

SCHEDULE - B**BILL OF QUANTITY**

Name of Work :- Providing and laying of chemical product pipeline from oil jetty no.7 to Y junction inside oil jetty complex-Kandla .

T.I. No.	Description of Item	Quantity	Rate		Unit		Amount
			In Fig.	In word	In Fig.	In word	
1	SUPPLY, ERECTION AND TESTING OF PIPING SYSTEM Complete work of supply of pipes, fitting (Tee, bend (piggable for chemical line (reducer, O' lets, Couplings etc), flanges, gasket, fasteners, provision of pig reciever at jetty area and pig launcher at manifold area for foam pig operations excluding the air, water, slop and nitrogen pipelines) including transportation to store and inspection charges. Handling and lifting of material from storage yard to work site. Complete work of piping fabrication works including cutting, edge preparation, fit up, bending, preheating, welding with fittings and flanges etc, erection of all type of pipe assembly over new / exisintg trestle, sleepers and pipe support, culverts/UG and at all elevations; hook-up with equipment nozzles etc, carrying out 10% non-destructive testing of each size such as radiography by X-ray, liquid penetration etc. as required; Hydrotesting of overall piping, flanges and fittings, dewatering, drying by compressed air if applicable, painting and making ready for further Commissioning including supply of all consumables, equipment, manpower and other resources and execution of, but not limited to, the following works in accordance with relevant scope of work, NOTE : 1. chemical lines are to be considered piggable by Foam pig.						
A	Chemical Line : (Size - 10 INCH, Thk. 6.4, A1M, Material-SS 316 L)	6750.00			RMT.	One Running Meter.	
B	Air Supply Line : (Size - 4 INCH, HVY, A3A, Material- IS 1239 Black)	2250.00			RMT.	One Running Meter.	
C	Nitrogen Supply Line : (Size - 3 INCH, Thk. HVY, A3A, Material- IS 1239 Black)	4500.00			RMT.	One Running Meter.	
2.0	SUPPLY & INSTALLATION OF VALVES Complete work of supply of Valves along with matching flanges including transportation to store and inspection charges. Handling and lifting of material from storage yard to work site and installation of all types of valves, bolting, threading or welding,including supply of gaskets,nuts, bolts & copper jumper (Two sets per valve) and insertion/ erection of the same on either side of flanged valves at all elevations of pipe sleepers, supports or overhead on racks, equipments nozzle, skid & painting etc. Supply of all consumables, manpower, equipment, etc. for completion of all works as per scope of work. NOTE : At Jetty area, the hose connection is taken normally 8" dia and 6" dia for both chemical lines as discussed with Terminal operators)						
A	BALL VALVE : (Air Line) (4" NB, FB, FE, 150#)	2.00			Nos.	One Number	
B	BALL VALVE : (Nitrogen Line) (3" NB, FB, FE, 150#)	4.00			Nos.	One Number	
C	GATE VALVE : (Chemical Line) (10" NB, FB, FE, 150#)	6.00			Nos.	One Number	

D	GATE VALVE : (Chemical Line) (8" NB, FB, FE, 150#)	12.00			Nos.	One Number	
3.0	SUPPLY OF FLEXIBLE HOSES FOR JETTY AND MANIFOLD AREA Supply of Flexible hose (Unloading) with synthetic braided material with electrical continuity as per Standard IS:10733,Type-B, 3m long each, with both end flange, Class 150, suitable for pressure, temperature range and type of fluid. coupling including all taxes, duties, transportation to store.						
A	4" dia. Flexible hose for air	2.00			Nos.	One Number	
B	3" dia. Flexible hose for nitrogen	4.00			Nos.	One Number	
C	8" dia. Flexible hose for chemical	6.00			Nos.	One Number	
4.0	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in-charge. All kinds of soil	480.17			M3	One Cubic Meter	
5.0	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level : (A) 1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size).	369.36			M3	One Cubic Meter	
6.0	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering,shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge.“(Note :- Cement content considered in this item is @ 330 kg/cum. “Excess/ less cement used as per design mix is payable/recoverable separately). (A) Providing M-35 grade concrete instead of M-25	187.76			M3	One Cubic Meter	
7.0	Centering and shuttering including strutting, propping etc. and removal of form for all heights : Foundations, footings, bases of columns, etc. for mass concrete	704.52			M2	One Meter Square	
8.0	Steel reinforcement for R.C.C. work including straightening, cutting,bending, placing in position Thermo-Mechanically Treated bars of grade Fe-500 D or more	18776.00			Kg.	One Kilogram	
9.0	Providing and fixing Anchor fastener for base plates after making the RCC Base surface smooth, with 16 mm anchor fasteners from Hilti or Equivalent Keeping 25 mm space below Base plate for Grouting	456.00			Nos.	One Number	
10.0	Structural steel work riveted, bolted or welded in built up sections,trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	37238.32			Kg.	One Kilogram	
11.0	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/ steel works	1966.374			M2	One Meter Square	
12.0	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete. On steel work	2028.15			M2	One Meter Square	
TOTAL = Rs.							

CONTRACTOR

Dy. CHIEF ENGINEER (PL)
DEENDAYAL PORT AUTHORITY