal D 4 divers
- ified (Will be conducted from the service vessel (tugboat)

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CVI of piping, valves and hoses

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ent.Certified Visual inspections and condition evaluation of the following items:

Close Visual Inspection (CVI) of turret bearings, potential rotation

iginal problems, pipe swivels, and structural deviations, cracks, etc.

CVI of chain stoppers and chain links locked into the stoppers

with the stoppers visual inspection of 6 x 6" anchor chains condition and corrosion levels near water line/splach zons

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original poc conducted, as components like anchor chain, chain stopper, loriginal Documer original valves, bearings and oil boses is not in the stopper original valves. Original valves, bearings and oil hoses is not applicable for this type of Certified Ori inspection. Certified Original sified Original Coriginal Doc

ment.Cc pending on safe access

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ertined Documentation from ABS reports and recommendations filed ent. Certi onboard should be reviewed and evaluated, in order to identify specific weak areas in the hull due to extensive corrosion.

The following should be subject to visual inspection, close visual inspection, where found applicables in o inspection where found applicable with regard to safe access, nt.Certifi especially with regard to indents, heavy corrosion and pitting:

Document.C Weather deck, especially in the cargo tank area tined Original Fore peak tank with stands Hull sides in the waterline area (from the service vessel - tug) tified Or Fore peak tank with structural interfaces with the turret frames t.Certifie Wing tanks both empty and used as ballast tanks

inal Documer The visual inspection of hull sides will also be made with original Duc NDT/UT spot checks, provided weather condition and acces

Greed Original the service vessel. No climbing will be conducted. Certified Inspection of cargo tank internals should be avoided due to gas. This is to certify that this is an original document.

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The different systems and equipment located on deck shall be subject to ent.Certifie visual inspection and condition checked, as follows but not limited to: cument.Ce

- ed Original Document. Certified Original ertified Original Document.Certified Orig ent.Certified Original Document.Certified Cargo deck piping, including cross-over manifolds with associated cument.Certified Original Document.Cert valves – condition, corrosion level and operability (end valves on Document Certified Original Document crossover with size 16")
 - iginal Document.Certified Original Document Fuel oil and diesel oil piping and associated valves - condition, d Original Document. Certified Original D corrosion level and operability (end valves on crossover size 12")
- Fire lines and fire extinguishers with associated valves condition, corrosion level and operability

Steam lines and associated valves to deck machinery such as

- mooring winches and old anchor windlasses- condition, corrosion level and operability
- Inert gas piping with associated valves, check valves and P/V valves as well as gas deck seal - condition, corrosion level and operability.

Possibilities for connecting an external inert gas incinerator should Original Doc

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Deck Equipment

visual inspection and condition checked, as follows but not limited to:

Deck machinery, mooring winches anchor windlass, etc. -

condition, corrosion level and operability shall be checked.

Deck machinery, 16 t lifting booms with rigging and winches -

Deck machinery, 25 t rotating crane on starboard side - condition,

Metering unit with associated equipment (located PS amidships) -

Fixed and loose firefighting equipment - condition, corrosion level

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Emergency fire pump and associated equipment, condition,

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Transfer Equipment

The different components and systems needed for discharging of the crude oil cargo shall be

subject to Close Visual Inspection and the actual conditions determined, such as, but not limited to:

Piping and associated valves on deck (20") - condition, corrosion level and operability.

- Condition of the transfer "goose neck" including ESD (Emergency Shut Down) valve PS aft with regard to general condition, corrosion and operability.
- Mooring hawser gear at stern, with accessories like, nylon hawser, chafing chain, associated shackles, pick-up lines, etc

The SOW includes inspection of all systems onboard the FSO, which will give a comprehensive of the SOW includes inspection of all systems onboard the FSO, which will give a comprehensive of the SOW includes inspection of all systems on board the FSO, which will give a comprehensive of the SOW includes inspection of all systems on board the FSO, which will give a comprehensive of the SOW includes inspection of all systems on board the FSO, which will give a comprehensive of the SOW includes inspection of all systems on board the FSO. tified analysis of the state of the FSO and all its structures and systems. The assessment of any L.Cert

equipment onboard used for transferring the oil cargo would include only inspection of that

inal C equipment as part of the larger assessment of the SAFER vessel. Maintenance of this system Origi

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The engine room should be overlooked, checked and reported with respect to:

Condition of access ladders, platforms, railings, etc.

Presence of toxic or explosive gases

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god General recommendations for necessary maintenance and repairs shall be presented.

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 $\sqrt{10}$ Specific listing of actions and recommendations related to maintenance, repair, replacements and

Humidity

Cleanliness

Corrosion

Lighting

testing of all components and systems as listed below shall be presented, together with any other

systems/components considered important to be included and implemented.

 $\mathbb{R}^{|\mathcal{V}|}$ The recommendations should reflect maintenance and modifications/repairs needed for neutralized

origi threat of an oil spill. iginal Document. Certified Original Document. Certified original Document. Certified Certified Certified This is to certified that the continuous continuous certified or the certified original Document. nent.Certified Origina. · Certified Original Docum wified Original Document This is to certify that this is an original document.

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Investigations and inspections shall be conducted on all parts of the cooling riginal Docume system, such as ent.Certified Original Document.Cer cument.Certified Original Documen ertifi system, such as al Document. Certified Original Docu

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- Corrosion NDT/UT thickness measurements should be made
- Plating condition
- Valve conditions and operability
- Corrosion protection system condition, operability
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- Investigations to be made of the status and condition of the protection ginal Document. Certified Original Document. Certified Origi

case of internal water leakages due to improper tightness of valves or corroded pipelines

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All components and piping system (including insulation) to be inspected and riginal Documer checked out, such as – but not limited to:

checked out, such as – but not limited to:

Boilers with associated valves and instrumentation

Fuel oil system with burners and associated valves, piping

- instrumentation Feed water systems with associated valves and instrumentation

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Engine Room – Cargo pump system ad original Document. Certified Original D All cargo pumps and associate steam turbines shall be inspected with respect to doriginal Document and condition, and tightness inclusive associated and conditions.

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Certific Inspection of Engine Room - Bilge system in cument. Certified Original Procumer 5 November Courtines and Original Procumer 5 November 1000 Certified Original Procumer 5 November 1000 Certif wells, pipes and associated monitoring/instructions and Original Documents of Original Documents (Certines and Original Documents). t.Certified Original Document.Cerun.ed Ori ment.Certified Original Document.Certified

Document.Certified Original Document.Cer All pumps, wells, pipes and associated monitoring/instrumentation shall be inal Document. Certified Original Documen checked against corrosion and operability, and if possible tested. Original Document. Certified Original Docu

Engine Room – Ballast and Fire system

All components and piping system with associated instrumentation/control umer systems shall be inspected, incorporating, but not limited to: Doci

- Ballast pumps and associated valves Ballast pump steam turbines, inclusive associated valves, insulation,
- instrumentation and control system
- Fire pumps and associated valves and control system
- Fire extinguishers
- Fire hoses

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Fire alarm system

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nents and piping system with accordated in rtified Original Document.Ceru.ed Ori nt.Certified Original Document.Certified All components and piping system with associated instrumentation/control ament.Certified Original Document.Cer Document. Certified Original Documen

- system shall be inspected, incorporated, but not limited to: Exhaust fans/supply fans
 - Scrubber and uptakes
 - Boosting fans

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The control room shall be inspected with respect to general condition, humidity, certified Original Document. Certified Original Doc

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rtified Original Document.Ceru.ed Ori nt.Certified Original Document.Certified ament.Certified Original Document.Cer All components necessary for running of safety systems, cargo control, pumps, Document. Certified Original Documen

MSB (Main Switch Board)

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Diesel generator set on deck (Caterpillar) – condition, corrosion, control systems, cooling

inert system, and living quarter should be subject to inspection and if possible

- Emergency diesel generator set condition, corrosion, control systems, cooling
- Turbo generator set #1 condition, corrosion, control systems, cooling, insulation
- Turbo generator set #2 condition, corrosion, control systems, cooling, insulation
- Distribution and cabling system Evaluations should be made if the systems should be upgraded for future operations

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The tasks related to the electrical systems will include inspections and doriginal Document. Certified on the electrical systems will include inspections and doriginal Document. Certified on the electrical systems will include inspections and doriginal Document. Certified on the electrical systems will include inspections and doriginal Document. Certified on the electrical systems will include inspections and doriginal Document. Certified on the electrical systems will include inspections and doriginal Document. Certified on the electrical systems will include inspections and doriginal Document. Certified on the electrical systems will include inspections and doriginal Document. Certified on the electrical systems will include inspections and doriginal Document. Certified on the electrical systems will include inspections and doriginal Document. Certified on the electrical systems will include inspections and doriginal Document. Certified on the electrical systems will include inspections and doriginal Document. Certified on the electrical systems will include inspections and doriginal Document. Certified on the electrical systems will include inspections and doriginal Document. Certified on the electrical systems will be added to the electrical systems wi

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conducted on vital systems related to the safety of the vessel, such as diesel

driven generators, seawater discharge pumps, air ventilation, inert and fire ginal Document.Certified Original driven generators, seawater discharge pumps, air ventilation, inert and fire ginal Document.Certified Original driven generators, seawater discharge pumps, air ventilation, inert and fire ginal Document.Certified Original driven generators, seawater discharge pumps, air ventilation, inert and fire ginal Document.Certified Original driven generators, seawater discharge pumps, air ventilation, inert and fire ginal Document.Certified Original driven generators, seawater discharge pumps, air ventilation, inert and fire ginal Document.Certified Original driven generators, seawater discharge pumps, air ventilation, inert and fire ginal Document.Certified Original driven generators, seawater discharge pumps, air ventilation, inert and fire ginal Document.Certified original driven generators, seawater discharge pumps, air ventilation, inert and fire ginal Document.Certified original driven generators, seawater discharge pumps, air ventilation, inert and fire ginal Document.Certified original driven generators ginal Document.Certified original driven generators ginal Document.Certified original driven generators ginal Document.Certified original driven ginal driven ginal Document.Certified ginal driven gi

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The superstructure shall be overlooked and inspected with respect to condition, ed Original Document Corrosion, and weather tightness.

ent.C The accommodation should be inspected with respect to condition, access humidity, ventilation and lighting.

igina The mess rooms, galley and provision stores shall be inspected with respect to condition, cleanliness, humidity and lighting. Original Document.Certified Origins D

inal Document.Certified The superstructure condition shall be evaluated, and recommendations

ginal presented for any maintenance/upgrade considered necessary for future use.

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ions below shall be document. Document Certified Original Document Tent. Certified Original Document. Certified Certified Original Document. Certified Original Original Documer 5 November 2020

All the actions below shall be documented with video tapes, and reports attached.

ent.c Anchor chain

The Anchor chains should be subject to Close Visual Inspection (CVI) with respect to iginal corrosion reduction and marine growth from water level/splash zone to 10 m below waterline.

nt.Ce umer Riser/Oil Hoses

Buoyancy Tank and Chain Tethers

inal D The riser/oil hose buoyancy tank shall be subject to CVI, especially with respect to the corrosion of the chain tethers and their attachment shackles to buoy and PLEM. iginal Document Certific that the continue of the certific that th ified Original Docum ent.Certified One Certified Original

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Mainal Document. Certified Original Document Document. Certified Original Document.ent.Certified Original Document.Certified All the actions below shall be documented with video tapes,

ent.C cume Pipe Line End Manifold (PLEM)

al Do

All units on the PLEM shall be subject to CVI, with respect to interfaces between pipes and valves, corrosion rates, marine ocument. nal Docum growth, and potential cracks.

The valves shall be monitored for correct position of all ginal valves, in order to verify being in closed position.

Orig tine Sea Chest Inlets

ertifi and reports attached.

All sea chests STB and PS shall be subject to CVI, with respect of Origina

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integrity, marine growth and corrosion level. Position and

origin condition of closing covers at the seawater inlets shall be

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SUBTASK #2 - Light Maintenance Original Document.

any required work permits for mission activities.

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SUBTASK #2 - Light Maintenance Original Document. Certified Original Docum maintenance campaign onboard the FSO SAFER, to serve primarily as a guidance and priority

ent.Certifie cument.Cer The team management will always have the overall responsibilities for the safety of its personnel, interest of the safety o al Documen iginal Docu and to make the decisions how and when the different tasks shall be conducted, in consultation d Original I with the Safer Exploration and Production Operation Company (SEPOC) representatives. rtified Orig

nt.Certified UNOPS acknowledges that work permits will be required for all activities undertaken by the technical experts onboard the vessel. To expedite this process, UNOPS proposes that SEPOC and ied Origin Document UNOPS each designate one authorized focal point for work permits. These two focal points will serviced to call points are serviced to call points are serviced to call points. ginal Docur original work together onboard the vessel to issue daily work orders for mission personnel and to issue

One of the team members will be a trained officer for risk assessment work. In addition, the team

inal Docum manager has extensive experience of risk assessment in the offshore oil industry. Certified Original Document. Certified Original Document. Jessmon Joseph Document. Certified Original Document. Certified Original Document. Jean Original Document. Certified Original F ent.Certified Original Document.Certific Triginal Document. Certified Oliver Certified Original Document. Sad Original Document. Certific nocument.Certified Original

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Safety Plan

necessary to provided.

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During the initial bordering, evaluations should be made if a few key personnel should enter the

FSO through the crane/basket access, and secure the stern area. Alternatively, the access can be

conducted with one of the new pilot ladders being lifted onboard and installed/secured by the

local watch/duty personnel staying onboard. Adequate instructions for installation will be

This first group should at least consist of the "local" Chief Engineer, and the Medic, the latter for

The second duty will be to perform initial inspection of the stern crane, and evaluate if the unit is

Thereafter, the accommodation area should be checked with regard to condition and safety to

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performing adequate testing of the existing personnel onboard against Covid-19 virus.

The Escape Chute should be lifted onboard and installed as soon as found practicable.

secure for further use, or if some maintenance will be needed before further use.

The tank deck should be checked for flammable gas level.

The safety for personnel, environment and equipment will always be the highest priority for the overall

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Light Maintenance - Safety Certified Original Portified Original Porti

es crane aft with personnel backer Sent. Certified Original Document. Lerune Cortified Original Document. Certified Original d Original Documer 5 November 2020 riginal Documer 5 November The stores crane aft with personnel basket initially is the sole entry/exit to/from the FSO, also in the case

of any emergency. UNOPS will provide a new personnel basket for this purpose. In order to increase the safety and reduce time for evacuation of personnel, a secondary crane will be provided with a personnel in backet assistant. Original I basket positioned on a barge that will be stationary at the FSO stern during the overall mission period. ified Orig APO In addition to that UNOPS will also provide and install an Escape Chute at the FSO stern, enabling

personnel to jump directly from deck to the sea in a safe manner. rtifie

nt.Ce a) Stores crane aft

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The crane should be subject to inspection and necessary repairs/upgrade performed in order to ensure safe operation for access and escape of personnel and equipment to and from the FSO. Load testing and/or changing of wire ropes shall be evaluated and agreed upon. Vital structural parts will be checked

by NDT/UT. ment

ocur b) Caterpillar diesel generator on deck inal C

oil, filters, etc. may be changed as found appropriate.

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nt.Certif As this unit has only been run on a non- regular basis, all systems should be checked and tested.

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Certified Original Document.Certified Original Emergency diesel generator in engine casing

This unit has been occasionally in operation, but should be subject to same inspections and maintenance as for the Caterpillar (b).

General Service pump in engine room.

This unit is today the only component in operating condition for evacuating of bilge water and water from possible major leakages. The pump should be examined and necessary upgrade/repairs performed to ensure safe function.

A second electrical driven pump in the engine room should be identified and the same work performed to ensure safe function as specified for the general service pump under (d). The upgrade and " maintenance specified under items b) to e) should ensure a system for evacuating water from the engine room with full redundancy for power and pumping.

nal Docu The fire-fighting system on deck, together with an applicable seawater pumps in the engine received diesel driven emergency fire pump forward will be given priority in accordance with the work classes

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Inspection and necessary maintenance of the ventilation system for accommodation, engine room and pump room in order to keep these area free for flammable gases, and provide fresh air for the

Particular attention is to be paid to presence of flammable gases on deck, and action taken for

corrosion level. All valves on tanks are intended to be inspected and tested, and repaired or replaced as

with the applicable listing. Pipe couplings (Dresser type) shall be inspected, maintained, and repaired

with applicable repair kits. Heavily corroded piping and fittings shall be repaired or replaced as far as available materials. Once this maintenance has been undertaken, the system shall be subject to component and system tests. All repaired and replaced components/piping shall be repainted. The

technical assessment will identify any further appropriate steps to be taken. These shall be income ned or as part of the overall and comprehensive expert recommendations to neutralize the threat posed by the

The inert gas (IG) system shall be subject to inspection with regard to integrity, condition and

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found applicable. Spare valves for replacement and repair kits shall be brought onboard in accordance

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i Origir The cargo tank pressure relief valves (P/V valves) together with main P/V safety valves tified C related to the cargo tanks shall be subject to inspection, maintenance, testing and re-Certif calibration. The maintained system shall be subject to component and system testing. All repaired or replaced components/piping shall be repainted. Docum

inal Do k) Seawater inlet valves, sea chests and associated piping shall be inspected, and Origina NDT/UT spot checks on plating and piping will be conducted, as applicable. Possible repail so

be conducted as long as the seawater integrity of the engine room and associated systems are

not compromised. This is to certify that this is an original document.

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The NDT inspect:ent.Certified Original Document.Certified Cartified Original Document. Certineu Original Original Documer 5 November 2020 The NDT inspections will mainly be conducted by either Ultrasonic Testing (UT) or Eddy-Current Inspection (ECI) techniques. Gear for other techniques will also be mobilized, and actual

methods chosen in each case per the discretion of the attending operators. idina m) The tank deck shall be inspected with special attention to severe corrosion degradation, $_{
m ad}$ of including spot checks by NDT/UV, alternatively ECI. Number of spot checks will have to be decided

locally, after assessment of the actual areas, access and weather conditions. Local possible repairs shall be conducted where found applicable, and surface corroded spots to be repaired with Belzona coating and Epoxy paint as found suitable.

ginal (orign) Hull sides shall be spot checked above waterline, and Local painting applied where severe corrosion detected, pending safe access from boat. Additional protection with Belzona may be used where safe access and application can be achieved, pending access from boat. Hull sides in splash zone and below waterline are covered under the Subsea Section. Special diver team equipped with scrubbing and cleaning gear will be engaged for cleaning of the hull sides from water line level and dow 3-

order to remove seaweed and other marine growth in the area. Some NDT/UT spot checks mixed

conducted by divers on hull sides below water line, pending conditions. This is to certify that this is an original document.

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alternatively ECI. Furthermore the sacrificial anodes on the hull shall be inspected by ROV or divers.

it is the intention to provide a continuous oil boom of 1,000 m length encompassing the FSO hull, acting

as first defence line if an oil spill should occur. This oil boom will be connected to the bow of the FSO,

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enabling the boom to follow the weather-vaning of the vessel around the turret anchoring.

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Hull flat bottom in cargo tank areas will be spot checked by ROV with NDT/UV equipment,

In accordance with the primary mission objective of reducing the risk of a spill from the FSO,

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he following equipment he ditional Document. Certified Original Document. ment.Certified Original Document.Lerune Cortified Original Document. Certified Original ad Original Documer 5 November 2020 riginal Documer 5 November nocument.Ceruned Ori The following equipment has been identified to ensure safety and efficiency in conducting inspection,

Original	The following equipment has been identified to ensure safety and efficiency in cond					
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ent.Certifi	Ea	uipment List - Containers and Tooling	Description	QTY		
cument.C		20ft DNV Containers	DNV Containers for offshore use	10 EA		
al Document.C	1	20Ft Workshop Container	Fully equipped container with tools & Equipment	1 EA		
al Docume iginal Docume iginal Docume ad Original Docume ertified Original ertified Original	-	20Ft Rigging Container	Fully equipped container with Rigging and Lifting Equipment	1 EA		
rtified and Or	3	3m Half Height Basket	Off-shore specification c/w Side Loading	1 EA		
rtified Original Certifie	4	Water Bags 0-7T	Water bags for proof load testing crane 1x3T, 4x1T	1 lot		
nt.Certifieu nt.Certifie ument.Certifie Document.Ce	_	High Pressure Water Jet	30K PSI - Subse Water Jet c/w High pressure gun and 250m Hose	1 EA		
- 110000						

Document.	5	High Pressure Water Jet	250m Hose	1 EA
ginal Docus d Original Doci	6	Poly-Text Polyester Cargo Net	15ft x 15ft @1T / 15ft x 15ft @ 3T	2 EA
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d Original tified Original	Е	quipment List - Power and Welding	Description	QTY
tified One	7	Mobile Drive Diesel Generators	ATLAS COPCO QAS 150 S2 60Hz 400V	1 EA
t.Certified ment.Certified ment.Cer	9	Mobile Driven Air compressor	ATLAS COPCO U175 c/w Spillage and lifting frame	2 EA
ment.Cer	10		Welding in Zone rated c/w monitors and extractors	
		Welding Habitats 3mx2mx2m	3m x 2m x 2m	1 EA
Original Docu	11	Welding Units	Danox DC400 / AC440-50/60 Hz	2 EA
Original C	12	Cutting Equipment	Oxy./Acet./regulators/cutting torch	2 Sets
ified Origi	13	Cylinder Rack Gas	Oxy/Act cylinder rack for Offshore	1 SET
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- ollic-	10	Extension Cables ATEX	ATEX 110V - 10 x 25mtres	10 EA	ent.Certified Original Control Certified Control Certified Control Certified
OCM!	17	ATEX Splitter Box	ATEX 110V	1 EA	ent. Certified sified
2310	18	440v stepdown Transformers 110V	ATEX Electrical 3kVA for 110V Tools	2 EA	cument.Certing
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riginal Document.Cert ed Original Document. rtified Oric ertified Original Docum nt.Certified **Equipment List - Safety** Description QTY nt.Certified Original D ument.Cerl Emergency Escape Breathing Device (EEBD) | Sabre ELSA 15B – "Hood Type", EC/MED Approved 20 EA ument.Certified Origin Document Portable Gantry Aluminium W:2.5m, H:3.0 @ 2t c/w chain block 1 EA I Document. Certified C Whip Checks Hose Retainers 1/8" & 1/4" 50 EA ginal Docui ginal Document.Certif Blower Fan 110V 110v Blower for Ventalation with Venting 1 EA J Original E Saininal Document.C Tool Bags 4 EA Bag. Canvas tified Origi Safety Harness Delta Harness (Mx10/Lx15/XLx15) 1 Lot t.Certified (Retrieval Inertia Safety Reel Sealed Block SRL Retrieval System 2 EA For Project ment.Certi Inertia Safety Reel Rebel SRL 11ft Web 5 EA ocument. Fire Extinguisher Dry Chemical 6Kg 10 EA inal Docum Fire Extinguisher CO2 Gas 5 Kg c/w Hose & Fishtail Horn Assembly 5 EA Certified Original Document. Certified Original Jew Original Document. Certified Original Document. Joriginal Doc Ment. Certified Original Document nent.Certified Original Document.Certifies Certified Original Document. Tiginal Document. Certified Ony Sed Original Document. Certification I nocument. Certified Original ...ent.Certified Orig

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Basket Stretcher

Emergency Pilot Ladder

Emergency Escape Chute Deployment

Personnel PPE Filtration Helmets

Equipment List - Additional Hand Tools

Medic Kit - Remote Trauma

Personal Gas Monitor

Flogging Spanner

Impact Sockets

Hammers

Wrenches

AED Machine

Billy Pugh

system

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Life Point-Portable

Filters/Batteries

Sledge Hammers

Adjustable and Chain

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c/w Spreader Bar, 20m length, Load Test certificate

Model BWSE-275-15000,c/w 15m adjustable chute

Hoods, 3M Battery, Filtration helmet and

Contains Emergency Drugs and Supplies

Impact Sockets for Flange Management

Taps and Dies Set & Sliding Socket Handles/Solder

Gas Alert Max XT II, 4 Gas Monitor

Spanners for Flange Management

Stretcher c/w 4 Point Lifting Sling 278KG

8 Man/ ABS Type Approval Cert, PN:X-904-8

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1 EA

1 EA

2 EA

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2 EA

1 Set

1 Lot

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Flogging Spanner

Impact Sockets

Hammers

Wrenches

Pipe Cutters

Pneumatic hand tools

Impact Wrench

Portable Hacksaw

Reciprocating Saw

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Spanners for Flange Management

Impact Sockets for Flange Management

Assortment of metal files, clamps and drills

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Taps and Dies Set & Sliding Socket Handles/Solder

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Threading Set & Tools for Crane

Pipe Stands Adjustable Height 20" - 38"

Equipment List - Hydraulic and Pneumatic Tools Brief Description

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Sledge Hammers

Adjustable and Chain

Range from 1/8" to 8"

Needle Gun x 1, Air Chisel x 1

Portable Hacksaw with pipe clamp

Reciprocating Saw c/w 2 sets of blades

Nut Splitter for Bolt Range 0.5" - 1.38"

125Kn Spreader Set / 80mm Spread

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Hose and Fittings

Zone II Pressure Washer

Equipment List - Electrical Power Tools

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ed Original	51	Grinders	110v Grinder, 4" and 9" 2 Ea	4 EA
ed Origination of the Cortified	52	Drills	110V Hand Held Drills 10mm & 16mm	2 EA
nt.Certified	53	Magnetic Drill	Magnetic Base 110V c/w Rotor Broach Attachment	1 EA
ument.Cert	54	Drop Saws	110v Reciprocating & Cut-off Saw 14"	2 EA
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jinal Docur	E	quipment List - Measuring Equipment	Description	QTY
original D	55	Tape measuring	Steel metal & Fibre glass 100ft / Test Pen	1 Lot
origination origination	56	Calipers	Layout Inside/Outside 0-12" / Vernier's	1 Lot
Certified (57	Electrical measuring Equipment	Multi-meters and clamp meters 2 EA	4 EA
ment.Certif	58	PRV Test Equipment	Calibration and test equipment	1 Set
ocument.	59	Load Link for Load Test	10t Load Shackle c/w Digital Readout	1 EA
nal Docum		Equipment List - Pumping equipment	Description	QTY
original Do	60	Storage IBC	1000 litres storage Tank	2 EA
origine fied Origin	61	Manual Drum Pump	Manual Operated to transfer liquids such as Fuel	2 EA
Gertified O	62	Wilden Diaphragm Pump	2" BSP / 617LPM c/w Discharge/suction Hose	1 EA
certificertificent.Co	63	Wilden Diaphragm Pump	1" BSP / 617LPM c/w Discharge/suction Hose	1 EA
nent.Ce		Hose and Fittings	1/4" Air Hose 20m c/w quick connect couplings	10 EA
- I Doca.	l cc	Lloss and Fittings	2/4" Air Hose 20m s/w Chicago fittings	10 E A

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4GPM @ 3000PSI, 185F LPM @ 206.9 Bar, 85 C)

3/4" Air Hose 20m c/w Chicago fittings

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Chamber

Booster Pump

High Pressure)

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Gas Detector XI-1/7

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mA)

Diving Equipment - Power packs

Diving Equipment - Cleaning Tools

Diving Equipment - Cleaning Tools

Diving Equipment - Decompression

Equipment List – Additional Equipment

Bolt Tensioning Torque Wrenches

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Calibrator and Injector for (RTD, TC and

Instrument Hand Pump (Low Pressure/

Bolt Tensioners Equipment

Hart Communicator

Diving Equipment - Welding Equipment

Chamber

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Diesel Powered Hydraulic Power Packs

Mini Pamper and Hull Cleaning

Hydraulic Polishing Hand Tools

Torque Guns and Tooling

Manual Torque Wrenches

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Subsea Welding and Cutting System

Rosemount TREX Device Communicator

Metrology Well Calibrator (Model 9172)

Comparator & Digital Pressure Gauge

Riken Model GX-8000 (LEL) & (O2)

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Containerised Air Drive Control with Decompression

Booster pump c/w manifold / Hose / pressure gauge

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2 Sets

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tified Origi t.Certified (73	Base vessel	AHTS vessel with tem accommodation, and fuel storage	1 EA
t.Certiforent.Cortiforcument.Cocument.Cocument.Cocument.Cocum	74	Service vessel	AHTS w/firfighting gear, accommodation for divers and ROV personnel – installation vessel for oil booms	1 EA
Documerio	75	Tug for crane barge		1 EA
inal Docum	76	Crane barge	Crawler crane for personnel basket and equipment	1 EA

75 | Tug for crane barge Crawler crane for personnel basket and equipment 76 Crane barge 1 EA nent.Certified Original Documers. ified Original Document.Certified Original Doc ment. Certified Origina Certified Original Document.Cerum Certified Original Docu I nocument. Certified God Original Document adinal Document.Cerum ment.Certified Orice

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Cotton, Rigger, Welding, Mechanic

95 GAL Overpack Drum 152 piece

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Hand Gloves 93 Oil Spill Kit Universal Spill Kits

Universal/ portable /refill spill kits Oil Spill Kit 280L Portable Spill Response Kit 96 Portable First Aid Kits Small First Aid Kits 97 Large First Aid Kit 255 Pc Large Size First Aid Kit

VHF Portable Radio Sailor SP3540 Portable VHF ATEX GMDSS Ropes Fire Hose - Exclude fittings

Oils and Lubricants Aerosol sprays Flange gaskets

105 Tapes, Adhesives 106 Band-It tool / Strapping and Buckles 3/8" strapping and buckles for fire hose Assembly 107 Welding Consumables 108 Welding Electrodes

Gasket Material

Cutting Discs and Blades 109 110 Covid 19 Test Kits

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8mm, 12mm, 1-3/4" Mooring Rope 50t 5 rolls x 1-1/2" and 5 rolls x 2" 3mm Gasket Paper

2.6mm to 4mm rods

Grinding & Cutting Discs

Earmuffs / ear plugs

Grease Gun & Rags WD40. Primer paint, contact cleaner Sizes 2-1/2" to 14" x 30 each Thread tapes, Duct tape, Insulation etc.

1 SET Chippers Wire Brushes, Anti-Spatters, hoods 1 Lot 1 Lot

inal 1 Lot Orig 175 test kits

1 Lot

1 Lot

1 EA

5 EA

4 EA

2 EA

2 EA

26 EA

1 Lot

1 Lot

4 Rolls

1 Lot

1 Lot

1 Lot

1 Lot

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Caterpillar Genset Spares for

Genset 2 Spares - Detroit

SS304 Mesh 30 for Flame

Niikura Butterfly Valves

Niikura Butterfly Valves

Belzona 1111 Supermetal

Belzona 1121 Supermetal XL

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Document.Certified Original Document.Certified 111 Portable Airconditioners Freestanding 110v c/w Transformer 110-240v

112 Main Hoist and Boom Hoist ropes 18mm & 20mm wires with termination Paint Brushers and Rollers

paint roller trays, rollers, brushes etc consist of: 4 x fuel filters; 1 x Air filter; 2 x lube

filter.

kit)

kits)

3 Litre tins

(254mm x 64m)

(1000mm x 500m)

SS106 -125 grams

PTFE05 - 900 grams

UST5010 - 460 grams

fuel and oil filters

1111 Supermetal (1kg)

1121 Supermetal XL (1kg)

30 x 0.24mm wire x 1M width x 20M length

10" Butterfly Valves & Refurb Kits (8 x valve, 2 x

22Cument. Certified Original Document. Let Wiles

1 Roll

10 EA

14" Butterfly Valves & Refurb Kits (6 x valve, 4 x

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2 EA

1 Lot

1 Lot

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40 Rolls

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20 Rolls 40 Sticks

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PS106 - 620 grams 10 Package fied Orig Wrap Seal PLUS Fibreglass Repair WS4100 - 4kg 6 Rolls

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Belzona 9381 124 Belzona 9382 Seal Stic SS106 Underwater epoxy 125 Stick 126 | SealXpert Expanding PTFE Tape SealXpert Ultra Sealing Tape SealZpert PS106 Underwater 128

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Wrap Seal PLUS Fibreglass Repair tape

Wrap Seal PLUS Chopped Strand Mat

Wrap Seal PLUS Surface Tissue

Win (A Original Document. Certified Original Document. 107 130 | SealXpert PS107 5 Min (SF) Repair Putty | PS107 - 620 grams Wrap Seal PLUS Standard Resin and

WS2100 - 3kg

CM450 - 33kg

ST200 - 7.5kg

WSP500 - 700 grams

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d C	136	Paint Sigma	2nd Sigma Cover 630 colour code 6188
tif	137	Paint Sigma	3rd Sigma Signadur colour code 5177
t.C	138	Thinners Sigma	Thinner 91-92 for Sigma Cover
me	139	Thinners Sigma	Thinner 21-06 for Signadur
Do l	140	Thinners Sigma	Cleaning Thinner
ins		Equipment List – Vessels	
Or ifie	73	Base vessel	AHTS vessel with tem accommodation, and fuel storage
ce ner	74	Service vessel	AHTS w/firfighting gear, accommodation for divers and ROV personnel – installation vessel for oil booms
OC!	75	Tug for crane barge	
nal	76	Crane barge	Crawler crane for personnel basket and equipment

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JIS 16k Blinds

1 J	JIS 10k Blinds JIS 10k Blinds	Brief Description (FI Size)	4	Proposal Additional Requirement (Qty	Total Qty Required 20
2 J				16	20
2 J	JIS 10k Blinds	3"			
3 J			4	16	20
	JIS 10k Blinds	5"	4	16	20
	JIS 10k Blinds	6"	4	16	20
5 J	JIS 10k Blinds	8"	4	16	20
6 J	JIS 10k Blinds	10"	4	16	20
	JIS 10k Blinds	12"	4	16	20 Project
8 J	JIS 10k Blinds	14"	0	20	20

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Pipe fittings and flanges		and Flanges of Certified Officertified Offic	Annex 4 Qty (Proposal 3.3)	Cument.Certine I Document.Certine Iginal Documer I Original Documer Additional Requirement (Qty)	5 November 2020 Total Qty Required
1	JIS 16k Blinds	5"	4	16	20
2	JIS 16k Blinds	6"	4	16	20
3	JIS 16k Blinds	8"	4	16	20
4	JIS 16k Blinds	10"	4	16	20
5	JIS 16k Blinds	12"	4	16	20
6	JIS 16k Blinds	14"	0	20	20
7	JIS 10K Slip on Weld	2-1/2"	4	16	20 Project
18	JIS 10K Slip on Weld	3"	4	16	29
9	JIS 10K Slip on Weld	5"	4	16	20
20	JIS 10K Slip on Weld	6"	4	16	UNOPS

Pipe fittings and flanges		Pipe Fittings and Flanges Fittings and flanges Brief Description (Flange Size)		Cument.Certine I Document.Certine Iginal Documer I Original Documer Additional Requirement (Qty)	5 November 2020 Total Qty Required
1	JIS 10K Slip on Weld	8"	4	16	20
2	JIS 10K Slip on Weld	10"	4	16	20
3	JIS 10K Slip on Weld	12"	4	16	20
24	JIS 10K Slip on Weld	14"	0	20	20
25	JIS 16K Slip on Weld	2-1/2"	4	16	20
26	JIS 16K Slip on Weld	3"	4	16	20
27	JIS 16K Slip on Weld	5"	4	16	20 Project
28	JIS 16K Slip on Weld	6"	4	16	20
29	JIS 16K Slip on Weld	8"	4	16	20
30	JIS 16K Slip on Weld	10"	4	16	20 UNOPS

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	Tittings and nanges	Size)	3.3)	Requirement (Qty)	Total Qty Required
31	JIS 16K Slip on Weld	12"	4	16	20
32	JIS 16K Slip on Weld	14"	0	20	20
33	Long radius Butt weld 90 degree	2-1/2"	4	16	20
34	Long radius Butt weld 90 degree	3"	4	16	20
35	Long radius Butt weld 90 degree	5"	4	16	20
36	Long radius Butt weld 90 degree	6"	4	16	20
37	Long radius Butt weld 90 degree	8"	4	16	20 Project
38	Long radius Butt weld 90 degree	10"	4	16	20
39	Long radius Butt weld 90 degree	12"	4	16	20
40	Long radius Butt weld 90 degree	14"	o certify that this is an o	20	20 NATIONS

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	Tittings and nanges	Size)	3.3)	Requirement (Qty)	Total Qty Required
31	JIS 16K Slip on Weld	12"	4	16	20
32	JIS 16K Slip on Weld	14"	0	20	20
33	Long radius Butt weld 90 degree	2-1/2"	4	16	20
34	Long radius Butt weld 90 degree	3"	4	16	20
35	Long radius Butt weld 90 degree	5"	4	16	20
36	Long radius Butt weld 90 degree	6"	4	16	20
37	Long radius Butt weld 90 degree	8"	4	16	20 Project
38	Long radius Butt weld 90 degree	10"	4	16	20
39	Long radius Butt weld 90 degree	12"	4	16	20
40	Long radius Butt weld 90 degree	14"	o certify that this is an o	20	20 NATIONS

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Pipe	Pipe Fittings and	Brief Description (Flange Size)	d Original Docume d Original Docume rtified Original Doc nt. Certified Original ant. Certified Original Annex 4 Qty (Proposal 3.3)	Additional Requirement (Qty)	Total Qty Required
1	Short radius Butt weld 90 degree	2-1/2"	4	16	20
2	Short radius Butt weld 90 degree	3"	4	16	20
13	Short radius Butt weld 90 degree	5"	4	16	20
14	Short radius Butt weld 90 degree	6"	4	16	20
15	Short radius Butt weld 90 degree	8"	4	16	20
1 6	Short radius Butt weld 90 degree	10"	4	16	20
17	Short radius Butt weld 90 degree	12"	4	16	20 Project
18	Short radius Butt weld 90 degree	14"	0	20	20
49	Long radius Butt weld 45 degree	2-1/2"	4	16	20
50	Long radius Butt weld 45 degree	3"	4	16	20 UNOPS

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rtif			Size)	3.3)	Requirement (Qty)	
nt.C	51	Long radius Butt weld 45 degree	5"	4	16	20
Do	52	Long radius Butt weld 45 degree	6"	4	16	20
/6	53	Long radius Butt weld 45 degree	8"	4	16	20
tific L.Ce	54	Long radius Butt weld 45 degree	10"	4	16	20
oc' nel		Long radius Butt weld 45 degree	12"	4	16	20
nal Ori	56	Long radius Butt weld 45 degree	14"	0	20	20
fier Cer len	57	Tee Butt Weld	2-1/2"	4	16	20 Project
ocu al l	58	Tee Butt Weld	3"	4	16	20
rigi ed	59	Tee Butt Weld	5"	4	16	20
erti ent.		Tee Butt Weld	6"	4	16	20 UNOPS
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Long radius Butt Weld 180 degree

Long radius Butt Weld 180 degree

Long radius Butt Weld 180 degree

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Short radius Butt Weld 180 degree

14"

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Pipe Red	ducers	Sal Document.Certifies	Annex 4 Qty (Proposal 3.3)	ument.Cortine Document.Certine Document.Certine Ginal Document Goriginal Documer Additional Requirement (Qty)	5 November 2020 Total Qty Required
Pip	pe Reducer 2"	1-1/2"	8	7	15
Pip	pe Reducer 2-1/2"	1-1/2"	8	7	15
Pip	pe Reducer 2-1/2"	2"	8	7	15
Pip	pe Reducer 3"	1-1/2"	8	7	15
Pip	pe Reducer 3"	2"	8	7	15
Pip	pe Reducer 3"	2-1/2"	8	7	15
Pip	pe Reducer 6"	3-1/2"	8	7	15 Project
Pip	pe Reducer 6"	4"	8	7	15 28
Pip	pe Reducer 6"	5"	8	7	5

Pipe	Reducers	Reduced to: Annex 4 Qty (Proposal A		Additional Requirement (Qty)	Total Qty Required	
1	Pipe Reducer 8"	6"	8	7	15	
12	Pipe Reducer 10"	6"	8	7	15	
13	Pipe Reducer 10"	8"	8	7	15	
14	Pipe Reducer 12"	6"	8	7	15	
15	Pipe Reducer 12"	8"	8	7	15	
16	Pipe Reducer 12"	10"	0	15	15	
17	Pipe Reducer 12"	14"	8	7	15 Project	
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	2"	SDNR Globe Valves	JIS 10K	6	6	12
2	2-1/2"	SDNR Globe Valves	JIS 10K	6	6	12
3	6"	SDNR Globe Valves	JIS 10K	6	6	12
ļ	8"	SDNR Globe Valves	JIS 10K	6	6	12
5	2"	SDNR Globe Valves	JIS 16K	6	6	12
6	2-1/2"	SDNR Globe Valves	JIS 16K	6	6	12
,	6"	SDNR Globe Valves	JIS 16K	6	6	12
3	8"	SDNR Globe Valves	JIS 16K	6	6	12 For Project Co
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1 12"	Gate Valves	JIS 10K	6	6	12
2 14"	Gate Valves	JIS 10K	6	6	12
3 8"	Gate Valves	JIS 16K	6	6	12
4 10"	Gate Valves	JIS 16K	6	6	12
5 12"	Gate Valves	JIS 16K	6	6	12
6 14"	Gate Valves	JIS 16K	6	6	12
7 2-1/2"	Butterfly Valve	JIS 10K	6	6	12
8 6"	Butterfly Valve	JIS 10K	6	6	12 For Project Co
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