

12. PIPE WORK

12.1 Based on Sch 40 mild steel seamless pipe

PIPE DIA (MM)	STRAIGHT PIPE PER METRE (\$\$)	PER BEND (\$\$)	PER FLANGE 10K (\$\$)
Up to 25	32	12	11
50	60	23	18
75	95	36	27
100	130	48	36
125	160	60	46
150	175	70	55
200	230	120	70
250	295	190	95
300	350	320	130
350	460	430	180

Notes : Above rates shall be in increased for the following :

- | | |
|---|-------------------------------|
| a. Sch 80 | - Surcharge 50% |
| b. Copper pipe (9G) | - Surcharge 170% |
| c. Ready galvanized. 'C' pipe | - Surcharge 20% |
| d. High pressure steel flanges | - Surcharge 20% |
| e. Hot dip galvanizing | - Surcharge 35% |
| f. Hydraulic pipe | - Surcharge 40% |
| g. Pipes in engine room, pump room and accommodation | - Surcharge 20% |
| h. Piping in double bottom, cargo and peak tanks | - Surcharge 40% |
| i. Minimum charge 1 metre per pipe | |
| j. For intermediate pipe size, the next higher size will be apply | |
| k. Branch pipe of less than one metre shall be charged as one metre | |
| l. Staging, testing, painting, insulation, chemical cleaning, flushing, removal for access and hot-dip galvanising excluded | |
| m. Removal and refitting of pipes for access | - 70% of above rate |
| n. Reusing of existing flanges | - 80% of flange renewal price |
| o. Testing of pipe lines | - 20% of pipe renewal tariff. |

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12.2 Pipe Clamps and Deck Penetration renewal

PIPE DIAMETER (mm)	CLAMPS	DECK PENETRATION PIECE
	EACH (S\$)	EACH (S\$)
25	23	75
50	28	150
75	32	225
100	42	305
125	50	375
150	55	420
200	65	585
250	75	720
300	85	860

Notes: For Clamps and Deck Penetration

- a. Above rates based on U-bolt type clamp only.
- b. For clamps inside tank - surcharge 40%.
- c. Staging and removal for access excluded.
- d. For intermediate pipe size, the next higher size shall apply.
- e. For penetration piece inside tank - surcharge 40%.
- f. Staging, testing, painting, insulation, removal for access and hot-dip galvanizing excluded.
- g. For intermediate pipe size, the next higher size shall apply.

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5. HULL ANODES

Renew zinc anodes (Owner's supply).

WEIGHT (KG)	PER PIECE (S\$)
Below 10	18
10 to 20	21
Above 20	28

Note: Gas freeing of oil tanks, compartment and covering of anodes excluded.

6. VALVES

For valves up to 7 kg/sq. cm working pressure.
Open up valves, clean for survey, grind in, close up and repack gland in place.

Globe Valve	Gate Valve	Butterfly Valve
S\$32/inch bore	S\$42/inch bore	S\$50/inch bore

Note:

- a. Remove to shop – surcharge 50%.
- b. For intermediate valve size, the next size shall apply.
- c. Repair, renewals, machining and access work excluded.
- d. Lagging repairs excluded.
- e. Hydraulic, motorized and pneumatic operated valve, PV valve and steam valve will be charged on a different basis.
- f. For valves in engine room – surcharge 20%
- g. For valves in double bottom tank and duct keel – surcharge 35%
- h. For valves in tanks and pump room – surcharge 30%
- i. Minimum charge for 2" dia or above

For valves of different pressure rating, the following surcharge shall apply:

- 7 - 16 kg/sq.cm pressure @ surcharge 20%
- 16 - 28 kg/sq.cm pressure @ surcharge 40%
- 28 - 40 kg/sq.cm pressure @ surcharge 60%
- 40 - 60 kg/sq.cm pressure @ surcharge 80%