



**DOMESTIC PETROLEUM OPERATING BRANCH -
PETROVIETNAM EXPLORATION PRODUCTION
CORPORATION LIMITED**
(PVEP-POC)

PROJECT DAI HUNG NAM PROJECT, BLOCK 05.1(a)
OFFSHORE VIETNAM

PHASE FRONT END ENGINEERING DESIGN (FEED)

**WHP-DHN – TECHNICAL REQUISITION FOR
PRIMARY AND SECONDARY STEEL**

0	13 Dec 24	Issued for Bid		
Rev.	Date	Description	Approved by RNZ	Approved by PVEP-POC

Petrofac RNZ	Document number: WHP-DHN-S-X-2001
CONTRACTOR: RNZ INTEGRATED (M) SDN BHD SUBCONTRACTOR: PVENGINEERING CONSULTANCY JSC	Number of pages: 24 pages (including this page)

	DOMESTIC PETROLEUM OPERATING BRANCH - PETROVIETNAM EXPLORATION PRODUCTION CORPORATION LIMITED (PVEP-POC)
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Rev.	Date	Description	Prepared by	Checked by	Checked by PVEP-POC
0	13 Dec 24	Issued for Bid			
D0	30 Oct 24	Approved for Design			
C0	10 Sep 24	Issued for Review	LDTan	Redza	

Petrofac  RNZ		Document number: WHP-DHN-S-X-2001
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REVISION RECORD SHEET

No.	Revision No.	Content of revision	Date of revision
1	C0	Issued for Review	10 Sep 24
2	D0	Approved for Design	30 Oct 24
3	0	Issued for Bid	13 Dec 24

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APPENDICES

APPENDIX 1 : MTO AND SHIPMENT PLANS FOR WHP-DHN TOPSIDE, JACKET AND PILES (8 PAGES)



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1. SCOPE OF WORK/SUPPLY

Vendor shall supply materials in compliance with all technical documents provided in Appendix 1/ Section 3 of this Technical Requisition

The Scope of supply includes but not limited to the following:

- Engineering activities required for manufacture of the Material.
- Manufacture of the Materials in accordance with required specifications.
- Provision of all testing required by technical specifications and TPI/CA Services as defined Section 6. Inspection and Testing Requirements in order get properly Certification.
- Delivery of the material in accordance with required delivery terms and conditions.
- Provision of vendor data in accordance with Vendor Data Requirement List in Section 5 of this Technical Requisition.
- The Vendor must provide all information requested including a list of any exceptions and non-conformities to the specifications listed in this Technical Requisition.
- All technical exception and deviation shall be indicated at one place, Vendor to use attached technical exception and deviation form (section 7) Any Exception/ deviation not listed in attached form and listed anywhere else in the offer shall not be considered.

2. SPECIFIC INSTRUCTION TO VENDOR

The following are specific instructions to Vendor for the purchase of Primary and Secondary Steel

- Structural steel as shown in the MTO originated from front end engineering design, Vendor may round up the quantity of materials to the closest manufacturer's standard length or area.
- Vendor shall supply materials that strictly comply with Specification for Structural Materials WHP-DHN-S-S-0001. All raw material/mother plates shall be originated from EU/G7/Korea countries or equivalent which is a mandatory requirement. The materials that exceed the quality requirement of this specification are acceptable.
- Vendor shall supply full scope as per MTO, partial supply may be considered subject to the requirements specified in "Instruction to Vendor" of Request For Proposal (RFP).
- Electronic Copies (CD) of documents are required where indicated on Vendor Data Requirements List (VDRL). Client places high importance on the provision of Electronic Copies of Documents.

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- Preparation and marking of all structural steel shall strictly conformed to Client's material storage and identification requirements as specified in WHP-DHN-S-S-0001.

Provide to Client the structural steel materials specified in the attached technical documentation in Section 3.

3. LIST OF TECHNICAL DOCUMENTS

3.1 PROJECT SPECIFICATIONS

No.	Document No.	Document Title	Rev
1	DHF-00-A-P-0003	Dai Hung Field Development - Vendor Data Instructions	2
2	DHF-00-A-P-0005	Dai Hung Field Development - Vendor Quality Specification	2
3	WHP-DHN-S-S-0001	WHP-DHN Specification for Structural Materials	D2
4	WHP-DHN-S-S-0002	WHP-DHN Welding Procedure & Performance Qualification Specification	D1
5	WHP-DHN-S-S-0003	WHP-DHN Welding & Fabricating Offshore Structures Specification	D2

3.2 PROJECT DOCUMENTS AND DRAWINGS

No.	Document No.	Document Title	Rev
6	WHP-DHN-S-D-2002	WHP-DHN Topside - General Notes	0
7	WHP-DHN-S-D-2004-1	WHP-DHN Topside - Typical Weld Profile (Sheet 1)	0
8	WHP-DHN-S-D-2004-2	WHP-DHN Topside - Typical Weld Profile (Sheet 2)	0
9	WHP-DHN-S-D-1003	Jacket General Notes	0
10	WHP-DHN-S-D-1004	Jacket Typical Weld Profile Sht1	0
11	WHP-DHN-S-D-1005	Jacket Typical Weld Profile Sht2	0

4. GENERAL INSTRUCTIONS FOR VENDOR'S DOCUMENTATION

Vendor Data Instructions (DHF-00-A-P-0003) and Vendor Quality Specification (DHF-00-A-P-0005) to be referred to for the general instructions for VENDOR's documentation.

CLIENT's requirements relating to the preparation, format, and submission of vendor data documentation shall comply with Vendor Data Instructions (DHF-00-A-P-0003) and this requisition.

The English language and SI units shall be used in all correspondence, documents, drawings and transmittals.

5. VENDOR DATA REQUIREMENT LIST – VDRL

5.1 NOTES TO VENDOR

Data marked with a 'C' in the Critical column is to be expedited as a priority.

Please tick in the 'Accept' columns on VDRL to verify you are able to supply the data.

- 1.* = Additional 2 copies of these Data/Documents to be shipped with equipment/materials.
2. CF Data/Documents due 2 weeks after receipt of FA Data/Documents by VENDOR.
3. MDR Data/Documents due 2 weeks after shipment.
4. IOM Data/Documents due 4 weeks before shipment.

5.2 ABBREVIATIONS

AW	After Award
AT	After Test
BD	Before Delivery
BT	Before Test
C	Critical data
CA	Certifying Authority
CF	Certified Final
E	Electronic
FA	For Approval
I	Included in IOM
IOM	Installation, Operation and Maintenance Manual
M	Included in MDR
MDR	Manufacturer's Data Report



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P	Paper Print
PC	Purchase Contract
RFQ	Request for Quotation
PWHT	Post weld heat treatment
VDS	Vendor Data Schedule
VDRL	Vendor Data Requirements List
MTO	Material take-off

VENDOR DATA REQUIREMENT LIST - VDRL								
VDRL Code	Data/Document Description	Critical	Accept	With Tender	For Approval		Final Data	
				No. Copies	No. Copies	Date Required	No. Copies	IOM/ MDR
1	Commercial/Contractual							
C01	Vendor Document Index & Schedule	C		4P+1E	1E	2wks AW	4P+1E	M
C02	Manufacturing and Delivery/Construction Schedule	C		4P+1E	1E	2wks AW	4P+1E	M
C03	Sub-Contract Work Proposal			4P+1E	1E	2wks AW	4P+1E	M
C04	Safety Policy and Performance Records			4P+1E	1E	2wks AW	4P+1E	M
C05	Insurance Confirmation					2wks BD	4P+1E	M
C06	Delivery, Handling and Packing Proposals				1E	6wks BD	4P+1E	M
C07	Statement of Conformance with Specification	C		4P+1E	1E	2wks AW	4P+1E	M
C08	Vendor's Sub-Orders				1E	2wks AW	4P+1E	M
C09	Warranty/Guarantee Confirmation	C		4P+1E	1E	2wks BD	4P+1E	M
C10	Certificates Of Origin, Certificates Of Quality (CO, CQ)	C			1E	4wks BD	4P+1E	M
2	Drawing – General							
D01	General Arrangement Drawings							

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VENDOR DATA REQUIREMENT LIST - VDRL								
VDRL Code	Data/Document Description	Critical	Accept	With Tender	For Approval		Final Data	
				No. Copies	No. Copies	Date Required	No. Copies	IOM/ MDR
D02	Assembly Drawings							
D03	Shop Detail Drawings							
D04	Piping Isometric Drawings							
D05	Process Flow Diagrams including Mass and Heat Balance							
D06	Process and Instrument Drawings							
D07	All Approved "As-Built" - Drawings and Data Sheets							
3	Drawing – Mechanical/Structural							
M01	Foundation Load and Anchor Bolt Location							
M02	Detail Drawings - Mechanical / Structural							
M03	Drive Assembly Details							
M04	Input / Output Nozzle Schedules							
M05	Mechanical Design Calculations							
M06	Structural Design Calculations							
M07	Pipe Stressing Calculations							
M08	Mechanical/Process Data Sheets							
M09	Other Design Engineering Data Analysis							
4	Drawing – Instrument/Electrical							
J01	Package Electrical Termination Drawings							
J02	Panel Layout and Details							
J03	Panel Wiring Diagrams							
J04	Instrument / Fire and Gas Location Plans / Cable							

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VENDOR DATA REQUIREMENT LIST - VDRL

VDRL Code	Data/Document Description	Critical	Accept	With Tender	For Approval		Final Data	
					No. Copies	No. Copies	Date Required	No. Copies
	Layouts							
J05	Instrument / Fire and Gas Installation Details / Hook- ups							
J06	Loop Diagrams							
J07	Shutdown and Control Function Charts, Safe Charts							
J08	Alarm / Trip Set Point List							
J09	Electrical Wiring Diagrams and Schematics							
J10	Electrical Schematic Diagrams							
J11	Electrical Single Line Diagrams							
J12	Sequence and Logic Diagrams, Cause and Effect Diagrams							
J13	Instrument/Electrical Data Sheets							
J14	Functional Design Specifications							
J15	Cable Block Diagram, SR Data Link Address & Screen Graphics							
5	Data - General							
G01	Descriptive Literature and Catalogue Information							
G02	Sub Vendor/ Supplier Data Sheets			4P+1E	1E	4wks AW	4P+1E	M
G03	Recommended Spare Parts For 2 Year Operation							
G04	Recommended Spare Parts for Start-up & Commissioning							



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VENDOR DATA REQUIREMENT LIST - VDRL

VDRL Code	Data/Document Description	Critical	Accept	With Tender	For Approval		Final Data	
					No. Copies	No. Copies	Date Required	No. Copies
G05	List of Special Tools							
G06	Surface Preparation and Paint System Specification							
G07	Design/ Engineering Calculations							
G08	Foundation Static and Dynamic Loads Calculations							
G09	Bills of Material/ Packing List				1E	2wks BD	4P+1E	M
G10	Commissioning and Site Acceptance Test Procedures							
G11	Factory Acceptance Test Procedure							
G12	Cable Schedule							
G13	Nameplate Details							
G14	Instrument Index							
G15	I/O Schedules							
G16	Centre of Gravity Sketch/ Calculation							
G17	Process/ Utility Calculation							
G18	Weight Control Calculation							
G19	Lubrication Requirements							
G20	Maximum Acceptable Nozzle Forces and Moments							
G21	Special Requirements (Grounding, etc)							
G22	Dynamic Characteristics: Lateral & Torsional Analysis							
G23	Loading, Transport and Unloading Details							
G24	Preservation and Storage							



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VENDOR DATA REQUIREMENT LIST - VDRL

VDRL Code	Data/Document Description	Critical	Accept	With Tender	For Approval		Final Data	
				No. Copies	No. Copies	Date Required	No. Copies	IOM/ MDR
	Procedure							
G25	Lifting Lug Details / Calculations							
G26	Spreader Bar and Sling Certification							
G27	Hazardous Area Dossier							
G28	Hardware Standard Software Documentation							
G29	Equipment Specific Software Document							
6	Data – Performance							
P01	Performance and Test Procedure							
P02	Performance Curves and Data, Charts							
P03	Completed Client Data Sheets							
P04	Trial Assembly Procedure				1E	2wks AT	4P+1E	M
P05	HSE Policy/Plan/ Procedures							
P06	Noise Test Data/ Procedures							
P07	FAT Results (performance, leak and functional systems tests)							
P08	Commissioning and Site Acceptance Test Results							
P09	NDT (MT, PT, UT, RT.,etc.)/ PMI Procedures				1E	4wks AW	4P+1E	M
P10	Hydrotest/ Leak Test Procedures							
P11	Cleaning, Flushing & Drying Procedures							
P12	Insulation Procedure							

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VDRL Code	Data/Document Description	Critical	Accept	With Tender	For Approval		Final Data	
				No. Copies	No. Copies	Date Required	No. Copies	IOM/ MDR
P13	Pickling, Passivation Procedure							
P14	Manufacturing Procedure Specification				1E	4wks AW	4P+1E	M
P15	Bolt Tightening Procedure							
P16	Surface Preparation and Painting Procedure							
P17	Non-Conformance Control Procedure							
P18	Material Control, Storage & Traceability Procedure							
P19	Packing, Handling & Delivery Procedure							
P20	Load Test Procedures							
P21	Weight Control Procedure							
P22	Other Relevant Inspection/Performance/ Testing Procedures				1E	4wks AW	4P+1E	M
7	QA/Certification							
Q01	QA Accreditation Certification (Management System Certification, API Monogram, Certificate Of Authorization U-stamp ASME,.ect..)	C		4P+1E	1E	4wks AW	4P+1E	M
Q02	Contract Quality Plan			4P+1E	1E	4wks AW	4P+1E	M
Q03	Welding Specification Procedures & Qualification Test Records (WPS & PQR)	C		4P+1E	1E	4wks AW	4P+1E	M
Q04	Inspection and Test Plan	C		4P+1E	1E	4wks AW	4P+1E	M
Q05	Electrochemical/ Potential Test Reports	C			1E	2wks AT	4P+1E	M
Q06	Calibration Procedures & Results							



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VENDOR DATA REQUIREMENT LIST - VDRL

VDRL Code	Data/Document Description	Critical	Accept	With Tender	For Approval		Final Data	
					No. Copies	No. Copies	Date Required	No. Copies
Q07	Electrical Type Test Certificates/ Results							
Q08	Hydrotest/ Leak Test Reports							
Q09	Material Certification (Mill Test Certificates, Inspection Certificates, MRIR, Material Traceability Records, etc.)	C			1E	2wks AT	4P+1E	M
Q10	Dimension/Rolling/Forming Check Reports				1E	2wks AT	4P+1E	M
Q11	Approval of Relevant Authorities (3 rd Party Inspection Certificates, Statement Of Conformity,etc.)							
Q12	Statement of Code Compliance (U-Stamp certificates, Type Approval Certificates, etc.)	C			1E	2wks BD	4P+1E	M
Q13	Hazardous Area Electrical Equipment Certification							
Q14	Post Weld Heat Treatment Records							
Q15	Welder/Welding Operator Qualification Test Records/Certificates	C			1E	4wks AW	4P+1E	M
Q16	Mock-up testing Procedure							
Q17	NDT Reports	C			1E	2wks AT	4P+1E	M
Q18	Weld Map							
Q19	Blasting, Painting Reports							
Q20	Vendor/Sub-supplier Progress Report							
Q21	Vendor Technical Query (VTQ)							



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VDRL Code	Data/Document Description	Critical	Accept	With Tender	For Approval		Final Data		
					No. Copies	No. Copies	Date Required	No. Copies	IOM/ MDR
Q22	The Final Inspection Release Notes (IRN)				1E		2wks BD	4P+1E	M
Q23	Third Party Inspection Report of Source Inspection Services (If applicable)								
Q24	Non-Conformance Reports								
Q25	Trial Fit Reports								
Q26	Weight Control Report								
Q27	Other Relevant QA/QC/ Performance Inspection/ Testing Reports								
8	Manuals & Indices								
R01	Installation Operation and Maintenance Manual								
R02	Manufacturer's Data Report (MDR)				3P		2wks BD	4P+1E	M
R03	Data Manual								
R04	Training Manuals (Operation and Maintenance)								
9	Miscellaneous								
Z01	Specialty Documents as identified on VDS								
Z02	Specialty Documents as identified on VDS								
Z03	Specialty Documents as identified on VDS								

6. INSPECTION AND TEST REQUIREMENT

The VENDOR shall assume final responsibility for the inspection and testing of the equipment in accordance with the requirements of the referenced codes and standards. The VENDOR shall be responsible for obtaining statutory approval in the instance where the equipment is subject to such approval. Inspection and testing shall be in accordance with applicable specified Standards and Codes. Inspection and Test Plans (ITP) shall be submitted to the CLIENT / PURCHASER for review at the bid stage. The agreed ITP shall be part of VENDOR scope of supply. The VENDOR shall indicate in its bid the location of key production, inspection or testing activities (as identified in the Inspection and Testing Requirement). These locations shall not be changed at all times. VENDOR's ITP shall include the minimum activities and requirement as described in the typical ITP.

The CLIENT / PURCHASER and/or CLIENT / PURCHASER's inspection authority shall be given at any time full access to VENDOR's premise to inspect the VENDOR's manufacturing facilities, including major sub-VENDOR's manufacturing facilities, to confirm that satisfactory quality assurance and production procedures are being implemented. The VENDOR shall make available all relevant QA procedures and records for review.

The VENDOR shall provide to the CLIENT / PURCHASER or CLIENT / PURCHASER's representative, without charge, all facilities and access for satisfying himself that the equipment being manufactured shall be in accordance with the requirement of this Technical Requisition, relevant datasheet, Codes and Standards.

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Inspection Activity		Definition of Inspection Activity
Approval	A	A point is defined where Vendor/Supplier is required to submit document/dossier for approval before proceeding with the next relevant work steps.
Document	D	Document provided/submitted
Hold	(H)	The activities or inspections shall not be performed without witnessed by specified Parties. Notification to The Relevant Parties is compulsory in agreed notification days. The Vendor/Supplier shall not change/deviate this point unless formally notified by The Relevant Parties.
Monitor	(M)	Witnessing or inspections by specified Parties is not mandatory, but optional. No notification is required. The Relevant Parties may witness/inspect the activities during monitoring or quality control management visits.
Witness	(W)	The activities or inspections shall not be performed without witnessed by specified Parties. Notification to The Relevant Parties is compulsory in agreed notification days. The Vendor/Supplier may proceed works in case the Relevant Parties do not attend.
Verify	(V)	Verification of inspection, manufacturing, testing or document activity
Review	(R)	A point is defined as which a record/dossier is required. The nominated Party is required to review/endorse these records/dossiers. The review shall be complied with Purchase Order.
Other		Additional activity as required by VENDOR and subject to CLIENT acceptance



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The below inspection and testing matrix specifies the minimum requirements. VENDOR to prepare detailed ITP for CLIENT / PURCHASER's approval.

Act. No.	Activities Description	Procedure /Specification Reference	Acceptance Criteria	Documentation	Inspection / Surveillance Activities			
					Vendor	Client/ Purchaser	Third Party	Client's Certification Authority
1	Pre-Award Meeting				A	A		
2	Documents:							
3	Specifications / Data Sheets							
4	Drawings (commented copies and status of follow-up actions)							
5	Technical Queries / Concession Requests (approved)							
6	QC System Manual							
7	Inspection and Test Plan (ITP)				W	R	R	
8	Welding Procedure Specifications (WPS) & Procedure Qualification Record (PQR)				W	W	W	
9	Welder qualification record				W	R	W	
10	Welding repair procedures				W	R	R	
11	NDE procedures				W	R	R	
12	NDE personnel qualification records				W	R	R	
13	Cladding procedure (where applicable)							
14	Material test reports / certificates				W	R	R	
15	Material verification				W	M	M	
16	Positive Material Identification							



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Act. No.	Activities Description	Procedure /Specification Reference	Acceptance Criteria	Documentation	Inspection / Surveillance Activities			
					Vendor	Client/ Purchaser	Third Party	Client's Certification Authority
17	Components /Parts Inspection (Visual, Dimensions)							
18	Shell / Head							
19	Nozzles, Flanges, Pads							
20	Opening holes for nozzles							
21	Internal details							
22	Supports							
23	External attachments							
24	Fabrication/ Assembly Inspection				W	M	M	
25	Preliminary dimensional & orientation check				W	M	M	
26	Welding Inspection				W	M	M	
27	Welding material verification				W	M	M	
28	Fit-Up/Joint preparation				W	M	M	
29	Visual & Dimensional weldment				W	M	M	
30	Cladding (where applicable)							
31	Production Test Piece & Testing				W	M	W	
32	NDE & Other examination				W	R	R	
33	NDE activities (RT/UT/MPI/ DPI)				W	M / V / R	M	
34	Hardness test							
35	Impact test							
36	NDE & Other examination (after heat treatment)							



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Act. No.	Activities Description	Procedure /Specification Reference	Acceptance Criteria	Documentation	Inspection / Surveillance Activities			
					Vendor	Client/ Purchaser	Third Party	Client's Certification Authority
37	Post Weld Heat Treatment (PWHT) (where applicable)				W	R		
38	PWHT procedure (If applicable)				W	R	R	
39	PWHT							
40	Final Dimensions & Orientation Check				W	M	M	
41	Testing:							
42	Test procedures							
43	Hydrostatic test							
44	Pneumatic test							
45	High pressure N ₂ / Helium tests (where applicable)							
46	Test Reports/Test Certificates				R	R	R	
47	Cleaning/ Pickling Inspection							
48	Cleaning Internal (etc)							
49	Surface Preparation & Painting							
50	Coating Procedure							
51	Surface Preparation/ Primer Coat (thickness) visual, etc)							
52	Intermediate Coats (thickness, visual, etc)							
53	Topcoat (thickness, visual, adhesion, holiday detection, finish colour)							
54	Material Marking and Identification drawing.				W	M	M	



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Act. No.	Activities Description	Procedure /Specification Reference	Acceptance Criteria	Documentation	Inspection / Surveillance Activities			
					Vendor	Client/ Purchaser	Third Party	Client's Certification Authority
55	Final Inspection				W	W	W	
56	Certificate of Compliance				W	R	R	
57	Spare parts							
58	Data package				R	R		
59	Preparation for shipment				A	R	R	
60	Preservation				A			
61	Packing list				R	R		
62	Shipped loose items				R			
63	Two year operation spares							
64	Commissioning and start-up spares							
65	Release for shipment				R	H	R	
66	Site welding repair (where applicable)				W	M	R	

Notes:

The Third Party's activities indicative on the Inspection and Testing shall be updated and subject to necessary requirements to obtain proper Mill Certification as defined Specification for Structural Materials, Project Specifications.

6.1 GENERAL REQUIREMENT

CLIENT shall have the right to inspect the manufacturing of all materials and shall have free access at all times to any part of the Vendor's operation that concerns the work.

Vendor shall allow authorized inspectors free and immediate access to all parts of the plant.

Vendor shall furnish all necessary safety facilities, adequate lighting, measurement and test equipment, etc., for a safe and thorough inspection by CLIENT.

The inspector has the authority to reject any materials or work that do not meet the specifications. Additionally, materials accepted by the inspector may still be rejected if found to be defective at a later time.

Vendor shall replace or correct rejected material at no additional cost to the CLIENT.

Vendor may appeal disputes with the inspector to the Client's QA/QC Manager for the final decision.

6.2 SPECIFIC REQUIREMENT

Document submission shall comply with requirements and schedule listed in Vendor Data Requirement List.

PWHT shall be applied for joints in C-Mn steels when the material thickness at the welds exceeds 50 mm. If, however, satisfactory performance in the as-welded condition can be documented by a fitness-for-purpose assessment applying fracture mechanics testing, fracture mechanics and fatigue crack growth analyses, PWHT may be omitted.

All Supplementary Test Requirements for material classes shall be carried out as per listed in Table 9.2 and 9.3. in Specification No.WHP-DHN-S-S-0001.

Production test shall be 2 sets per each WPS per welding line (or station), one set for min production thickness of the WPS and one set for max production thickness of WPS. For the WPS made only one production thickness, then production test required one set for each production welding line.

A production test shall include the followings:

1. Weld tranverse Tensile Test: 2ea
2. Bend test: 4ea
3. Charpy V-notch (CVN) impact test: each 3ea on W.M, F.L, F.L+2mm/root test for $T < 19\text{mm}$, root & cap test for $T \geq 19\text{mm}$
4. Hardness test: 01ea
5. Macro test: 01ea

NDE shall perform and conform to API 2B/ASTM A578 or equivalent standards. 100% MPI & 100% UT shall be carried for rolled tubulars, beam W24 and above, UT

& MT for 12 inch length of each end for beams below W24, test result shall be mentioned in Mill Certificates.

Vendor shall be provided the mill certificates and supplementary tests, MPI, UT reports (if not included certificate) for ex-stock materials to determine proposed ex-stock materials to meet all relevant Codes, Standards, project specifications and specific requirements.

Mill certificates shall strictly conform to Section 10.3 of the Specification for Structural Materials Document No WHP-DHN-S-S-0001.

7. TECHNICAL EXCEPTION AND DEVIATION

VENDOR must clearly identify his exceptions to the scope of supply with a detail note of deviation request. All technical exception shall be subjected to CLIENT's / PURCHASER's approval in writing. Cost impact and/or schedule impact due to the technical exceptions shall be derived and presented clearly by VENDOR. VENDOR is required to cater an "alternative" proposal for all the exceptions taken. Those alternatives shall be approved by CLIENT / PURCHASER before work execution.

If there are exceptions, VENDOR shall submit the technical exception list together with his bid using the format provided in the Technical Bid Form.

The list shall contain the following information:

- Exception (title)
- Specification Clause Number
- Reason for non-compliance
- Cost and delivery impact to comply
- Alternative proposal (for compliance to the intent of the specification)

The technical exception list shall be signed and stamped.

If exceptions are not stated in the bid, it shall be interpreted by CLIENT / PURCHASER as full compliance with the technical requisition, project specification and all reference documents listed.

If there is conflict in the prescribed applicable Codes & Standards, VENDOR shall seek clarification in writing for PURCHASER's approval.



**DAI HUNG NAM PROJECT, BLOCK 05.1(a), OFFSHORE
VIETNAM**

**WHP-DHN - TECHNICAL REQUISITION FOR
PRIMARY AND SECONDARY STEEL**

8. APPENDICES

Appendix 1 : MTO and Shipment Plans for WHP-DHN Topside, Jacket and Piles (8 Pages)



**DAI HUNG NAM PROJECT, BLOCK 05.1(a), OFFSHORE
VIETNAM**

**WHP-DHN - TECHNICAL REQUISITION FOR
PRIMARY AND SECONDARY STEEL**

APPENDIX 1

MTO AND SHIPMENT PLANS FOR WHP-DHN TOPSIDE, JACKET AND PILES

MTO AND SHIPMENT PLANS FOR WHP-DHN TOPSIDE, JACKET AND PILES

Item	Material Type	Descriptions	Type	Unit	Unit Weight (Kg / mtr / sqmtr)	Req. Length/ Area (m/m2)	Typ. Size (m/m2)	Round Quantity (pcs)	Total Length/ Area (M / SQM)	Total Weight (MT)	Portion Consider	Shipment, Remarks	
I	ROLLED SECTION									613.49			
	Rolled Section (TYPE I)												
1	Beam	W36X194	I	m	288.70	428.91	12.00	36	432	124.72	PORTION 3	Shipment 1	
2	Beam	W33X152	I	m	226.20	271.22	12.00	23	276	62.43			
3	Beam	W24X104	I	m	154.80	1,088.82	12.00	91	1092	169.04			
4	Beam	W24X76	I	m	113.10	106.49	12.00	9	108	12.21			
5	Beam	W18X60	I	m	89.29	543.38	12.00	46	552	49.29			
6	Beam	W12X40	I	m	59.53	408.10	12.00	35	420	25.00			
	Sub-total										442.70		
	Rolled Section (TYPE IV)												
1	Beam	W14x38	IV	m	56.71	780.89	12.00	66	792	44.91	PORTION 3	Shipment 3	
2	Beam	W18X60	IV	m	89.29	25.62	12.00	3	36	3.21			
3	Beam	W12X40	IV	m	59.53	262.47	12.00	22	264	15.72			
4	Beam	W10X22	IV	m	32.70	95.52	12.00	8	96	3.14			
5	Beam	W8X18	IV	m	26.70	3,876.47	12.00	324	3888	103.81			
	Sub-total										170.79		
II	TUBULAR									7,051.01			
II.1	Rolled Tubular (TYPE I)												
1	Tubular	3000øx25	I	m	1834.20	35.80	4.00	0	0.00	0.00	SHIPMENT 4	Shipment 4	
2	Tubular	2338øx40	I	m	2266.89	50.63	4.00	16	64.00	145.08			
3	Tubular	2338øx30	I	m	1707.56	50.63	4.00	16	64.00	109.28			
4	Tubular	2134øx60	I	m	3068.88	609.92	4.00	160	640.00	1,964.08			
5	Tubular	2134øx40	I	m	2065.65	240.00	4.00	62	248.00	512.28			
6	Tubular	1828.8øx44.5	I	m	1958.16	21.32	4.00	6	24.00	47.00			
7	Tubular	1828.8øx38.1	I	m	1682.55	166.21	4.00	48	192.00	323.05			
8	Tubular	1371.6øx60	I	m	1940.76	23.53	6.00	5	30.00	58.22			
9	Tubular	1371.6øx44.5	I	m	1456.41	20.61	6.00	4	24.00	34.95			
10	Tubular	1371.6øx38.1	I	m	1252.96	36.70	6.00	8	48.00	60.14			
11	Tubular	1320.8øx50.8	I	m	1591.06	110.88	6.00	20	120.00	190.93			

Item	Material Type	Descriptions	Type	Unit	Unit Weight (Kg / mtr / sqmtr)	Req. Length/ Area (m/m2)	Typ. Size (m/m2)	Round Quantity (pcs)	Total Length/ Area (M / SQM)	Total Weight (MT)	Portion Consider	Shipment, Remarks
12	Tubular	1320.8øx38.1	I	m	1205.23	76.40	6.00	14	84.00	101.24	PORTION 1	Shipment 1-1
13	Tubular	1219.2øx25.4	I	m	747.80	53.38	6.00	10	60.00	44.87		Shipment 2
14	Tubular	1219.2øx20.6	I	m	608.92	21.76	6.00	4	24.00	14.61		Shipment 3
45	Tubular	1118øx25.4	I	m	684.41	1.00	6.00	0	0.00	0.00		Shipment 2-
16	Tubular	1100øx25.4	I	m	673.13	2.00	6.00	1	6.00	4.04		Shipment 2
17	Tubular	1080øx25.4	I	m	660.60	13.64	6.00	3	18.00	11.89		Shipment 2
18	Tubular	1066.8øx20.6	I	m	531.50	131.52	6.00	24	144.00	76.54		Shipment 1-2
19	Tubular	1016øx25.4	I	m	620.51	257.78	6.00	50	300.00	186.15		Shipment 1-1
20	Tubular	1016øx19.1	I	m	469.57	225.72	6.00	48	288.00	135.24		Shipment 1-1
21	Tubular	965.2øx38.1	I	m	871.11	48.61	12.00	5	60.00	52.27		Shipment 1-2
22	Tubular	965.2øx31.8	I	m	732.01	29.24	12.00	3	36.00	26.35		Shipment 1-2
23	Tubular	965.2øx20.6	I	m	479.88	276.19	12.00	28	336.00	161.24		Shipment 1-2
24	Tubular	965.2øx19.1	I	m	445.65	68.92	12.00	6	72.00	32.09		Shipment 1-2
25	Tubular	965.2øx15.9	I	m	372.24	231.73	12.00	20	240.00	89.34		Shipment 1-2
26	Tubular	965.2øx30	I	m	691.90	54.98	12.00	5	60.00	41.51		Shipment 4
27	Tubular	914.4øx15.9	I	m	352.32	174.91	12.00	15	180.00	63.42		Shipment 3
28	Tubular	914.4øx19.1	I	m	421.72	90.01	12.00	8	96.00	40.48		Shipment 3
29	Tubular	914.4øx25.4	I	m	556.87	4.52	12.00	0	0.00	0.00		Shipment 2
30	Tubular	863.6øx25.4	I	m	525.05	95.39	12.00	10	120.00	63.01		Shipment 1-2
31	Tubular	812.8øx25.4	I	m	493.23	4.42	12.00	0	0.00	0.00		Shipment 2
32	Tubular	812.8øx20.6	I	m	402.46	145.36	12.00	13	156.00	62.78		Shipment 1-2
33	Tubular	812.8øx15.9	I	m	312.48	415.52	12.00	38	456.00	142.49		Shipment 1-2
34	Tubular	762øx38.1	I	m	680.18	29.14	12.00	3	36.00	24.49		Shipment 1-2
35	Tubular	762øx31.8	I	m	572.65	26.72	12.00	3	36.00	20.62		Shipment 1-2
36	Tubular	762øx25.4	I	m	461.41	147.58	12.00	13	156.00	71.98		Shipment 1-2
37	Tubular	762øx12.7	I	m	234.68	161.48	12.00	14	168.00	39.43		Shipment 2
38	Tubular	711.2øx35	I	m	583.66	114.71	12.00	10	120.00	70.04		Shipment 1-2
39	Tubular	711.2øx15.9	I	m	272.64	20.65	12.00	2	24.00	6.54		Shipment 1-2
40	Tubular	660.4øx28.6	I	m	445.62	9.75	12.00	1	12.00	5.35		Shipment 1-2
41	Tubular	660.4øx25.4	I	m	397.77	90.86	12.00	8	96.00	38.19		Shipment 2
42	Tubular	660.4øx20.6	I	m	325.04	35.08	12.00	4	48.00	15.60		Shipment 1-2
43	Tubular	660.4øx15.9	I	m	252.72	13.06	12.00	2	24.00	6.07		Shipment 1-2
44	Tubular	660.4øx12.7	I	m	202.86	29.18	12.00	3	36.00	7.30		Shipment 1-2
45	Tubular	609.6øx25.4	I	m	365.94	2.59	12.00	2	24.00	8.78		Shipment 3
46	Tubular	609.6øx12.7	I	m	186.95	157.26	12.00	15	180.00	33.65		Shipment 1-2
47	Tubular	508øx19.1	I	m	230.29	170.41	12.00	15	180.00	41.45		Shipment 2
48	Tubular	508øx12.7	I	m	155.13	83.73	12.00	8	96.00	14.89		Shipment 2
49	Tubular	457.2øx19.1	I	m	206.36	193.51	12.00	17	204.00	42.10		Shipment 2

Item	Material Type	Descriptions	Type	Unit	Unit Weight (Kg / mtr / sqmtr)	Req. Length/ Area (m/m2)	Typ. Size (m/m2)	Round Quantity (pcs)	Total Length/ Area (M / SQM)	Total Weight (MT)	Portion Consider	Shipment, Remarks	
50	Tubular	457.2Øx12.7	I	m	139.22	58.74	12.00	6	72.00	10.02		Shipment 2	
51	Tubular	1371.6Øx45	I	m	1,472.22	2.61	6.00	1	6.00	8.83		Shipment 1	
52	Tubular	1371.6Øx38.1	I	m	1,252.96	2.71	6.00	1	6.00	7.52		Shipment 1	
53	Tubular	1219.2Øx45	I	m	1,303.09	6.46	6.00	1	6.00	7.82		Shipment 1	
54	Tubular	1219.2Øx31.8	I	m	931.20	22.68	6.00	4	24.00	22.35		Shipment 1	
55	Tubular	609.6Øx25.4	I	m	365.94	56.28	12.00	5	60.00	21.96		Shipment 2	
56	Tubular	508Øx25.4	I	m	302.30	55.75	12.00	5	60.00	18.14		Shipment 2	
57	Tubular	508Øx19.05	I	m	229.71	105.16	12.00	10	120.00	27.57		Shipment 2	
58	Tubular	1828Øx38	I	m	1,677.48	3.47	4.00	1	4.00	6.71		Shipment 4	
										Sub-total	5,371.96		
II.2	Rolled Tubular (TYPE II)												
1	Tubular	1828.8Øx60	II	m	2827.37	259.85	4.00	71	284.00	802.97	PORTION 1	Shipment 1-1	
2	Tubular	1828.8Øx55	II	m	2405.95	11.00	4.00	3	12.00	28.87		Shipment 1-1	
3	Tubular	1828.8Øx44.5	II	m	1958.16	4.40	4.00	2	8.00	15.67		Shipment 1-1	
4	Tubular	1371.6Øx60	II	m	1940.76	26.09	4.65	6	27.90	54.15		Shipment 1-1	
5	Tubular	1371.6Øx55	II	m	1785.81	10.30	6.00	2	12.00	21.43		Shipment 1-1	
6	Tubular	1371.6Øx50.8	II	m	1629.63	16.13	4.20	4	16.80	27.38		Shipment 3	
7	Tubular	1320.8Øx60	II	m	2013.04	34.80	6.00	8	48.00	96.63		Shipment 1-2	
8	Tubular	1320.8Øx38.1	II	m	1205.23	15.20	6.00	3	18.00	21.69		Shipment 1-2	
9	Tubular	1219.2Øx55	II	m	1579.10	10.80	6.00	2	12.00	18.95		Shipment 3	
10	Tubular	1219.2Øx44.5	II	m	1289.16	6.00	6.00	0	0.00	0.00		Shipment 2	
11	Tubular	1066.8Øx44.5	II	m	1121.91	30.20	6.00	6	36.00	40.39		Shipment 1-2	
12	Tubular	1066.8Øx38.1	II	m	966.57	0.00	6.00	0	0.00	0.00		Shipment 1-2	
13	Tubular	1016Øx38.1	II	m	918.84	61.22	6.00	11	66.00	60.64		Shipment 1-2	
14	Tubular	1016Øx31.8	II	m	771.84	102.98	6.00	19	114.00	87.99		Shipment 1-1	
15	Tubular	1016Øx25.4	II	m	620.51	37.60	6.00	7	42.00	26.06		Shipment 1-1	
16	Tubular	965.2Øx44.5	II	m	1010.41	43.33	12.00	4	48.00	48.50		Shipment 1-2	
17	Tubular	965.2Øx38.1	II	m	871.11	26.53	12.00	3	36.00	31.36		Shipment 1-2	
18	Tubular	965.2Øx31.8	II	m	732.01	12.20	12.00	2	24.00	17.57		Shipment 1-2	
19	Tubular	965.2Øx25.4	II	m	588.69	0.00	12.00	0	0.00	0.00		Shipment 1-2	
20	Tubular	914.4Øx38.1	II	m	823.37	3.00	12.00	1	12.00	9.88		Shipment 2	
21	Tubular	812.8Øx38.1	II	m	727.91	15.90	12.00	2	24.00	17.47		Shipment 1-2	
22	Tubular	762Øx30	II	m	541.57	5.60	12.00	1	12.00	6.50		Shipment 2	
23	Tubular	711.2Øx31.8	II	m	532.81	72.86	12.00	7	84.00	44.76		Shipment 1-2	
24	Tubular	660.4Øx28.6	II	m	445.62	52.94	12.00	5	60.00	26.74		Shipment 1-2	
25	Tubular	660.4Øx25.4	II	m	397.77	44.56	12.00	4	48.00	19.09		Shipment 1-2	
26	Tubular	609.6Øx30	II	m	428.81	6.30	12.00	1	12.00	5.15		Shipment 1-2	
27	Tubular	609.6Øx28.6	II	m	409.79	31.99	12.00	4	48.00	19.67		Shipment 1-2	
28	Tubular	609.6Øx25.4	II	m	365.94	48.50	12.00	5	60.00	21.96		Shipment 1-2	
29	Tubular	508Øx25.4	II	m	302.30	4.80	12.00	1	12.00	3.63		Shipment 2	

Item	Material Type	Descriptions	Type	Unit	Unit Weight (Kg / mtr / sqmtr)	Req. Length/ Area (m/m2)	Typ. Size (m/m2)	Round Quantity (pcs)	Total Length/ Area (M / SQM)	Total Weight (MT)	Portion Consider	Shipment, Remarks	
30	Tubular	1371.6Øx50.8	II	m	1654.70	9.70	2.26 2.45 2.54	1 2 1	9.70	16.05	PORTION 1	Shipment 1	
31	Tubular	1219.2Øx50.8	II	m	1463.78	4.16 3.26	4.16 3.26	1 1	7.42	10.86		Shipment 1	
32	Tubular	1219.2Øx45	II	m	1303.09	6.52	3.26	2	6.52	8.50		Shipment 1	
33	Tubular	1219.2Øx45	II	m	1303.09	12.45	4.15	3	12.45	16.22		Shipment 1	
34	Tubular	1828Øx50.8	II	m	2226.48	3.39	3.39	1	3.39	7.55		Shipment 2	
35	Tubular	1100Øx60	II	m	1538.88	1.77	2.00	1	2.00	3.08		Shipment 4	
36	Tubular	900Øx45	II	m	948.85	1.24	1.40	1	1.40	1.33		Shipment 4	
37	Tubular	600Øx45	II	m	615.92	2.13	2.50	1	2.50	1.54		Shipment 4	
										Sub-total	1,640.20		
	Rolled Tubular (TYPE IV)												
1	Tubular	508Øx15.9	IV	m	192.96	82.37	12.00	8	96.00	18.52	PORTION 1	Shipment 3	
2	Tubular	1219.2Øx25.4	IV	m	747.80	3.85	6.00	1	6.00	4.49		Shipment 2	
3	Tubular	1067Øx19.1	IV	m	493.60	2.20	6.00	1	6.00	2.96		Shipment 2	
4	Tubular	508Øx25.4	IV	m	302.30	3.58	12.00	1	12.00	3.63		Shipment 4	
5	Tubular	508Øx19.05	IV	m	229.71	9.47	12.00	1	12.00	2.76		Shipment 4	
6	Tubular	457.2Øx25.4	IV	m	270.48	15.19	12.00	2	24.00	6.49		Shipment 4	
											Sub-total	38.85	
SEAMLESS TUBULAR											291.05		
II.3	Seamless Tubular (TYPE I)												
1	Tubular/PIPE	406Øx12.7	I	m	123.18	151.90	12.00	13	156.00	19.22	PORTION 2	Shipment 2	
2	Tubular/PIPE	356Øx15.9	I	m	133.36	66.44	12.00	7	84.00	11.20		Shipment 3	
3	Tubular/PIPE	273Øx25.4	I	m	155.10	4.88	12.00	1	12.00	1.86		Shipment 3	
4	Tubular/PIPE	406.4Øx25.4	I	m	238.66	144.44	12.00	13	156.00	37.23		Shipment 3	
5	Tubular/PIPE	406.4Øx19.05	I	m	181.98	57.18	12.00	6	72.00	13.10		Shipment 3	
6	Tubular/PIPE	406.4Øx15.9	I	m	153.12	172.95	12.00	15	180.00	27.56		Shipment 3	
7	Tubular/PIPE	406.4Øx12.7	I	m	123.31	219.39	12.00	19	228.00	28.11		Shipment 3	
9	Tubular/PIPE	323.9Øx15.9	I	m	120.77	55.18	12.00	5	60.00	7.25		Shipment 3	
10	Tubular/PIPE	323.9Øx12.7	I	m	97.47	4.85	12.00	1	12.00	1.17		Shipment 3	
11	Tubular/PIPE	273.1Øx15.9	I	m	100.85	304.67	12.00	26	312.00	31.47		Shipment 3	
12	Tubular/PIPE	273.1Øx12.7	I	m	81.56	56.00	12.00	5	60.00	4.89		Shipment 3	
13	Tubular/PIPE	219.1Øx12.7	I	m	64.64	64.04	12.00	6	72.00	4.65		Shipment 3	
14	Tubular/PIPE	219.1Øx9.52	I	m	49.20	70.13	12.00	6	72.00	3.54		Shipment 3	
15	Tubular/PIPE	168.3Øx7.1	I	m	28.23	20.76	12.00	2	24.00	0.68		Shipment 3	

Item	Material Type	Descriptions	Type	Unit	Unit Weight (Kg / mtr / sqmtr)	Req. Length/ Area (m/m2)	Typ. Size (m/m2)	Round Quantity (pcs)	Total Length/ Area (M / SQM)	Total Weight (MT)	Portion Consider	Shipment, Remarks
16	Tubular/PIPE	114.3Øx6.02	I	m	16.08	39.65	12.00	4	48.00	0.77		Shipment 3
									Sub-total	192.71		
		Seamless Tubular (TYPE II)										
1	Tubular/PIPE	406.4Øx25.4	II	m	238.66	8.87	12.00	1	12.00	2.86	PORTION 2	Shipment 4
									Sub-total	2.86		
		Seamless Tubular (TYPE IV)										
1	Tubular/PIPE	406.9Øx15.9	IV	m	153.32	56.37	12.00	7	84.00	12.88	PORTION 2	Shipment 3
2	Tubular/PIPE	324Øx12.7	IV	m	97.50	95.13	12.00	8	96.00	9.36		Shipment 2
3	Tubular/PIPE	324Øx9.52	IV	m	73.83	29.92	12.00	3	36.00	2.66		Shipment 3
4	Tubular/PIPE	219Øx9.52	IV	m	49.18	153.64	12.00	13	156.00	7.67		Shipment 2
5	Tubular/PIPE	406.4Øx25.4	IV	m	238.66	13.98	12.00	2	24.00	5.73		Shipment 4
6	Tubular/PIPE	406.4Øx19.05	IV	m	181.98	24.55	12.00	3	36.00	6.55		Shipment 4
7	Tubular/PIPE	323.9Øx15.9	IV	m	120.77	13.17	12.00	2	24.00	2.90		Shipment 4
8	Tubular/PIPE	323.9Øx12.7	IV	m	97.47	25.13	12.00	3	36.00	3.51		Shipment 4
9	Tubular/PIPE	273.1Øx15.9	IV	m	100.85	14.08	12.00	2	24.00	2.42		Shipment 4
10	Tubular/PIPE	273.1Øx12.7	IV	m	81.56	40.16	12.00	4	48.00	3.91		Shipment 4
11	Tubular/PIPE	219.1Øx12.7	IV	m	64.64	284.11	12.00	24	288.00	18.62		Shipment 4
12	Tubular/PIPE	219.1Øx9.52	IV	m	49.20	46.78	12.00	4	48.00	2.36		Shipment 4
13	Tubular/PIPE	168.3Øx9.52	IV	m	37.28	175.54	12.00	15	180.00	6.71		Shipment 4
14	Tubular/PIPE	168.3Øx7.11	IV	m	28.26	235.16	12.00	20	240.00	6.78		Shipment 4
15	Tubular/PIPE	141.3Øx7.11	IV	m	23.53	85.71	12.00	8	96.00	2.26		Shipment 4
16	Tubular/PIPE	114.3Øx6.02	IV	m	16.08	64.68	12.00	6	72.00	1.16		Shipment 4
									Sub-total	95.48		
III	PLATE									1,245.36		
III.1	Plate (TYPE I)											
1	Plate	PL60	I	m2	471.00	2.02	2.4x3.0	0	0	0.00	PORTION 3	Shipment 3
2	Plate	PL50	I	m2	392.50	10.24	2.4x6.0	0	0	0.00		Shipment 3
3	Plate	PL40	I	m2	314.00	189.86	2.4x6.0	27	388.8	122.08		Shipment 2
4	Plate	PL38	I	m2	298.30	136.66	2.4x6.0	15	216	64.43		Shipment 1-1
5	Plate	PL32	I	m2	251.20	58.95	2.4x6.0	7	100.8	25.32		Shipment 1-1
6	Plate	PL30	I	m2	235.50	234.70	2.4x6.0	30	432	101.74		Shipment 1-1
7	Plate	PL25	I	m2	196.25	921.74	2.4x6.0	82	1180.8	231.73		Shipment 1-1
8	Plate	PL20	I	m2	157.00	149.24	2.4x6.0	15	216	33.91		Shipment 1-1
9	Plate	PL15	I	m2	117.75	192.23	2.4x6.0	24	345.6	40.69		Shipment 1-1
10	Plate	PL12	I	m2	94.20	49.60	2.4x6.0	6	86.4	8.14		Shipment 2
11	Plate	PL45	I	m2	353.25	3.67	2.4x6.0	1	14.4	5.09		Shipment 1

Item	Material Type	Descriptions	Type	Unit	Unit Weight (Kg / mtr / sqmtr)	Req. Length/ Area (m/m2)	Typ. Size (m/m2)	Round Quantity (pcs)	Total Length/ Area (M / SQM)	Total Weight (MT)	Portion Consider	Shipment, Remarks	
12	Plate	PL40	I	m2	314.00	16.14	2.4x6.0	2	28.8	9.04		Shipment 1	
13	Plate	PL35	I	m2	274.75	81.17	2.4x6.0	6	86.4	23.74		Shipment 1	
14	Plate	PL30	I	m2	235.50	20.09	2.4x6.0	2	28.8	6.78		Shipment 1	
15	Plate	PL25	I	m2	196.25	161.15	2.4x6.0	12	172.8	33.91		Shipment 1	
16	Plate	PL20	I	m2	157.00	228.48	2.4x6.0	16	230.4	36.17		Shipment 1	
17	Plate	PL16	I	m2	125.60	117.94	2.4x6.0	9	129.6	16.28		Shipment 1	
18	Plate	PL12	I	m2	94.20	15.02	2.4x6.0	2	28.8	2.71		Shipment 1	
19	Plate	PL10	I	m2	78.50	5.94	2.4x6.0	1	14.4	1.13		Shipment 1	
										Sub-total	762.91		
III.2	Plate (TYPE II)												
2	Plate	PL60	II	m2	471.00	6.21	2.4x6.0	2	28.8	13.56		Shipment 4	
3	Plate	PL50	II	m2	392.50	2.47	2.4x6.0	1	14.4	5.65		Shipment 4	
4	Plate	PL40	II	m2	314.00	8.01	2.4x6.0	2	28.8	9.04		Shipment 4	
5	Plate	PL50	II	m2	392.50	9.11	2.4x6.0	1	14.4	5.65		Shipment 1	
6	Plate	PL45	II	m2	353.25	40.35	2.4x6.0	5	72	25.43		Shipment 1	
7	Plate	PL40	II	m2	314.00	126.87	2.4x6.0	11	158.4	49.74		Shipment 1	
8	Plate	PL35	II	m2	274.75	109.14	2.4x6.0	8	115.2	31.65		Shipment 1	
9	Plate	PL30	II	m2	235.50	43.32	2.4x6.0	4	57.6	13.56		Shipment 1	
10	Plate	PL25	II	m2	196.25	24.70	2.4x6.0	2	28.8	5.65		Shipment 1	
11	Plate	PL60	II	m2	471.00	21.94	2.4x6.0	3	43.2	20.35		Shipment 2	
										Sub-total	180.30		
III.3	Plate (TYPE III)												
1	Plate	PL12	III	m2	94.20	205.76	2.4x6.0	15	216	20.35	PORTION 3	Shipment 2	
2	Plate	PL6	III	m2	47.10	362.34	2.4x6.0	26	374.4	17.63		Shipment 3	
										Sub-total	37.98		
III.4	Plate (TYPE IV)												
1	Plate	PL20	IV	m2	157.00	144.10	2.4x6.0	12	172.8	27.13	PORTION 3	Shipment 3	
3	Plate	PL12	IV	m2	94.20	1.06	2.4x6.0	1	14.4	1.36		Shipment 3	
4	Plate	PL10	IV	m2	78.50	51.90	2.4x6.0	6	86.4	6.78		Shipment 3	
5	Plate	PL25	IV	m2	196.25	29.23	2.4x6.0	3	43.2	8.48		Shipment 1	
6	Plate	PL20	IV	m2	157.00	25.32	2.4x6.0	2	28.8	4.52		Shipment 1	
7	Plate	PL16	IV	m2	125.60	84.05	2.4x6.0	6	86.4	10.85		Shipment 3	
8	Plate	PL12	IV	m2	94.20	1,209.23	2.4x6.0	84	1209.6	113.94		Shipment 3	
9	Plate	PL10	IV	m2	78.50	1,130.16	2.4x6.0	79	1137.6	89.30		Shipment 3	
10	Plate	PL8	IV	m2	62.80	7.30	2.4x6.0	2	28.8	1.81		Shipment 3	
										Sub-total	264.17		
IV	Reducer										27.03		

Item	Material Type	Descriptions	Type	Unit	Unit Weight (Kg / mtr / sqmtr)	Req. Length/ Area (m/m2)	Typ. Size (m/m2)	Round Quantity (pcs)	Total Length/ Area (M / SQM)	Total Weight (MT)	Portion Consider	Shipment, Remarks
IV.1		Reducer (Fabricate from plates TYPE I)										
1	Cone	1828.80x1371.60x38	I	Pcs			1.83	3		8.91	PORTION 1	Shipment 1-1
		1828.80x1371.60x60	1.0	Pcs			1.83	1		4.69		Shipment 1-1
2	Cone	10160x1320.80x30	I	Pcs			1.00	4		3.41		Shipment 1-1
3	Cone	965.20x1320.80x30	I	Pcs			1.05	4		3.51		Shipment 1-1
4	Cone	1219.20x18280x38	I	Pcs	2808.10		2.00	1		2.81		Shipment 1
5	Cone	1219.20x1371.60x45	I	Pcs	1048.50		0.75	1		1.05		Shipment 1
6	Cone	1219.20x1371.60x38	I	Pcs	885.40		0.75	3		2.66		Shipment 1
									Sub-total	27.03		

Notes: WHP-DHN Topside, Jacket, Piles Steel will be divided to 3 Portions and each portion will be consider to delivery by four (04) of shipments

Estimate weight (T)		
Portion 1	7,078.03	Rolling tubular and rolling cones
Portion 2	291.05	Seamless pipe
Portion 3	1,858.85	Plate and rolling sections (beam)
Total	9,227.94	