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PART-II [PRICE-OFFER FORMAT/WORK-FORMAT]- PRICE TO BE FILLED IN THIS SHEET AND UPLOADED

The Shipping Corporation of India Ltd. , Mumbai

TECHNICAL SERVICE (FLEET) DEPARTMENT

E-TENDER FOR EMPANELMENT OF SHIP REPAIR WORKSHOPS & FIXATION OF TARIFF RATES

GENERAL MACHINERY OVERHAULING REPAIRS & RELATED JOBS [RFx 9000049212]

PORT : KOCHI

NAME OF WORKSHOPS:

RATES ARE IN INDIAN RUPEES EXCLUDING ALL APPLICABLE TAXES .

VALIDITY : TWO YEARS PLUS TWO EXTENSIONS OF THREE MONTHS EACH.

RATES FOR WORKING ON SHIPS ALONGSIDE BERTH/AT STREAM/ANCHORAGE/IN DRYDOCK/AT QUAY.

Sr. No.	GENERAL	UNIT	Estd Annual Qty. without any guarantee	W/shop to quote rates in this column [priced quotation (unprotected excel sheet) should be digitally signed and uploaded under 'Attachment' tab while submitting RFx response]
1	**ENGINEER / LABOUR RATES - MAN DAYS**			
2	Marine Engineer (CEO)	PER DAY PER NORMAL SHIFT	100	
3	Graduate Engineer(B.E.)	PER DAY PER NORMAL SHIFT	100	
4	Diploma Engineer	PER DAY PER NORMAL SHIFT	500	
5	Supervisor Charges	PER DAY PER NORMAL SHIFT	2000	
6	Labour rates for skilled workers all inclusive I.E.(inclusive of long term benefits, overheads, profits)	PER DAY PER NORMAL SHIFT	20000	
7	Labour rates for semi-skilled workers all inclusive (inclusive of long term benefits, overheads profits)	PER DAY PER NORMAL SHIFT	20000	
8	Labour rates for un-skilled workers all inclusive (inclusive of long term benefits, overheads, profits)	PER DAY PER NORMAL SHIFT	20000	
9	**AUXILIARY ENGINE - DAIHASTU -300-350 mm BORE, MAK/CAT, Wartsila engines - 250 to 350 mm Bore, CAT C18/32, Volov Penta - Please consider for taking to ashore and bringing back on board, if required wherever.**			
10	Injector removal from engine, overhaul, checking for atomisation pressure setting and fitting back	Each Injector	15	
11	Overhauling of Exhaust valves (Cage type) : Removal from engine, dismantle, clean, check all parts, lapping of valve & valve guide clearance, assemble exhaust valve, fit back on engine, adjust tappet clearance (without removing cylinder head)	Each Valve	25	
12	Overhauling of Exh. Valves after removing Cyl. Head : Removal of cylinder head for overhauling stuck exhaust valves, overhauling exh. valves as mentioned above and fitting back cylinder head on Engine. Adjustment of head inlet and exhaust tappets.	per complete job.	30	
13	Renewal of leaky Cyl. Head Gaskets : Removal of cylinder head, cleaning landing faces, replacing cyl. Head gasket and fitting back cyl. head on Engine. Adjusting tappet clearance.	per cyl. head	20	
14	Overhauling of Cyl. Head :			
15	Removal of cyl. Head, removal of all mountings and overhaul including inlet/exh. Valves, overhaul (excluding overhaul of air starting valve) and cleaning of cooling water spaces. Fitting back cylinder head after overhaul and adjusting tappet clearances.	per cyl. head	15	
16	Air starting & relief valve overhaul and lapping.	each valve	10	
17	Cleaning of Cyl.head cooling water spaces	per cyl. head	10	
18	Cleaning of cyl. Head cooling water spaces and pressure testing	per cyl. head	15	
19	Renewal of inlet/exh.valve pocket seats	each seat	10	
20	Transportation of cyl. head to workshop after consultation with attending Super intendent	Per time	20	
21	Cyl Head cooling water ferrules - O rings renewal	each cyl head	10	
22	Checking of Cyl Head stud tightness	each cyl head	10	
23	Removing Cyl Head loose stud & retightening	per stud per head	15	
24	Indicator Cock / Valve to overhaul & pressure test to 140 bar.	Each cock/valve	10	
25	Relief Valve to overhaul & pressure test to 140 bar.	Each valve	20	
26	Renew Zinc anodes(workshop supply) on covers of cooling water spaces of cylinder head. Extract old screws and fit new brass screws with adhesives.	Each	10	
27	Make and fit new side covers on cylinder heads with proper milled areas/sections for proper flow of cooling water. Apply Apexior No. 3 on cover before fitting with gasket.	Each head	20	
28	**CYLINDER LINER & ASSOCIATED JOBS**			

29	Cyl Liner replacing with ship supply spare liner.	Per liner	10	
30	Honing of cylinder liners in workshop	Per liner	10	
31	Honing of cylinder liners in - situ	Per liner	10	
32	D. P. Check on landing area of liner on entabulature	Per liner	10	
33	**PISTON & ASSOCIATED JOBS**			
34	Removal of piston alongwith connecting rod and bottom end bearing cleaning of piston and liner. Calibration of cyl. liner and piston rings groove and piston rings. Calibration of bottom end bearing shells and crank pin, Check & record bearing clearances. Assemble all parts and fit back piston with old, bottom end bearing bolts – per piston.	Per Piston	25	
35	Piston Cooling Nozzzles remove & refit	Per Piston	20	
36	D.P. Check on serration of con. rod and keep	Per con. Rod	10	
37	Connecting rods bolts tightness to check.	Per con. Rod	20	
38	Checking parent circle of bottom end bearing in con. rod after tightening, record ovality.	Per Unit	20	
39	Con rod replcement with spare during overhaul of engine.	Per Unit	10	
40	Renewal of bottom end bearing bolts in con. rod after calibrating as per procedure (upto 4 bolts).	Per con. Rod	10	
41	Renewal of cylinder liner rubber rings and gasket.	per liner	10	
42	**DEFLECTION**			
43	Crank shaft web deflection of all 6 units to check after opening crank case doors.	Per Engine/per time	10	
44	Crank shaft web deflections after overhaul of engine.	Per Engine/per time	10	
45	**SUMP OIL**			
46	Engine sump oil to be pumped out/bailed out manually, sump to be cleaned & filled up with fresh oil. Internally fitted perforated strainer plates to remove, clean & refit. Clean rags by workshop.	Per time	10	
47	**MAIN BEARINGS**			
48	To open bearing for survey & fit back same after calibration including thrust collar. Bearing holding nuts & bolts to be locked using SS binding wires supplied by workshop as per the prescribed procedures.	Per Bearing	10	
49	**FUEL INJECTION PUMP & ASSOCIATED JOBS**			
50	Removal of fuel injection pump, overhaul & fit back on engine.	Per fuel pump	10	
51	Checking fuel pump timings of all units of an engine each time.	Per Engine	10	
52	Fuel Timing Adjustment	Each Unit	10	
53	Fuel Pump Tappets - O Rings renewal	Each pump	10	
54	FRESH WATER pump/ L. O. PUMP (ATTACHED) Overhaul and Survey. (Spares excluded).	Each pump	10	
55	**TURBOCHARGER & ASSOCIATED JOBS:**			
56	Dismantle Turbocharger, clean all parts, replace bearings, clean filter and assemble turbocharger, chemical to be used for cleaning Air Strainer & body.	Each Turbocharger	10	
57	Turbocharger casing remove and renewed	Each Turbocharger	10	
58	Turbocharger cooilng water expansion joint renewal	Each Turbocharger	10	
59	Engine Trial to be conducted after through cleaning of the engine.	Per Engine	10	
60	Overhauling of spare Exh. valves of cage type on board ship. Machining excluded.	Each valve	10	
61	Overhauling of spare cylinder head including fitting with all overhauled mountingsnand keeping it ready for use.	Each head	10	
62	Exh. Bellow joint renewal after the Turbo Charger.	Each joint	10	
63	Measuring Peak Pressure of all units of the engine 1st time.	Per Engine	10	
64	Measuring Peak Pressure of all units of the engine 2nd time.	Per Engine	10	
65	Scavenge manifold cleaning in place.	Per Unit	10	
66	Exhaust manifold to clean per unit in place.	Per Unit	10	
67	Scavenge manifold cleaning after disconnecting taking outside.	Per Unit	10	
68	Opening of Booster pump and fitting back after survey.	Each pump	10	
69	Timing Gear Covers - 4 Halves tightness checking	Per Engine	10	
70	Timing Gear Covers - 4 Halves - studs to renew	Per Engine	10	
71	Carrying out driving gears survey	Per Engine	10	
72	Machining of Con. Rod parent circle under survey. Check fitting of bearing shell and certify hard contact between shell and con.rod.	Per Unit	10	
73	Extracting Fuel Injector copper sleeve. Providing new sleeve, copper gland fitting in cylinder head & stainless steel compression seal fitting (by workshop) & pressure test cylinder head again.	Per Unit	10	
74	Axial movement/clearance for crank shaft to check with Dial gauges	Per Engine	10	
75	Chain tightening and slackness to calibrate. Rectification excluded.	Per Engine	10	
76	Camshaft removal for renewal of cams, refitting and checking the timings	Per Camshaft	10	
77	Renewal of cam	Per Cam	10	
78	Crank case door relief valve type mounting to overhaul.	Per relief valve	10	
79	Foundation bolts tightness checking	Per Engine	10	
80	Cleaning exhaust uptake from T/C outlet to funnel including water washing.	Per Engine	10	

81	**Cleaning of Plate type coolers (Normal Cleaning/Chemical Cleaning)**				
82	**a. Fresh water cooler**			**Normal**	**Chemical**
83	L = 2587 mm, B = 886 mm	Per 100 Plates	10		
84	L = 875 mm, B = 375 mm	Per 100 Plates	10		
85	L = 700 mm, B = 745 mm	Per 100 Plates	10		
86	**b. Main Lub oil cooler**				
87	L = 2125 mm, B = 886 mm	Per 100 Plates	10		
88	L = 2135 mm, B = 790 mm	Per 100 Plates	10		
89	L=2060mm, B= 770mm	Per 100 Plates	10		
90	L=1730mm, B= 625mm	Per 100 Plates	10		
91	L=1801mm, B= 957mm	Per 100 Plates	10		
92	L=930mm, B= 375mm	Per 100 Plates	10		
93	L=1550mm, B= 735mm	Per 100 Plates	10		
94	L=2100mm, B= 1061mm	Per 100 Plates	10		
95	L=2280mm, B= 825mm	Per 100 Plates	10		
96	L=1565mm, B= 530mm	Per 100 Plates	10		
97	L=1920mm, B= 640mm	Per 100 Plates	10		
98	L=1400mm, B= 425mm	Per 100 Plates	10		
99	L=1460mm, B= 700mm	Per 100 Plates	10		
100	L=1450mm, B= 720mm	Per 100 Plates	10		
101	L=1480mm, B= 740mm	Per 100 Plates	10		
102	L=1440mm, B= 810mm	Per 100 Plates	10		
103	L=1460mm, B= 710mm	Per 100 Plates	10		
104	L=1743mm, B= 617mm	Per 100 Plates	10		
105	L=1460 mm, B= 715 mm	Per 100 Plates	10		
106	L=1800 mm, B= 720 mm	Per 100 Plates	10		
107	L=1560 mm, B= 550 mm	Per 100 Plates	10		
108	L=1720 mm, B= 670 mm	Per 100 Plates	10		
109	L=1785 mm, B= 704 mm	Per 100 Plates	10		
110	L=1465 mm, B= 700 mm	Per 100 Plates	10		
111	L=3320 mm, B= 1026 mm	Per 100 Plates	10		
112	L=2165 mm, B= 720 mm	Per 100 Plates	10		
113	L=1350 mm, B= 500 mm	Per 100 Plates	10		
114	L=1910 mm, B= 780 mm	Per 100 Plates	10		
115	L=1457 mm, B= 707 mm	Per 100 Plates	10		
116	L=2228 mm, B= 1036 mm	Per 100 Plates	10		
117	**c. H.T.F.W. Cooler**				
118	L = 1659 mm, B = 720 mm	Per 100 Plates	10		
119	L = 1040 mm, B = 460 mm	Per 100 Plates	10		
120	L = 1069 mm, B = 460 mm	Per 100 Plates	10		
121	L = 1422 mm, B = 138 mm	Per 100 Plates	10		
122	L= 1250mm, B= 600mm	Per 100 Plates	10		
123	L=1367mm, B= 825mm	Per 100 Plates	10		
124	L=2280mm, B= 825mm	Per 100 Plates	10		
125	L=990mm, B= 539mm	Per 100 Plates	10		
126	L=1460mm, B= 423mm	Per 100 Plates	10		
127	L=890mm, B= 450mm	Per 100 Plates	10		
128	L=1130mm, B= 490mm	Per 100 Plates	10		
129	L=1140mm, B= 510mm	Per 100 Plates	10		
130	L=1130mm, B= 570mm	Per 100 Plates	10		
131	L=650 mm, B= 430 mm	Per 100 Plates	10		
132	L=1130 mm, B= 590 mm	Per 100 Plates	10		
133	L=1125 mm, B= 480 mm	Per 100 Plates	10		
134	L=920 mm, B= 420 mm	Per 100 Plates	10		
135	L= 860 mm, B= 370 mm	Per 100 Plates	10		
136	L=866 mm, B= 377 mm	Per 100 Plates	10		
137	L=870 mm, B= 375 mm	Per 100 Plates	10		
138	L=870 mm, B= 380 mm	Per 100 Plates	10		
139	L=956 mm, B= 380 mm	Per 100 Plates	10		
140	L=1120 mm, B= 490 mm	Per 100 Plates	10		
141	L=1220 mm, B= 1026 mm	Per 100 Plates	10		
142	L=1179 mm, B= 481 mm	Per 100 Plates	10		
143	L= 930 mm, B= 380 mm	Per 100 Plates	10		
144	L= 1100 mm, B= 468 mm	Per 100 Plates	10		
145	L= 1134 mm, B= 489mm	Per 100 Plates	10		
146	L= 1811.6 mm, B= 1036mm	Per 100 Plates	10		
147	**d. Stern tube lub cooler**				
148	L = 823 mm, B= 328 mm	Per 100 Plates	10		
149	L = 621 mm, B= 45 mm	Per 100 Plates	10		

150	L = 870 mm, B= 260 mm	Per 100 Plates	10		
151	L = 620 mm, B= 265 mm	Per 100 Plates	10		
152	L = 790 mm, B= 320 mm	Per 100 Plates	10		
153	L = 840 mm, B= 320 mm	Per 100 Plates	10		
154	L = 360 mm, B= 80 mm	Per 100 Plates	10		
155	L= 720 mm , B= 250 mm	Per 100 Plates	10		
156	L= 870 mm , B= 374 mm	Per 100 Plates	10		
157	L= 1179 mm , B= 481 mm	Per 100 Plates	10		
158	L = 320 mm, B= 75 mm	Per 100 Plates	10		
159	L = 1115 mm, B= 500 mm	Per 100 Plates	10		
160	**e. M.G.O. Cooler**				
161	L = 490 mm, B=460 mm	Per 100 Plates	10		
162	L = 1135 mm, B=376 mm	Per 100 Plates	10		
163	L = 920 mm, B= 270 mm	Per 100 Plates	10		
164	L = 915 mm, B= 270 mm	Per 100 Plates	10		
165	L = 915 mm, B= 267 mm	Per 100 Plates	10		
166	L = 1080 mm, B= 250 mm	Per 100 Plates	10		
167	L = 700 mm, B= 250 mm	Per 100 Plates	10		
168	**f.Central L.T.Cooler**				
169	L=1910 mm, B= 720 mm	Per 100 Plates	10		
170	L=2060 mm, B= 770 mm	Per 100 Plates	10		
171	L=2199 mm, B= 576 mm	Per 100 Plates	10		
172	L=2185 mm, B= 590 mm	Per 100 Plates	10		
173	L=2185 mm, B= 1060 mm	Per 100 Plates	10		
174	L=2025 mm, B= 756 mm	Per 100 Plates	10		
175	L=1420 mm, B= 530 mm	Per 100 Plates	10		
176	L=1300 mm, B= 450 mm	Per 100 Plates	10		
177	L=1450 mm, B= 720 mm	Per 100 Plates	10		
178	L=1460 mm, B= 700 mm	Per 100 Plates	10		
179	L=1480 mm, B= 740 mm	Per 100 Plates	10		
180	L=1460 mm, B= 710 mm	Per 100 Plates	10		
181	L=1460 mm, B= 705 mm	Per 100 Plates	10		
182	L=1800 mm, B= 720 mm	Per 100 Plates	10		
183	L=1710 mm, B= 705 mm	Per 100 Plates	10		
184	L=1540 mm, B= 580 mm	Per 100 Plates	10		
185	L=1785 mm, B= 704 mm	Per 100 Plates	10		
186	L=1465 mm, B= 715 mm	Per 100 Plates	10		
187	L=2100 mm, B= 1125 mm	Per 100 Plates	10		
188	L=2005 mm, B= 886 mm	Per 100 Plates	10		
189	L=1350 mm, B= 500 mm	Per 100 Plates	10		
190	L=1670 mm, B= 840 mm	Per 100 Plates	10		
191	L=1447 mm, B= 677 mm	Per 100 Plates	10		
192	L=2313 mm, B= 1036 mm	Per 100 Plates	10		
193	**g. Camshaft L.O Cooler**				
194	L=810 mm, B= 320 mm	Per 100 Plates	10		
195	L=400 mm, B= 180 mm	Per 100 Plates	10		
196	L=910 mm, B= 268 mm	Per 100 Plates	10		
197	L=1000 mm, B= 450 mm	Per 100 Plates	10		
198	L=720 mm, B= 250 mm	Per 100 Plates	10		
199	L=730 mm, B= 250 mm	Per 100 Plates	10		
200	L=714 mm, B= 260 mm	Per 100 Plates	10		
201	**h. Aux Eng. L.O.Cooler**				
202	L=500 mm, B= 1345 mm	Per 100 Plates	10		
203	L=280 mm, B= 900 mm	Per 100 Plates	10		
204	L=920 mm, B= 265 mm	Per 100 Plates	10		
205	L=920 mm, B= 290 mm	Per 100 Plates	10		
206	L=1000 mm, B= 340 mm	Per 100 Plates	10		
207	L= 917 mm, B= 270 mm	Per 100 Plates	10		
208	L= 925 mm, B= 250 mm	Per 100 Plates	10		
209	L= 945 mm, B= 245 mm	Per 100 Plates	10		
210	L= 930 mm, B= 260 mm	Per 100 Plates	10		
211	**i. Miscellaneous Coolers**				
212	L=1410 mm, B= 830 mm	Per 100 Plates	10		
213	L=170mm, B= 170mm	Per 100 Plates	10		
214	L=1500mm, B= 585mm	Per 100 Plates	10		
215	L=980mm, B= 320mm	Per 100 Plates	10		
216	L=850mm, B= 320mm	Per 100 Plates	10		
217	L=1220mm, B= 705mm	Per 100 Plates	10		
218	L=730mm, B= 150mm	Per 100 Plates	10		

219	**J. Plate area upto 0.521sq.mtr (single side)**	Per 100 Plates	10		
220	**k. Plate area upto 2.4sq.mtr (single side)**	Per 100 Plates	10		
221	**l. Plate area upto 3.4sq.mtr (single side)**	Per 100 Plates	10		
222	**m. Plate area above 3.4sq.mtr (single side)**	Per 100 Plates	10		
223	**CLEANING OF CONDENSER / HEAT EXCHANGER**				
224	Opening end covers and the condenser to clean manually by brushing etc. INSITU. Length upto 2000 mm (rates for removal / refit of one set of inlet/outlet pipes & replacing rubber gasket/NUTS, BOLTS are included. The end covers to be brushed/cleaned and epoxy (owner's)coated.				
225	DIA (MM)				
226	Upto 200	Each	10		
227	200 to 300	Each	10		
228	301 to 400	Each	10		
229	401 to 500	Each	10		
230	501 to 600	Each	10		
231	601 to 700	Each	10		
232	701 to 1000	Each	10		
233	Removal of condenser tube nest by extracting out and chemically clean the same in on board with ship supplied chemical and box pack in place with new nuts/bolts and joints. The end covers to be brushed/cleaned and epoxy (owner's)coated.				
234	DIA (MM)				
235	Upto 200	Each	10		
236	200 to 300	Each	10		
237	301 to 400	Each	10		
238	401 to 500	Each	10		
239	501 to 600	Each	10		
240	601 to 700	Each	10		
241	701 to 1000	Each	10		
242	If required quote seperatly for transporting condenser from ship to w/s and back on board. For size 500mm dia and 1500 cm lenth.	One Complete Condenser	5		
243	**Pressure tesing of condensers/heat exchangers ON BOARD**				
244	DIA (MM)				
245	Upto 200	Each	10		
246	200 to 300	Each	10		
247	301 to 400	Each	10		
248	401 to 500	Each	10		
249	501 to 600	Each	10		
250	601 to 700	Each	10		
251	701 to 1000	Each	10		
252	**BOILER SURVEY**				
253	AUX BOILER - Boiler drum Opening & refitting after descaling--by chemical cleaning & manualcleaning for both water and smoke side and presenting for survey.	Per Boiler	10		
254	**Cleaning of Auxiliary boiler FURNACE**	Per Boiler	10		
255	Opening and closing furnace door with new packing.	Per Boiler	10		
256	Opening and closing manhole DOOR with new packing.	Each Door	10		
257	Opening and closing hand holes/doors and cleaning holes/doors with new packing.	Each Door	20		
258	**Overhauling of burners**				
259	For Water tube boiler other than Double evaporation boiler	Each Burner	10		
260	For Double evaporation boiler	Each Burner	10		
261	Plugging of boiler tubes with ships supply plugs.(limited max 15 tubes)-- Job including removal and refitting of connected and accessory work. Testing included.	Per Complete Job Lumpsum	10		
262	Auxiliary Boiler after plugging leaky tubes, filled with water & pressure tested.	Each Time	10		
263	**PUMPS (Centrifugal)**				
264	Overhauling of pump at ashore - Removal of pump from base plate after disconnecting and removal of motor, disconnecting one set of suction/discharge pipes and accessories, transporting to and fro from vessel to workshop, epoxy coating, fitting back in place and installing motor including renewal of spares supplied by ship and giving running trial.				
265	Pump Capacity (HP)				
266	5	Each Pump	5		
267	10	Each Pump	5		
268	15	Each Pump	5		
269	20	Each Pump	5		
270	25	Each Pump	10		
271	30	Each Pump	10		
272	50	Each Pump	10		
273	75	Each Pump	10		
274	100	Each Pump	10		
275	150	Each Pump	10		

276	200	Each Pump	10	
277	250	Each Pump	15	
278	300	Each Pump	15	
279	350	Each Pump	15	
280	400	Each Pump	15	
281	450	Each Pump	15	
282	500	Each Pump	5	
283	Pump Capacity (Cub.mtr.per hr.)			
284	UPTO 100	Each Pump	5	
285	101-200	Each Pump	5	
286	201-300	Each Pump	5	
287	301-400	Each Pump	5	
288	401-500	Each Pump	10	
289	501-600	Each Pump	10	
290	601-700	Each Pump	10	
291	701-800	Each Pump	10	
292	801-900	Each Pump	10	
293	901-1000	Each Pump	10	
294	1001 to 1500	Each Pump	10	
295	1501 to 2000	Each Pump	15	
296	2001 to 2500	Each Pump	15	
297	2501 to 3000	Each Pump	15	
298	3001 to 3500	Each Pump	15	
299	3501 to 4000	Each Pump	15	
300	Overhauling of pump in situ - Removal of pump from base plate after disconnecting and removal of motor, disconnecting one set of suction/discharge pipes and accessories, epoxy coating, fitting back in place and installing motor including renewal of spares supplied by ship and giving running trial.			
301	**Pump Capacity (HP)**			
302	5	Each Pump	5	
303	10	Each Pump	5	
304	15	Each Pump	5	
305	20	Each Pump	5	
306	25	Each Pump	10	
307	30	Each Pump	10	
308	50	Each Pump	10	
309	75	Each Pump	10	
310	100	Each Pump	10	
311	150	Each Pump	10	
312	200	Each Pump	10	
313	250	Each Pump	15	
314	300	Each Pump	15	
315	350	Each Pump	15	
316	400	Each Pump	15	
317	450	Each Pump	15	
318	500	Each Pump	5	
319	**Pump Capacity (Cub.mtr.per hr.)**			
320	UPTO 100	Each Pump	5	
321	101-200	Each Pump	5	
322	201-300	Each Pump	5	
323	301-400	Each Pump	5	
324	401-500	Each Pump	10	
325	501-600	Each Pump	10	
326	601-700	Each Pump	10	
327	701-800	Each Pump	10	
328	801-900	Each Pump	10	
329	901-1000	Each Pump	10	
330	1001 to 1500	Each Pump	10	
331	1501 to 2000	Each Pump	15	
332	2001 to 2500	Each Pump	15	
333	2501 to 3000	Each Pump	15	
334	3001 to 3500	Each Pump	15	
335	3501 to 4000	Each Pump	15	
336	On board job - Dismantle the pump, skim the impeller/wear rings, paint casing (SHIPS PAINT) and reassemble and fit back and give trial of pump for satisfactory running.			
337	**Pump Capacity (HP)**			
338	5	Each Pump	5	
339	10	Each Pump	5	
340	15	Each Pump	5	

341	20	Each Pump	5	
342	25	Each Pump	10	
343	30	Each Pump	10	
344	50	Each Pump	10	
345	75	Each Pump	10	
346	100	Each Pump	10	
347	150	Each Pump	10	
348	200	Each Pump	10	
349	250	Each Pump	15	
350	300	Each Pump	15	
351	350	Each Pump	15	
352	400	Each Pump	15	
353	450	Each Pump	15	
354	500	Each Pump	5	
355	**Pump Capacity (Cub.mtr.per hr.)**			
356	UPTO 100	Each Pump	5	
357	101-200	Each Pump	5	
358	201-300	Each Pump	5	
359	301-400	Each Pump	5	
360	401-500	Each Pump	10	
361	501-600	Each Pump	10	
362	601-700	Each Pump	10	
363	701-800	Each Pump	10	
364	801-900	Each Pump	10	
365	901-1000	Each Pump	10	
366	1001 to 1500	Each Pump	10	
367	1501 to 2000	Each Pump	15	
368	2001 to 2500	Each Pump	15	
369	2501 to 3000	Each Pump	15	
370	3001 to 3500	Each Pump	15	
371	3501 to 4000	Each Pump	15	
372	Overhauling of reciprocating bilge pump on board.	Each Pump	10	
373	NOTE : 1) For in between BHP of pump pro-rata rates will be applicable.			
374	2) Above rates are for gland type or Mech. Seal type stuffing box pumps.			
375	3) Renewal of bearings and mechanical seal is part of overhaul. No extra charge for above will be paid (bearing & seals supply)			
376	Renewal of stainless steel shaft and sleeves including making of keyway and new key			
377	Make and supply stainless steel shaft ss316	Per Kg. Finished Wt.	1000	
378	For new key way	Each Keyway	25	
379	For new key	Each Key	25	
380	Renewal of GM bushes/wear rings/false sleeves.	Per Kg. Finished Wt.	1000	
381	Renewal of brass bushes/wear rings/false sleeves.	Per Kg. Finished Wt.	1000	
382	To check shaft trueness on lathe for pump shaft only. (assume one meter length and 50 mm dia)	Each shaft	25	
383	**AIR BOTTLES**			
384	**Top, Main and Emergency Air Bottle: Sizes 500mm OD x 1800mm long and other similar sizes. (OSV Vessel)**			
385	Removals of all connected pipe and blank all lines, pressurized and try out to identify for leakages, if any. Refit all the removed lines after repairs & overhaul of mountings and again try out to check for no leakages.	Per Bottle	10	
386	Air Bottles internally scrap and thoroughly clean & paint using epoxy paint (workshop supply).	Per Bottle	10	
387	All mounting / valves to remove from Air Bottles dismantled, clean / overhaul, worn out part to renew (Cost extra at actual). All items to present to surveyor / ship staff for inspection (if required). All items to reassembled and fit back at their respective locations using new joints etc. Rate per mounting (inclusive of joints etc).	Per Mounting	10	
388	Bottle to pressurize at 28 kg/cm² with all valves kept in shut position & check for satisfactory operation.	Per Bottle	10	
389	**Safety valve fitted on Air Bottle:-** Remove / overhaul, repair / replace damaged seat etc. box back, fit at location try out at pressure of 28 kg/cm², present for inspection for ship staff / surveyor. (Repair / Renewal of parts not included).	Per Valve	20	
390	**Filling Air line valve –** Remove / refit & Overhaul. (Renewal of parts extra)	Per Valve	20	
391	**BULK HANDLING COMPRESSORS (OSV Vessel)**			
392	Removal of Solenoid valves & Actuators with Butterfly valves from places overhaul. Repair & renewal of any defective / damages part (Cost extra at actual). Box back and refit back at their locations.	Each Actuator set	10	

393	Removal of old / defective electric pressure switch / limit switches repair or renew as required (material Cost at actual) refit at their original places & try out satisfactory operations.	Each switch	10	
394	Overhauling of Bulk Handling Compressor.	Each Compressor	10	
395	Removal & refit of connecting gears (small & large size) between motor & compressor.	Each Compressor	10	
396	Renewal of coupling pads by shifting motor from the place.	Each motor	10	
397	Cleaning of Lub Oil & Air Coolers as per sizes at place.	Each cooler	10	
398	Cleaning of Lub Oil & Air Coolers as per sizes at workshop.	Each cooler	10	
399	Pressure testing of coolers	Each cooler	10	
400	leaking tubes rectifications / blanking.	Per tube	10	
401	Cleaning of lub oil tank & filter housing as per size.	Per tank	10	
402	Cleaning of filters.	Each filter	10	
403	Cleaning of Oil & Air separators.	Each seperator	10	
404	Repairing of Auto drain mechanism.	Each Compressor	10	
405	Load / unload setting.	Each Compressor	10	
406	Repairing of motor starting control panel.	Per Panel	10	
407	Repairing of pneumatic valve starting remote control panel.	Per Panel	10	
408	Overhauling of Actuators & Butterfly valve	Each Actuator set	10	
409	System Trial to be given.	Each	10	
410	**Gangway Repairs**			
411	Alluminium Welding (Certified alluminium welders)	Per mtr (complete run)	5	
412	Repair of platform/step	Per platform	5	
413	Repair of Stanchions(Including socket) & Hand rail	Per Set	10	
414	Repair of sheaves	Pre sheave	20	
415	Changing of damaged wire rope (wire rope ship supply) (Dia 13 mm) (6 x 37)	Per change	5	
416	Repair of frame	Per frame	5	
417	**AIR VENT HOODS OVERHAULING:** Chipping and through cleaning of air vent hoods, dismantle all parts, renew wire mesh and other parts as required (material cost at actuals), assemble and apply			
418	Sizes			
419	2"	each air vent	200	
420	4"	each air vent	200	
421	6"	each air vent	200	
422	8"	each air vent	200	
423	10"	each air vent	200	
425	**EMERGENCY AIR COMPRESSOR.**			
426	Overhauling air compressor (All parts, lub oil, gaskets etc by ship.) All spares from OEM only. Overhauling should be done under supervision of OEM wherever possible. Note: - Spares & OEM Supervision by SCI.	EACH	5	
427	**ENGINE FOR EMERGENCY AIR COMPRESSOR**			
428	Overhauling single cylinder diesel engine as attached to Emergency Air Compressor and giving trial. Fuel injectors, injection pump, governer, gaskets, lub oil etc ship supply. All spares from OEM & OEM Supervision by SCI.	EACH	5	
429	**MAIN AIR COMPRESSOR**			
430	Overhauling of Main Air Compressor (spares extra) All spares from OEM and supervision by OEM.	EACH	5	
431	**AIR COOLERS-M/E**			
432	Open up Air Cooler, chemically clean air and water side, refit with new gaskets.	each cooler	10	
433	Pressure test of Air Cooler.	each cooler	10	
434	Renew Zinc blocks per 100 gm.	Per Unit	10	
NOTE	**PLEASE NOTE ALL ALLOWANCES STATED BELOW ARE FIXED BY SCI. WHILE QUOTING THE JOB COST YOU ARE REQUESTED TO MAKE NOTE OF THIS.(Ref. Summary of SCI fixed allowances for more details)**			

1.00 **Normal Shift , Over Time, Holidays:**

All labour rates and Engineer / Technician rates, unless otherwise specifically mentioned, are for 8 hrs. normal shift / per day.

Normal Shift : from 0900 hrs to 1700 hrs (Monday to Saturday).

1/2 Shift is payble for - 4 hours or less

Full shift is payable for - more than 4 hours and upto 8 hours.

Holidays: Sundays, National Holidays & May 1st **.**

Overtime allowance shall be paid on basic labour cost of jobs only and at 25% on pro-rata basis beyond normal working hours (pls note no allowance over allowance).

Note: The workshop must not delay in reporting to the vessel for the sake of accumulating O.T Hours. The O.T allowances (if approved) are subject to scrutiny from the consideration of attempted delayed reporting to the vessel amongst other issues. The time, readiness given by vessel's Master/ship staff or office(user division) for carrying out the specific work entrusted with the concerned workshop shall be distinctly written and endorsed by ship staff in the time sheet and certified by the superintendent, which should be produced during submission of invoice.

In applying O.T allowance the "break-up of cost" in case of jobs consisting of labour + material is to be considered as below:

	for Woodwork– 65% labour cost + 35% material cost
	for Upholstery– 40% labour cost + 60% material cost
	for Steel renewal/Steel fabrication – 50% labour cost + 50% material cost
	for Pipe line & Flanges renewal– 35% labour cost + 65% material cost
	for Insulation renewal and other jobs in this category – 45% labour cost , 55% material cost
	for rewinding of motors and other equipments - 40% Labour + 60% Material

2.00 **The location allowances:** have been fixed as follows and payable on basic labour component of jobs only .(No allowance over allowance)

A	**Mumbai Port**				
	Anchorage /Pirpau - 15%				
	JNPT / Nhava/ NSICT , Butcher Island - 20%				
	BFL - LPO 25 %				
	Mumbai High / Panna & Ratna fields – 30%				
B	**Vizag Port**				
	Anchorage / LPG Jetty - 15%				
	Outer Anchorage/SPM -20%				
C	**Chennai Port**				
	Anchorage/Ennore port -15%				
D	**Jamnagar / Vadiner/Sikka anchorage – 25%**				
E	**Kandla stream--15%.**				
F	**Kochi Port -** Anchorage 15%				
G	**Budgebudge/ Kulpi/ Diamond harbour -15%**				
H	In any other locations an anchorage allowance of 15%				

Note: During a single call of vessel remaining partly alongside and partly on moorings, stream allowance shall be applied on proportionate basis for the respective stay.

3.00 **Outstation allowance** for jobs attended at ports other than base port. The outstation allowance of 25% would be applicable only on labour component of "basic cost of job"(i.e allowance over allowance is not allowed).This allowance is incentive for attending job at outstation-if not otherwise mentioned in the tariff-

Transportation cost & entitlement:

For Engineer/Supervisor-2AC Train fare/Bus Fare/Economy class air fare.

For Others - Non-AC Sleeper Class train fare/Bus fare

For attending outstation jobs expenses towards transportation of men and material (to & fro),wages for manpower during travel time will be applicable-

-one normal shift charges per day per person (if travelled by train/bus i.e by road)

-on hourly (pro-rata) basis for engineers/supervisors if travelled by air

-plus reasonable food charges during travel time & stay time (max Rs.500 per person per day)

- lodging charges if personnel stayed at hotel (in case accommodation not available on board ship and certification in this regard by Master of vessel is required) would be payable seperatly. For lodging plus boarding per day per person :

-for engineers and supervisors Rs.2500/-

-for skilled workers and labour. Rs.1000/-

Miscellaneous Expenses at Outstation:

Towards Custom clearance, port clearance, road taxes and other misc.expenses for out port jobs will be paid lumpsum Rs.6000/-per round trip/per port call of vessel.For transporting men & material between hotel and ship at outstation (unless otherwise seperately quoted in the tariff) Rs.600 per day/per round trip is admissible.

4.00 For procuring and supplying (onboard vessel)of material (non-tariff) used in the course of repairs 15% allowance will be payable on cost of materials only. (Cash memos/ invoices in line with GST provisions are to be submitted for items/total costing more than Rs. 2500)

5.00 An allowance of 10% will be payable for mutually agreed sub-contracted services excluding materials (ON APPROVAL OF CONCERNED USER DIVISION OF SCI) as percentage over the actual sub-contracted price.

Any use of Gen. Set must be authorised by attending supdt. And supported by proper Repair Sepcification.

6.00	At Base port only-INCIDENTAL EXPENSES, ANY OTHER MISC. EXPENSES, CUSTOM CLEARANCE ETC. IS PAYABLE AT 10% OF TOTAL BASIC LABOUR COST. Minimum of Rs. 1500/-.
7.00	SCI service boats to be utilized as far as possible. Whenever, SCI Service boats are not available and workshop arranges his boats service to attend the job on instruction of Superintendent of the vessel, cost approval to be taken by the concerned supdt. Such arrangement of boat services has to be certified by Vessel's master and superintendent and will be paid at (approved) actuals.
8.00	For any 'in-between' capacity/size equipment,rates shall be pro-rated from the rate of immediately succeeding/preceding rating(capacity) , which ever is Lower. Decision of SCI in this regard would be final and binding.
9.00	Workshop must submit bill within 30 calendar days from the date of completion of work.
10.00	**Payment terms**
	within 90 days (subject to change as per SCI's adopted guidelines/govt. guidelines) from the date of receipt of bill in SCI office with all the required documents and without any discrepancies . The tariff rates offered for 2 years with six months extension if required by SCI. The tariff rates will remain fixed during the entire contract period irrespective of any variation in labour cost, material cost and various taxes.
	END