

PUBLIC HEALTH WORKS DIVISION - JUNAGADH.
P.H.S. SUB-DIVISION Keshod
Name of Scheme : M&R To Maliya part-1 RWSS
Name of Work: Providing Supplying Chlorine Plant, Construction Chlorine Room and Neutrilization pit at Amrapur HW & Babra SHW Under Maliya Part 1 RWSS
Taluka : Maliya Dist : Junagadh
<u>ITEM WISE SPECIFICATION.</u>
Item.No. 1
Excavation for foundation upto 1.50 mt.depth including sorting out and stacking useful material and disposing of the excavated stuff upto 50 mt.lead.
Details specification of Civil item No. 1 are applicable to this item. Rate shall be paid per Cum. basis.
Item No.2
P.C.C. M-10 levelling Course
Providing and casting in situ mass cement concrete in grade M-10 (approx. corresp. to prop. 1.3:6) using granite quartzite trap metal of size 12 mm to 25 mm incl. consolidation curing etc. complete.
Details specification of Civil item No. 5 are applicable to this item. Rate shall be paid per Cum. basis.
Item No.3
Filling in foundation and plinth with murrum or selected soil in layers of 20 cm thickness including watering ramming and consolidating etc. completed.
Details specification of Civil item No. 27 are applicable to this item. Rate shall be paid per Cum. basis.
Item No.4
Providing and cast in situ C.C. in grade M-30 proportions of ingredients as per mix design by weigh batching using granite, quartzite trap metal of size 12 mm to 20 mm and or 6 mm to 12 mm including scaffolding centering formwork, needle vibrated consolidation, curing and hydraulic testing etc. complete (excluding cost of reinforcement) up to 6 meter height /depth Av. G.L.for all water retaining structures. With formwork
Details specification of Civil item No. 57 are applicable to this item. And mix proportions as per M-30, Rate shall be paid per Cum basis.
Item No.5
Supplying cutting, bending, binding and placing in position steel as per plan and design and as per ISS 2502 including cost of steel and binding wire for reservoirs/structures only including lift up to 6 meter height or depth below G.L. for all diameters
Details specification of Civil item No. 13 are applicable to this item. Rate shall be paid per MT basis.
Item No.6
Providing TMT bar FE 500 D reinforcement for RCC work including Bending bidding and placing in position complete upto floor two level
Details specification of Civil item No. 13 are applicable to this item. Rate shall be paid per Kg. basis.
Item No.7
20 mm.thick cement plastering in C.M.(1:2) using water proofing compound of approved quality include, finishing etc. complete.
Details specification of Civil item No. 18 are applicable to this item. Rate shall be paid per Sq. m basis.
Item No.8
20mm thick sand faced cement plaster on walls upto height 10 metres above ground level consisting of 12mm thick backing coat of C:M 1:3 (1 Cement :3 Sand) and 8 mm thick finishing coat of C:M 1:1 (1 Cement : 1 Sand) etc. complete.
Details specification of Civil item No.18 are applicable to this item. Rate shall be paid per Sq. m basis.
Item No.9
Providing and fixing 250 mm pipe 5.2 mm MS railing with 3 Horizontal rows posts of angle iron of size 65 x 8 mm RCC 150 mm at 1.15 mt height and Place at 1.85 mt C/C incl painting two coats and anchor in CC etc. compete
Details specification of Civil item No. 42 are applicable to this item. Rate shall be paid per Kg. basis.

Item No.10
White stone Bela mesonary block in course in superstructure with stone of approved quality in cement Mortar 1:6 (1 Cement: 6 Course Sand) including packing the joints etc. complete
Details specification of Civil item No. 4 are applicable to this item. Rate shall be paid per Cum. basis.
Item No.11
Providing and laying cement concrete work 1:2:4 (1 Cement: 2 Coarse Aggregates 20mm nominal size) and curing complete excluding cost of formwork and reinforcement for reinforce concrete work in (B) Slabs, landing, shelves, balconis, lintel, beams, Girders and Cantilever upto floor two level. (upto 10 ton)
Details specification of Civil item No. 56 are applicable to this item. Rate shall be paid per Cum basis.
Item No.12
Providing formwork of Ordinary timber planking so as to give a rough finish including centering shuttering strutting and propping etc. Height of propping and centering below supporting floor to ceiling not exceeding 4 M and removal of the same for in situ reinforced concrete and plain concrete work in (B) flat surfaces such as soffits of suspened floor slabs landing and the like (1) floor etc. upto 200mm in thickness.
Details specification formwork of Ordinary timber planking to be as per Requirment and Complete given by the Engr.-in-charge to this item. Rate shall be paid per Sq.m basis.
Item No.13
Providing 15 mm thcik cement plaster in single coat on rough (similar) side of single or half brick walls for interior plastering upto floor two level and finished even and smooth in (ii) Cement mortor 1:4 (1-cement:4 sand)
Details specification of Civil item No. 17 are applicable to this item. Rate shall be paid per Sq.m basis.
Item No.14
Extra over for finishing with a floating coat of neat cement slurry.
Details specification for finishing with a floating coat of neat cement slurry to be as per Requirment and Complete given by the Engr.-in-charge to this item. Rate shall be paid per Sq.m basis.
Item No.15
Providing and Fixing 35 mm thick shutters for doors, windows and clearstory windows including blackenamelled M.S. butt hinges with necessary screws. (A) Indian teak wood. (ii) Fully Glazed.
Details specification of Civil item No.23,24 are applicable to this item. Rate shall be paid per Sq.m basis.
Item No.16
Providing and fixing rolling shutters of approved make made of 80 mm wide M.S. laths inter-locked together through their entire length and jointed together at the ends by end locks mounted on specially designed pipe shaft with bracket plates, guide channels and arragements for inside and outside locking with push-pull operation including the cost of hood cover and spring etc. complete.(A) Shutters having width below 3.5M
Details specification of Civil item No. 46 are applicable to this item. Rate shall be paid per Sq.m basis.
Item No.17
Finishing wall with water proofing cement paint of on wall surface (two coats) to give an approved brand and manufacture and of required shape even shade after thoroughly brushing the surface to remove all dirt, and remains of loose powdered materials etc complete.
Details specification of Civil item No.64 are applicable to this item. Rate shall be paid per Sq.m basis.
Item No.18
Distempeing (Two coats) with oil bound washable distemper of approved brand and manufacture and of required shade and manufacture and of required shade on wall surface to give an even shade, over and including a priming coat with alkali resistance primer of approved brand after thoroughly brushing the surface and other foreign matter and also including preparing the surface even and sand parpered smooth
Details specification of Civil item No. 64 are applicable to this item. Rate shall be paid per Sq.m basis.

Item No.19

Providing, Supplying & installing Vacuum Control Direct wall mounted gas chlorinator including necessary fittings, installation and commissioning of plant incl. Clamp, copper pipe, ferule filter & control valve with injector. (Devghadh HW)

Providing, supplying & fixing Vacuum Operated Direct wall mounted / Panel mounted cabinet of (thickness 4mm for capacity 3kh/hr @poynad and include vacuum regulator (MOC-UHMWV,PIFE SS316,Hast alloy spring).Differential regulator (MOC-UHMWV,PIFE RIGID PVC) Controll valve glass flow indicator(Roto meter tube of borosilicate taper & anile galls) Vacuum gauge with PVC isolator, water gauge,was mounted liquid trap(schedule 80 grade B, carbon steel seamless pipes) with chlorine pressure gauge & isolation valve on top. Vacuum relief valve to release excess vacuum with effect on diaphragms fitted in differential regulator & vacuum regulator remote/stand mounted injector of rigid pvc with built in NRV & Drain Valve. Additional Non-return valve in between injector& chlorinator to prevent water back flooding to chlorine toner include transportation, loading, unloading, lab our, material, all taxes duties completed.

100% Payment shall be made after installing the plant & the satisfactory testing. Per No. Basis

Item No.20

Supplying and Erection of approved make self priming domestic monoblock water pump with 1 Hp motor suitable for operation on 230 volt 50c/s, AC supply with metallic flange and MS impeller delivery of following discharge (B) 100 LPM 14 mt head suitable for 25mm dia delivery, Cat-II

The item shall be as per prior approval of ELC and approved make as per IS. The item includes with transportation at site of work and all taxes.

100% Payment shall be made per No of basis.

Item No.21

Providing laying and Jointing in true line and level 25 mm dia UPVC PIPE (SCH 40) for cold water including fittings make PRINCE/SUPREME/ASTRAL/FINOLEX or equivalents as approved by EIC,Pipe shall be cancelled as directed including necessary fittings etc.including testing of pipe and joints and fixing the same with adhesive solvent,including cost of all materials.

Details specification of P.H item No. 2 are applicable to this item. Rate shall be paid per Rmt basis.

Item No.22

Providing laying and Jointing in true line and level 40 mm dia UPVC PIPE (SCH 40) for cold water including fittings make PRINCE/SUPREME/ASTRAL/FINOLEX or equivalents as approved by EIC,Pipe shall be cancelled as directed including necessary fittings etc.including testing of pipe and joints and fixing the same with adhesive solvent,including cost of all materials.

Details specification of P.H item No. 2 are applicable to this item. Rate shall be paid per Rmt basis.

Item No.23

Providing supplying Chlorine Gas cylinder empty of required capacity with necessary explosive certificates incl. all taxes.Chlorine cylinder 100 Kg.

Details specification of Chlorine Gas Cylinder

1. Chlorine Gas Cylinder Conforms	IS-7631
2. Gas Capacity	90 Kg
3. Internal volume	84 Liters
4. Inside Diameter	356 MM
5. Normal wall thickness	6 MM
6. Working pressure	19.9 Kg/ .cm2
7. Test Pressure	65 Kg
8. Tare weight	65 Kg
9. Model	JMC 84C

100% Payment shall be made after supplying the cylinder & satisfactory running test. Per No. Basis

Item No.24

Refilling of Chlorine gas in cylinder including transportation to and from factory Chlorine cylinder 100 Kg.

The gas cylinder shall be filled by liquid chlorine at GACL factory after necessary testing of cylinder. Item include transportation from factory site to gas filling yard and back to outside of factory with loading, unloading and all taxes etc.

100% Payment shall be made No basis of cylinder filled by chlorine gas, Per No. Basis

Item No.25

Transportation of Chlorine Gas Cylinder with loading, unloading, Cylinder transportation should have a Licence public liability insurance at 1991 Chlorine cylinder 100 Kg.

The 100 kg cylinder shall be transported from H/W site as suggested by Engineer in charge to factory site with loading, unloading etc complete with all necessary taxes if applicable.

100% Payment shall be made No basis of empty & filled cylinder transported as shown in schedule -B Per No.

Item No.26

Providing & Supplying digital chlorine detector/monitor meter 0 - 20 ppm capacity

Sensor

Flammable - Catalytic Bead Detector Toxic / Oxygen - Electrochemical Sensor

Accuracy

± 2% of the range

Response Time (T 90)

Generally less then 30 Seconds

Gas Sampling

Diffusion

Display

3 1/2 digit Liquid crystal Display (LCD) with Low BAT indication

Alarms

Low Alarms -Visual

Power Supply

Flammable - Rechargeable battery

Environment

Temperature - 0-50 C

Physical Properties

Weight - 230 g

100% Payment shall be made per No of basis.

Item No.27

Providing & Supplying Safety Kit for chlorine cylinder - 100 kg toner.

The item incl. the work of providing supplying safety kit for 100 Kg capacity tonner used during any leakages or repairing work of chlorine gas cylinder. The Safety Kit for 100 Kg Capacity Cylinder should be of standard & approved quality. The rate incl. of all taxes etc. comp. Per No. Basic

Item No.28

Providing & Supplying air breathing apparatus as per IS : 10245 Part - II (With 45 minutes duration cylinder)

The breathing apparatus shall be of standard quality and approved make as per IS10245 Part II With 45 min duration cylinder and should be get approved from Engineer In Charge before supplying at site of work. The item includes with transportation at site of work and all taxes.

100% Payment shall be made per No of basis.

Notes:-

1. General detailed specification of civil work item No.1 excavation work given on page No.14 is amended to the following extent.
 - (a) For pipe line excavation no payment shall be with held.
 - (b) For work of well & other civil work 90% payment shall be made on completion and excavation work and remaining 10 % shall be realeased as soon as site is cleared to the satisfaction of Engr.-in -charge.
2. 30% amount will be with heled on account of hydraulic testing of any type of pipe line of labour item only withheld amount shall be released after satisfactory testing is given by the contractor.
3. 20% amount will be withheld on accout of hydraulic testing of type of valve specials G.I. Pipes etc. supplied fixied by contractor till tested.
4. 30% amount shall be with held from each items which are meat for holding works on account of hydraulic testing till tested and certificate to that effect is given by the Engr.-in-charge.

Contractor's signature**Deputy Executive Engineer**
P.H.S. Sub Dn. keshod**Executive Engineer**
P.H.W.Division Junagadh