

**Construction of Additional Jetty for Indian Coast Guard at Fort Kochi in
Cochin Port**

Item No	Description of item	Unit	Rate (Rs. Ps)
1	Fabricating and supplying M.S Liners using 6mm thick plate, including cost of all materials, labour, cutting, rolling, welding etc complete for bored cast in situ piles of 1000mm dia. in water to the required length.(Approx. Length 20m)	One tonne	
2	Transporting the fabricated M.S liners of 1000mm dia as per item above from the fabrication yard, handling, pitching and driving the M.S liners to required level including setting piling rigs in position, temporary works for driving piles in water etc. complete.	Each	
3	Marine boring through all strata (except soft and hard rock) for 1000mm dia. piles upto (-)65m depth including mobilisation/ demobilisation of all plants and equipments, retaining of sides and cleaning the holes, cost of all materials, labour, plants, equipments etc., including disposing of bored muck within a distance of 12km etc. complete.	One metre	
4	Providing and laying reinforced cement concrete of M40 grade inside the marine pile bore including cost of all materials, labour, admixtures if required etc. complete but excluding reinforcement.	One cubic metre	
5	Providing and placing in position fusion bonded epoxy coated reinforcement in cages inside the marine pile bore using TMT/CRS/ ordinary quality HYSD bars of Fe550/500 / Fe415 grade including cost of all materials, labour, transporting to site, fabricating into cage, installing in position, providing cover blocks etc. complete.	One tonne	
6	Chipping the concrete from the top of marine piles of 1000mm dia. upto cutoff level, exposing the reinforcement and disposing off the dismantled materials within a lead of 12km at locations pointed out by the Engineer-in-charge and levelling etc. complete.	One cubic metre	

Item No	Description of item	Unit	Rate (Rs. Ps)
7	Providing and laying reinforced cement concrete of M40 grade for precast beams excluding reinforcement but including cost of materials, labour, shuttering, levelling, compacting, curing etc. complete and transporting the beams and placing in position to lines and levels including necessary bedding in cement mortar 1:2 etc. complete.	One cubic metre	
8	Providing and laying in-situ reinforced cement concrete of M40 grade for pile muff, pile cap, fender block, beam, deck slab and brackets excluding reinforcement but including cost of materials, labour, shuttering, levelling, compacting, curing, providing necessary arrangements on slab and beam for fixing bollards, fenders, brackets etc. complete	One cubic metre	
9	Providing and laying in-situ reinforced cement concrete of M40 grade for kerb excluding reinforcement but including cost of materials, labour, shuttering, levelling, compacting, curing, etc. complete	One cubic metre	
10	Providing and laying in-situ reinforced cement concrete of M40 grade for hand rails and post excluding reinforcement but including cost of materials, labour, shuttering, levelling, compacting, curing, etc. complete	One cubic metre	
11	Providing and fixing fusion bonded epoxy coated reinforcement using TMT/CRS/ ordinary quality HYSD bars of Fe 550/500/Fe 415 grade for the RCC works precast beams, pile muff, pile cap, fender block, beam, deck slab and brackets etc. including conveying, straightening, cutting, bending and tying in position etc. complete	One tonne	
12	Providing interpenetrating polymer network (IPN) anti corrosive polymer system or its equivalent with two coats of epoxy phenolic ipnet coating of DFT 100 microns over one coat of epoxy phenolic ipnet primer coating of DFT 50 microns to entire external surface of superstructure/ substructure of the berth	One square metre	

Item No	Description of item	Unit	Rate (Rs. Ps)
13	Conducting pile integrity test on marine RCC bored cast-in-situ pile using pile integrity tester as per ASTM D5882 and submission of report on completion of required setting of piles, preparation of heads, mobilising and demobilising of equipments all complete. Report should include graphical wave form, interpretation of results, cross sectional area or material changes, if any, in length of pile, concrete quantity etc. complete	Each	
14	Conducting routine Dynamic high strain testing using pile Driving analyser as per ASTM D 4945 on 1200/1000 mm dia bored cast in situ land pile of capacity 60tonne by applying impact of 1.5 percent weight of capacity of pile with a fall varying from 1m to 3m including preparing head, providing ply and steel plates, fixing strain gauges etc. complete	Each	
15	Conducting initial vertical load test (by direct loading method) on 1000mm dia. pile including cost for finishing pile head, supply and erection of kentledge (or reaction loading) of suitable magnitude as specified, labour, excavation, back filling, compaction etc. complete.		
	a) Upto a test load of 500 tonnes	No.	
	b) Addition in test load above 500 upto 600 tonnes	No.	
16	Conducting routine vertical load test on 1000mm dia. pile including cost for finishing pile head, supplying and erecting kentledge (or reaction loading) of suitable magnitude, labour etc. complete.		
	a) Upto a test load of 500 tonnes	No.	
17	Providing and laying cement concrete of M25 grade mixed with secondary reinforcement of "poly propylene fibre" make for wearing course of approximate average thickness of 75 mm over deck slab, including casting in panels, providing slopes on surfaces as specified, vibrating, tamping, curing etc complete.	One Cubic metre	
18	Providing and laying G.I pipe of 100mm Nominal size and 4.5mm thick along with pipe accessories as per IS 1239 in utility duct for water supply arrangements in berth.	metre	

Item No	Description of item	Unit	Rate (Rs. Ps)
19	Providing and fixing Cast iron manhole cover 56cm (heavy duty) dia. over the deck slab including all fixtures, cost of materials, labour etc. complete	Each	
20	Providing berth markings using hot applied thermoplastic reflectorising compound 2.5mm thick	One square meter	
21	Providing and fixing in position to lines and levels 30 tonne capacity cast steel bollard, Double horn (Twin lobe) type	Each	
22	Providing and fixing in position to lines and levels 10 tonne capacity cast steel bollard, Single horn (Single lobe) type,	Each	
23	Providing and fixing in position Flat top Arch type rubber fenders 800mm H and 2,500mm long of approved quality	Each	
24	Providing and fixing in position Flat top Arch type rubber fenders 600mm H and 2,500mm long	Each	
25	Providing and fixing in position D-type rubber fenders 150mm H x 150mm D	Each	
26	Providing and fixing in position arch-type rubber fenders 300 mm H and 2,500 mm long	Each	
27	Providing and fixing Stainless steel (SS 316 grade) ladder of 3.5m length	Each	
28	Providing and fixing stainless steel (SS-316) mooring ring of outer dia. 200mm, using 25mm dia rod	Each	