UDUPI COCHIN SHIPYARD LIMITED

(Formerly TEBMA Shipyards Limited)
Ministry of Ports, Shipping and Waterways,
Government of India

UDUPI COCHIN SHIPYARD LIMITED

CONTRACT CELL DEPARTMENT

CORRIGENDUM - 3 Dated: 02-12-2023

Tender No.: UCSL/CC/T/W/002

Sir,

CORRIGENDUM-2 Dated: 02-12-2023- TENDER FOR PIPE SPOOL FABRICATION ON 3800 DWT GENERAL CARGO

The following terms of the subject tender is amended as follows:

1. Tender opening date;

FOR:

Last date & time of receipt of tender	**7th December 2023 (Thursday), 15:30 Hrs.**
Date & time of opening of Technical Bid (Part-I)	**7th December 2023 (Thursday), 15:30 Hrs.**
Tentative date & Time of opening of Price Bid (Part - II)	**11th December 2023 (Monday), 15:00 Hrs.**

READ AS:

Last date & time of receipt of tender	**11th December 2023 (Monday), 15:30 Hrs.**
Date & time of opening of Technical Bid (Part-I)	**11th December 2023 (Monday), 15:30 Hrs.**
Tentative date & Time of opening of Price Bid (Part - II)	**14th December 2023 (Thursday), 15:00 Hrs.**

2. Revised the below annexures.
   - Annexure III-Indicative Quantum of works-002
   - Annexure II - Scope Of Work-002
   - Annexure V- Price Bid Format-002

For Udupi Cochin Shipyard Limited,

Assistant General Manager (Materials & Contract Cell)

सोणि क्लेमेन्ट टी एम
SONY CLEMENT T M
सहायक महाप्रबंधक/ASSISTANT GENERAL MANAGER
उडुपि कोच्चीन शिपयार्ड लिमिटेड
UDUPI COCHIN SHIPYARD LIMITED
माल्पे, कर्नाटक/MALPE, KARNATAKA-576 108

SCOPE OF WORK

TENDER FOR PIPE SPOOL FABRICATION ON 3800 DWT GENERAL CARGO VESSEL

1. SCOPE OF CONTRACTOR:

1.1. Job to be executed on lumpsum turnkey basis which should be inclusive of material cost.

1.2. Pipe spool fabrication - 2200 Spools (Approx) per vessel.

1.3. The scope of work includes purchase of material by vendor (class certified wherever indicated in BOQ), fabrication at vendor premises, Galvanizing and pickling, transportation to yard (UCSL) and elimination of any imperfection or deficiency of the works until the project is completed.

1.4. The Contractor shall arrange all consumables, tools & tackles, cranes, laborer's, fabrication facility, surface treatment (galvanizing, pickling, painting, passivation) at his work site or at any sub vendors premises at his own responsibility and expenses.

1.5. The Contractor shall execute the work as per the specifications / drawings issued and to the satisfaction of UCSL.

1.6. Bending of pipe/tube spools will be required for less than 150 mm using bending machine. Desired bending radius will be 2D or 3D and maximum thickness upto 8 mm.

1.7. Bending deformations (pipe thinning, ovality, Wrinkling, damages, cracks) will not be accepted

1.8. Detailed piping and fittings Bill of Material (BOQ) is indicated in Annexure III

1.9. The contractor shall be responsible to UCSL for the following: -

a. Fabrication of the pipe spools as per drawing and piping standard as indicated by UCSL. Sample spool drawings attached for references.

b. All pipes root should be in TIG welding and balance (cover / filling runs) Arc welding preferred for carbon steel pipes. Proper root penetration to be ensured.

c. All Stainless Steel (SS) pipes to be only TIG welded

d. Welded beads on inside surface of fabricated pipes, except butt welded joints using backing ring, shall be finished to suit to the purpose of the respective piping system. In case of TIG welding pipes, inside finishing of butt joint shall be omitted.

e. The spools should undergo Hydro Testing at test pressures indicated in the drawings post completion of welding and same will be witnessed by UCSL QC team or surveyor as applicable. Hydrotesting at shop is applicable only for class 1 & 2. Class -3 pipes are pressure tested on-board during layout survey. However, if found any defect, same will be rectified by UCSL yard. Compensation with penalty for defective welding or loss of the item will be recovered from the Contractor.

f. Pipes which require Hot-Dip Galvanizing shall be done with sand/grit blasting/special cleaning/ pickling with approved chemicals etc to remove oil, grease, paints, varnish, rust etc to make the surface ready for Hot dip galvanizing and then galvanizing (85-120 microns).

g. Pipes in which pickling is required, shall require sand blasting prior going to pickling and one coat of Primer(spray)/paint(spray) coating of marine grade(Jotun/PPG/Hempal) to be done.

h. Stainless steel pipe to be passivated.

i. Pickling/ galvanizing/Passivation to be done as per the details given in fabrication drawing/yard standard.

j. Punching of pipes with MLF/paint code/ Pipe spool numbers as indicated by UCSL in the drawings.

k. Packing, Pelleting and transportation to be done without damaging/ deforming. Pipe end to be closed (air tight)

l. As per UCSL piping practice all pipes will having inspection by UCSL QC/OWNER, any imperfection/rejection/deficiency to be rectified by the contractor without any additional charges

1.10. Contractor shall maintain quality as per UCSL quality standards and yard quality procedures. UCSL will conduct inspection during fabrication.

1.11. The Bidder shall also be solely responsible for correct delivery of the materials in size, quantity, quality etc in good conditions and obtaining clear receipts to that effect.

1.12. Entire work as per Work order must be completed within the time line as per UCSL load conditions. As a benchmark 750 No of pipe spools would be expected to be fabricated per month.

1.13. Bidder should be ready to work round the clock and multiple shifts as per UCSL's requirement/ instruction of officer-in-charge.

1.14. All works shall be as per strict compliance to approved UCSL drawings/material type/ QAP.

2. OTHER CONDITIONS:

2.1. The bidder should have qualified welders having relevant WPS approved by classification societies. Welding shall be done by qualified welders for respective WPS and the welders shall carry / submit the welder's certificate to Quality control department for records. The contactors shall requalify the welders if so, felt necessary or as mandated by the class. The fee as applicable for re-certification of welder shall be to contractor's scope.

2.2. The bidder's team shall include a qualified piping engineer having minimum 05 years post-qualification experience in pipe fabrication / ship pipe repairs or piping on floating marine structures. Details of qualification & experience (CV) shall be submitted along with the offer.

2.3. The bidder shall have a qualified QA / QC team / department with relevant procedures for ensuring quality. Details of structure and strength of QA / QC team shall be submitted.

2.4. Bidder shall carry out the Quality Checks (QC) of the pipes and Quality Check should be offered to UCSL Quality Assurance team at their premises prior proceeding for pickling/passivation/painting/galvanization. QC reports to be provided along with pipe spools for dimensional accuracy, contractor's internal QC verification is required before welding of the spools.

2.5. Contractor shall prepare and submit a Quality Assurance Plan (QAP) to UCSL covering aspects such as type of QA check, quantum of QA check, reference documents, acceptance norms, records to be maintained etc pertaining to various stages viz., raw material selection, fabrication, pickling, passivation, galvanizing, etc. Comments by UCSL shall be duly incorporated in the final QAP, which will be approved by UCSL. In addition, Contractor has to ensure QC inspection as required, during stages of fabrication as per the approved QAP.

2.6. QAP & schedule to be submitted prior commencement of work. All the works undertaken in

bidder workshop/Site to be properly recorded along with photographs. After completion of work detailed report to be handed over.

2.7. Successful bidder shall procure Quality standard welding consumables for (TIG/Arc/Brazing) and certificates shall be submitted to UCSL for verification. Welding of pipes are to be done by qualified welders by classification societies. (Welders with WPS certificates)

2.8. Necessary HSE representative is also to be arranged by the subcontractor at his work site who shall ensure that the HSE requirements are complied.

2.9. Items as per BOQ procured to be made available at the yard.

3. TECHNICAL EXPERIENCE

3.1. The Bidder shall have experience in pipe fabrication, galvanizing, painting of various pipe materials such as CS, SS, and Cu etc. in the last three years in ship building, ship repair, petrochemical and chemical sectors.

3.2. The technical experience means "the experience of successfully completed similar works (as per clause 3.1 above) for period of 3 years. In the case of ongoing works, work progress report from the authorized officer of the work order issued firm shall be submitted for considering UCSL requirement.

3.3. The average cumulative annual financial turn over should be at least Rs. 3 Crores during the last 3 consecutive financial year (Audited balance sheets showing turnover profit & loss account of the firm should be submitted).

3.4. The bidder should have qualified welders having relevant WPS approved by classification societies.

3.5. Documents to prove credentials of the firm to undertake the subject work. eg: Details of available equipments & facilities, Skilled / qualified Manpower, Work experience of similar job, etc. The firm has to submit the documents which validate the above-mentioned Clause 3.1 - 3.4 requirements.

3.6. If the experience claimed by the bidder is of no relevance with respect to pipe fabrication, galvanizing, painting of various pipe materials of Piping Systems, then such experience will not be considered for pre-qualification. Decision taken by UCSL in this regard will be final.

3.7. The Bidder should furnish the required work-specific information and satisfactory documentary evidence such as copy of work order / agreement and a certificate from the employer for satisfactory completion of work or any other relevant document indicating completion of work shall be submitted to UCSL in support of its claim of experience.

3.8. Bidder shall not be under a declaration of ineligibility issued by Govt. of India/ State govt./ Public Sector Undertakings etc. The bidder shall not have been debarred / black listed by UCSL or by any of the Public Sector Undertaking or Government department etc.

3.9. Bidder should have sufficient covered space and handling equipments to undertake the work.

3.10. Bidder should have the facility or sub vendor facility to galvanize minimum 3-meter length pipes and up to 500 NB size pipes with flanges and elbows.

3.11. Bidder should provide the detailed execution plan of Hot-Dip galvanizing, such as where Hot Dip Galvanizing being carried out. Galvanizing unit capacity, present load, undertaking to carry out the work as per this tender also to be produced along with the tender

3.12. The Contractor shall provide certificates wherever applicable, which shall include the results of all testing required as per the scope of work and performed on all items giving details, but not limited to the following:

3.12.1. Certified reports of all material.

3.12.2. Certified reports of hydrostatic testing.

3.12.3. QC inspection reports.

3.13. Successful bidder should depute a team (Fabricators & Supervisor) to UCSL to study the fabrication drawings which includes bending details reading, fit-up details reading, welding details reading etc.

4. SCOPE OF UCSL:

4.1. UCSL will provide necessary work instructions, technical specifications and applicable drawings etc. for the work.

4.2. Quality assurance plan (QAP) and available welding procedure specification (WPS) shall be provided. QAP & WPS are UCSL property & contractor should not use this for any other purpose.

4.3. Welder qualification shall be carried out by UCSL in presence of competent authority for acceptance and performing on the job woks. (The welder test will be conducted on chargeable basis)

4.4. Assistance from yard will be limited to Entry pass for personnel /Crane assistance/Fork Lift assistance for loading and unloading of items within UCSL premises, subject to availability at free of cost.

4.5. UCSL shall not be responsible for any compensation to personnel for injuries etc/damage to vehicles involved in accidents under any circumstance, whatsoever.

5. ADDITIONAL WORKS

5.1. This is a turnkey job and any additional works up to 7.5% growth of work on the material and spool fabrication in terms of total quantity of material and spools is to be envisaged and is to be undertaken without any additional price impact.

5.2. In case of additional work (rework/modification), written consent is to be obtained from the Officer-in-charge before commencement of the work.

5.3. Contractor shall carry out the complete work in accordance with Shipyard's approved drawings. Any minor modifications from drawing or any other work or supply of material, which is not specified hereunder, but is considered incidental and essential for the successful completion of the job shall be carried out by the Contractor without any additional charge.

5.4. The contractor shall be responsible for any damage caused to the spool's supplied to UCSL. Compensation with penalty for damage or loss of the item will be recovered from the Contractor, in the event of loss or damage.

6. INSPECTION

6.1. The complete work has to be carried out under the survey of UCSL Quality Control Dept.

6.2. Contractor to maintain the required dimensional accuracy and surface finish as per quality standards (to be provided by UCSL).

6.3. All welding works shall be carried out by approved and qualified welders only.

6.4. Welding spatters and slags on the flange face shall be removed.

6.5. Welded beads on inside surface of fabricated pipes, except butt welded joints using backing ring, shall be finished to suit to the purpose of the respective piping system. In case of TIG welding pipes, inside finishing of butt joint shall be omitted.

6.6. No holes other than those existing in the units are to be drilled to ease slinging while galvanizing. However, suitable hooks may be welded for slinging while galvanizing and removed later after galvanizing, at no extra cost. Any damage to the material while welding hooks or otherwise while in the premises of galvanizer should be rectified/replaced compensated by the bidder.

6.7. Cleaning of materials after galvanizing and removing lump of zinc sticking to the surface (both inside and outside), if any. Also, no zinc spray should be used.

6.8. All welding machines are to be calibrated.

6.9. All test and Inspections shall be carried out as per approved Quality Plan.

6.10. All works shall be as per strict compliance to approved UCSL drawings.

6.11. All correspondence with the Shipyard to be in English language. All documents and plans to be in English language and in metric units.

PART A

FABRICATION RATE FOR CARBON STEEL & STAINLESS-STEEL PIPES

Category	Approx. Inch Diameter (A)	Unit rate (B)	Total Rate (C=A*B)
Carbon Steel Pipes total	**27630**		
32NB to 50NB	*4707.19*		
65NB to 80NB	*3804.38*		
100NB to 150NB	*15784.38*		
Above 150NB	*2290.00*		
Pipe bending	*1045*		
Class Pipes total	**115**		
32NB to 50NB	*17.5*		
65NB to 80NB	*30*		
100NB to 150NB	*22.5*		
Above 150NB	*45*		
Stainless Steel Pipe total	**362**		
32NB to 50NB	*81.25*		
65NB to 80NB	*200.00*		
Above 150NB	*80.00*		

PART B

RATE FOR GALVANISATION/PICKLING/PASSIVATION

SL. No	Description	Total Weight in Ton (A)	Unit Rate/Ton (B)	Total Rate (C=A*B)
1	Hot Dip Galvanizing	45		Rs..... (Per Ton)
2	Pickling	3		Rs..... (Per Ton)
3	Passivation	1		Rs..... (Per Ton)

PART C
INDICATIVE BILL OF MATERIAL(BOQ)

Sr.No	Item Description	Size	Schedule	Material	Material Category	Standard	Qty	UOM	Remark	Unit Price
1	Seamless Pipe	200	Sch20	ASTM A106 Gr B	Carbon Steel	ASME B36.10	37	Mtrs		
2	Seamless Pipe	32	Sch40	ASTM A106 Gr B	Carbon Steel	ASME B36.10	42	Mtrs		
3	Seamless Pipe	40	Sch40	ASTM A106 Gr B	Carbon Steel	ASME B36.10	118	Mtrs		
4	Seamless Pipe	50	Sch40	ASTM A106 Gr B	Carbon Steel	ASME B36.10	207	Mtrs		
5	Seamless Pipe	65	Sch40	ASTM A106 Gr B	Carbon Steel	ASME B36.10	69	Mtrs		
6	Seamless Pipe	80	Sch40	ASTM A106 Gr B	Carbon Steel	ASME B36.10	270	Mtrs		
7	Seamless Pipe	100	Sch40	ASTM A106 Gr B	Carbon Steel	ASME B36.10	214	Mtrs		
8	Seamless Pipe	125	Sch40	ASTM A106 Gr B	Carbon Steel	ASME B36.10	21	Mtrs		
9	Seamless Pipe	150	Sch40	ASTM A106 Gr B	Carbon Steel	ASME B36.10	28	Mtrs		
10	Seamless Pipe	200	Sch40	ASTM A106 Gr B	Carbon Steel	ASME B36.10	14	Mtrs		
11	Seamless Pipe	250	Sch40	ASTM A106 Gr B	Carbon Steel	ASME B36.10	14	Mtrs		
12	Seamless Pipe	32	Sch80	ASTM A106 Gr B	Carbon Steel	ASME B36.10	7	Mtrs		
13	Seamless Pipe	40	Sch80	ASTM A106 Gr B	Carbon Steel	ASME B36.10	297	Mtrs		
14	Seamless Pipe	50	Sch80	ASTM A106 Gr B	Carbon Steel	ASME B36.10	325	Mtrs		
15	Seamless Pipe	65	Sch80	ASTM A106 Gr B	Carbon Steel	ASME B36.10	104	Mtrs		
16	Seamless Pipe	80	Sch80	ASTM A106 Gr B	Carbon Steel	ASME B36.10	111	Mtrs		
17	Seamless Pipe	100	Sch80	ASTM A106 Gr B	Carbon Steel	ASME B36.10	725	Mtrs		
18	Seamless Pipe	125	Sch80	ASTM A106 Gr B	Carbon Steel	ASME B36.10	28	Mtrs		
19	Seamless Pipe	150	Sch80	ASTM A106 Gr B	Carbon Steel	ASME B36.10	235	Mtrs		
20	Elbow 45 Degree 1.5D	100	Sch80	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	36	Nos		
21	Elbow 90 Degree 1.5D	200	Sch20	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	5	Nos		
22	Elbow 90 Degree 1.5D	100	Sch40	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	63	Nos		
23	Elbow 90 Degree 1.5D	125	Sch40	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	28	Nos		
24	Elbow 90 Degree 1.5D	150	Sch40	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	28	Nos		
25	Elbow 90 Degree 1.5D	200	Sch40	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	14	Nos		
26	Elbow 90 Degree 1.5D	250	Sch40	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	10	Nos		
27	Elbow 90 Degree 1.5D	100	Sch80	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	46	Nos		

28	Elbow 90 Degree 1.5D	125	Sch80	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	10	Nos		
29	Elbow 90 Degree 1.5D	150	Sch80	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	25	Nos		
30	Concentric Reducer	200x150	Sch20	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	3	Nos		
31	Concentric Reducer	32x25	Sch40	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	12	Nos		
32	Concentric Reducer	40x20	Sch40	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	5	Nos		
33	Concentric Reducer	40x25	Sch40	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	14	Nos		
34	Concentric Reducer	40x32	Sch40	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	7	Nos		
35	Concentric Reducer	50x25	Sch40	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	10	Nos		
36	Concentric Reducer	50x32	Sch40	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	6	Nos		
37	Concentric Reducer	50x40	Sch40	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	6	Nos		
38	Concentric Reducer	65x50	Sch40	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	19	Nos		
39	Concentric Reducer	80x50	Sch40	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	21	Nos		
40	Concentric Reducer	80x65	Sch40	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	14	Nos		
41	Concentric Reducer	100x80	Sch40	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	10	Nos		
42	Concentric Reducer	125x100	Sch40	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	11	Nos		
43	Concentric Reducer	150x100	Sch40	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	10	Nos		
44	Concentric Reducer	150x125	Sch40	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	7	Nos		
45	Concentric Reducer	200x150	Sch40	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	5	Nos		
46	Concentric Reducer	100x50	Sch80	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	10	Nos		
47	Concentric Reducer	100x80	Sch80	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	12	Nos		
48	Concentric Reducer	150x100	Sch80	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	7	Nos		
49	Concentric Reducer	200x100	Sch80	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	6	Nos		
50	Concentric Reducer	200x150	Sch80	ASTM A234 Gr WPB	Carbon Steel	ASME B16.9	5	Nos		
51	Slip On Flange	80	PN6	IS2062 Gr B	Carbon Steel	EN 1092-1 Type 1 FF	3	Nos		
52	Slip On Flange	125	PN6	IS2062 Gr B	Carbon Steel	EN 1092-1 Type 1 FF	7	Nos		
53	Slip On Flange	150	PN6	IS2062 Gr B	Carbon Steel	EN 1092-1 Type 1 FF	17	Nos		
54	Slip On Flange	200	PN6	IS2062 Gr B	Carbon Steel	EN 1092-1 Type 1 FF	3	Nos		
55	Slip On Flange	32	PN10	IS2062 Gr B	Carbon Steel	EN 1092-1 Type 1 FF	35	Nos		
56	Slip On Flange	40	PN10	IS2062 Gr B	Carbon Steel	EN 1092-1 Type 1 FF	101	Nos		
57	Slip On Flange	50	PN10	IS2062 Gr B	Carbon Steel	EN 1092-1 Type 1 FF	403	Nos		
58	Slip On Flange	65	PN10	IS2062 Gr B	Carbon Steel	EN 1092-1 Type 1 FF	91	Nos		
59	Slip On Flange	80	PN10	IS2062 Gr B	Carbon Steel	EN 1092-1 Type 1 FF	218	Nos		
60	Slip On Flange	100	PN10	IS2062 Gr B	Carbon Steel	EN 1092-1 Type 1 FF	525	Nos		
61	Slip On Flange	125	PN10	IS2062 Gr B	Carbon Steel	EN 1092-1 Type 1 FF	43	Nos		

62	Slip On Flange	150	PN10	IS2062 Gr B	Carbon Steel	EN 1092-1 Type 1 FF	166	Nos		
63	Slip On Flange	200	PN10	IS2062 Gr B	Carbon Steel	EN 1092-1 Type 1 FF	33	Nos		
64	Slip On Flange	250	PN10	IS2062 Gr B	Carbon Steel	EN 1092-1 Type 1 FF	17	Nos		
65	Pipe Sleeve MS	32			Carbon Steel	As per Drawing	29	Nos	Enclosure-1	
66	Pipe Sleeve MS	40			Carbon Steel	As per Drawing	35	Nos		
67	Pipe Sleeve MS	50			Carbon Steel	As per Drawing	60	Nos		
68	Pipe Sleeve MS	65			Carbon Steel	As per Drawing	29	Nos		
69	Pipe Sleeve MS	80			Carbon Steel	As per Drawing	75	Nos		
70	Pipe Sleeve MS	100			Carbon Steel	As per Drawing	184	Nos		
71	Pipe Sleeve MS	150			Carbon Steel	As per Drawing	37	Nos		
72	Pipe Sleeve MS	200			Carbon Steel	As per Drawing	5	Nos		
73	Penetration Sleeve MS	32			Carbon Steel	As per Drawing	9	Nos		
74	Penetration Sleeve MS	40			Carbon Steel	As per Drawing	76	Nos		
75	Penetration Sleeve MS	50			Carbon Steel	As per Drawing	78	Nos		
76	Penetration Sleeve MS	65			Carbon Steel	As per Drawing	36	Nos		
77	Penetration Sleeve MS	80			Carbon Steel	As per Drawing	59	Nos		
78	Penetration Sleeve MS	100			Carbon Steel	As per Drawing	82	Nos		
79	Penetration Sleeve MS	125			Carbon Steel	As per Drawing	27	Nos		
80	Penetration Sleeve MS	150			Carbon Steel	As per Drawing	36	Nos		
81	Penetration Sleeve MS	200			Carbon Steel	As per Drawing	19	Nos		
82	Blank Plate with nipple	80			Carbon Steel	Ø89x8-R1/2"	4	Nos		
83	Weld Nipple BSP MS	1"			Carbon Steel	DIN2982	18	Nos		
84	Weld Nipple BSP MS	1/2"			Carbon Steel	DIN2982	23	Nos		
85	Weld Nipple BSP MS	2"			Carbon Steel	DIN2982	10	Nos		
86	Welding Socket MS	1/2 "			Carbon Steel		36	Nos		
87	Welding Socket MS	1/4"			Carbon Steel		9	Nos		
88	Seamless Pipe	40	Sch160	ASTM A106 Gr B	Carbon Steel		2	Mtrs	BV Class Certificate	
89	Seamless Pipe	50	Sch160	ASTM A106 Gr B	Carbon Steel		42	Mtrs	BV Class Certificate	
90	Seamless Pipe	80	Sch160	ASTM A106 Gr B	Carbon Steel		4	Mtrs	BV Class Certificate	
91	Seamless Pipe	100	Sch120	ASTM A106 Gr B	Carbon Steel		42	Mtrs	BV Class Certificate	

92	Seamless Pipe	125	Sch80	ASTM A106 Gr B	Carbon Steel		2	Mtrs	BV Class Certificate	
93	Seamless Pipe	150	Sch80	ASTM A106 Gr B	Carbon Steel		2	Mtrs	BV Class Certificate	
94	Seamless Pipe	200	Sch80	ASTM A106 Gr B	Carbon Steel		2	Mtrs	BV Class Certificate	
95	Seamless Pipe	250	SchXS	ASTM A106 Gr B	Carbon Steel		2	Mtrs	BV Class Certificate	
96	Elbow 90 Degree 1.5D	100	Sch120	ASTM A234 Gr WPB	Carbon Steel		21	Nos	BV Class Certificate	
97	Elbow 90 Degree 1.5D	50	Sch160	ASTM A234 Gr WPB	Carbon Steel		13	Nos	BV Class Certificate	
98	Seamless Pipe	200	Sch20	AISI-316L	Stainless Steel	ASME B36.10	7	Mtrs		
99	Seamless Pipe	50	Sch40	AISI-316L	Stainless Steel	ASME B36.10	21	Mtrs		
100	Seamless Pipe	65	Sch40	AISI-316L	Stainless Steel	ASME B36.10	35	Mtrs		
101	Seamless Pipe	80	Sch40	AISI-316L	Stainless Steel	ASME B36.10	7	Mtrs		
102	Elbow 45 Degree 1.5D	200	Sch20	AISI 304L	Stainless Steel	ANSI B 16.9	2	Nos		
103	Elbow 45 Degree 1.5D	200	Sch20	AISI-316L	Stainless Steel	ANSI B 16.9	2	Nos		
104	Elbow 45 Degree 1.5D	125	Sch40	AISI-316L	Stainless Steel	ANSI B 16.9	3	Nos		
105	Elbow 45 Degree 1.5D	150	Sch40	AISI-316L	Stainless Steel	ANSI B 16.9	2	Nos		
106	Elbow 90 Degree 1.5D	200	Sch20	AISI-316L	Stainless Steel	ANSI B 16.9	3	Nos		
107	Concentric Reducer	40x25	Sch40	AISI-316L	Stainless Steel	ANSI B 16.9	3	Nos		
108	Slip On Flange	50	PN10	AISI-316L	Stainless Steel	EN 1092-1 Type 1 FF	5	Nos		
109	Slip On Flange	65	PN10	AISI-316L	Stainless Steel	EN 1092-1 Type 1 FF	37	Nos		
110	Pipe Sleeve	80	PN10	AISI-316L	Stainless Steel	As per Drawing	6	Nos		

Note:

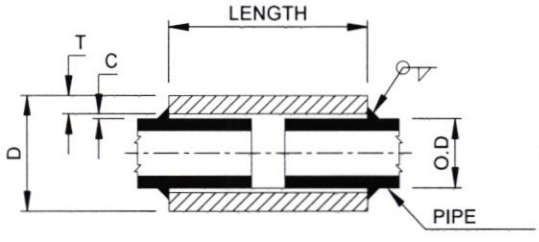
1. **For Pipe sleeve and Penetration sleeve refer typical arrangement shown in Enclosure 1.**
2. **Where BV certificate is indicated, the item is to be certified by class.**
3. **This is a turnkey job and any additional works up to 7.5% growth of work on the material and spool fabrication in terms of total quantity of material and spools is to be envisaged and is to be undertaken without any additional price impact.**

SLEEVES

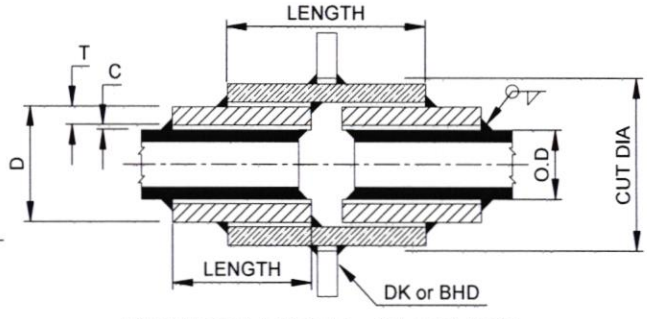
TYPE : WELDABLE SLEEVES FOR CLASS III PIPING SYSTEMS

MATERIAL : 125NB & BELOW – SEAMLESS CARBON STEEL PIPE (ASTM A106)
150NB & ABOVE – ROLLED CARBON STEEL PLATE (IS 2062)

END CONNECTION : WELDABLE



PIPE SLEEVES



PENETRATION SLEEVES

UNIT:mm

NOM. SIZE.	PIPE O.D	D (mm)	t (mm)	LENGTH (mm)	CUT DIA. (mm)	EQUIVALENT PIPE AS SLEEVE	~WEIGHT (kg)
15	21.3	33.4	4.55	100	36	25 NB SCH 80	0.32
20	26.7	42.2	6.35	100	45	32 NB SCH 80	0.45
25	33.4	48.3	5.08	100	51	40 NB SCH 80	0.54
32	42.2	60.3	7.14	100	63	50 NB 7.14mm Thk	0.94
40	48.3	60.3	3.91	100	63	50 NB SCH 40	0.54
50	60.3	73.0	5.16	100	76	65 NB SCH 40	0.86
65	73.0	88.9	5.49	100	92	80 NB SCH 40	1.13
80	88.9	114.3	11.13	100	117	100 NB SCH 120	2.83
100	114.3	141.29	12.70	100	144	125 NB SCH 120	4.03
125	141.3	168.3	10.97	120	171	150 NB SCH 80	4.26
150	168.3	192.3	9.00	120	196	ROLLED FROM 9 THK PLATE	5.08
200	219.1	243.1	9.00	150	246	ROLLED FROM 9 THK PLATE	8.04
250	273.0	299.9	10.00	150	303	ROLLED FROM 10 THK PLATE	11.02
300	323.9	349.9	10.00	150	353	ROLLED FROM 10 THK PLATE	12.86
350	355.6	381.6	10.00	150	385	ROLLED FROM 10 THK PLATE	14.03
400	406.4	432.4	10.00	150	437	ROLLED FROM 10 THK PLATE	15.89
450	457.2	483.2	10.00	180	486	ROLLED FROM 10 THK PLATE	21.31
500	508.0	536.0	11.00	180	540	ROLLED FROM 11 THK PLATE	26.01

NOTES:
1. FOR PENETRATION SLEEVES, TWO INNER AND AN OUTER SLEEVES ARE TO BE CONSIDERED.
2. THE DIMENSIONS ARE PRELIMINARY. THE ACTUAL DIMENSIONS FOR PENETRATION SLEEVES VARY CASE TO CASE BASIS.

TENDER FOR PIPE SPOOL FABRICATION ON 3800 DWT GENERAL CARGO VESSEL

PRICE BID FORMAT (Per Vessel)

Sl. No.	Work Description	UOM	Quantity (A)	Rate (B)	Amount-INR C= (A x B)
1	PART A- FABRICATION RATE FOR CARBON STEEL & STAINLESS-STEEL PIPES				
2	PART B -RATE FOR GALVANISATION/PICKLING/PASSIVATION				
3	PART C- BILL OF MATERIAL(BOQ)				
4	**Total Amount**				
5	**IGST/GST @.....**				
6	**Grand Total Amount**				
Grand total in words:					

Signature:

Address of the contractor:

Date:

Seal:

Note:

1.1. Prices are to be quoted in the Pricing Format. The quotations to be submitted in the company letter head and forwarded to contractcell@udupicsl.com

1.2. Quotations shall be submitted as Password Protected File. The bidders are advised to share the password through only SMS while opening the quotations.

1.3. L1 will be determined based on the total amount at sl no.6

1.4. Price quoted for Anticipatory items will not be considered in L1 determination and it may be considered in account, if required during execution at a later stage, as the case may be.

1.5. Cost of Pipe spool fabrication will be = Size of pipe in inch x No. of joints (of that size) X Inch Dia Rate in the respective category.

- Each Butt joint is considered as one joint.
- Each Flange fitment, inside and outside welding (Fillet) is considered as two joints.
- Sleeve welding both ends considered as one joint.

- Brach connection butt joint is considered as one joint
- Pipe bending by cold bending process is considered as 0.5 joints for charges.

1.6. Rate quoted for Inch Diameter (IND) includes all activities involved in that joint such as edge preparation, fitment, welding of flanges, sleeves, elbows, tees, reducers, bends, branch pipes, butt welding, fillet welding etc.

1.7. Root welding should be TIG welding.

1.8. Fabrication also includes marking, cutting, edge preparation, cold bending, branch connections, profile cutting, preparation, testing, inspection etc. as per drawings, specifications/ instructions of Engineer- in - Charge.

1.9. Cost for electrodes/filler wire, consumables, primer paint (one coat) wherever applicable, materials for galvanizing, pickling and passivation, pressure testing, inspection etc. shall be inclusive in the quoted rate.

1.10. All costs for the satisfactory completion of pipe spool fabrication and Primer coating or Hot -dip galvanizing shall be included in PART A/B.