

BILL OF QUANTITY - WATERPROOFING

Sr. No.	Item Description	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
	WATERPROOFING :				
(i)	All the work has to be carried out by the approved specialist agency as shown at the end of the Notes				
(ii)	Fifteen (15) years performance guarantee on requisite stamp paper has to be furnished by the main contractor backed-up by the manufacturer				
(iii)	Unless otherwise specified, the rate quoted shall include for the following (a) All material, labour, workmanship and sequence of operation as specified by the specialist agency. (b) Necessary scaffolding to work at all levels. (c) Curing for a minimum period of fourteen (14) days (d) Work at all levels				
(iv)	Testing of waterproofing by storing of water as directed by the employer for 7 days. In case of failure, or leakages, the contractor to carry out remedial measures as suggested by the Engineer in Charge. In extreme cases, the contractor to re-do the entire waterproofing after breaking the faulty one. No extra payments to be done.				
(v)	Only waterproofed area will be measured & paid. No extra will be paid for forming vata (gola) at the junction of slab and wall/parapet/column.				
(vi)	The following is the Acceptable Specialised Executing Waterproofing Agency. No substitutions will be permitted. IPWT Corporation, H.O. at Mumbai ; Ph : 022-25559191, 25505766 ; Fax : 022-25559132 ; email : gfcho@vsnl.com ; Branch Office at New Delhi ; Ph : 0124-4008233 ; Fax : 0124-2356906 ; email :ipwt.tammsdelhi@gmail.com ; Other branch offices at : Ahmedabad, Bangalore, Chennai, Kolkata, Hyderabad, Pune, Nagpur, Nashik				
1	BASEMENT RAFT & RETAINING WALL:				
	OPTION 1 : FLEXIBLE-MATRIX "CATALYTIC" IN-DEPTH CRYSTALLIZATION SYSTEM: Providing and applying proprietary <u>Flexible-Matrix</u> "Catalytic" In-depth Crystalline Waterproofing System in box-type fashion as per manufacturers' specification and as approved by the engineer-in-charge to permanently fix non-soluble crystalline growth throughout the capillary tracts and pores of concrete at a speed of minimum 60 - 65 cms per year inside concrete and <u>simultaneously provide a flexible membranous barrier having 150% elongation, capable of bridging cracks upto 1 mm width.</u> The Flexible-Matrix "Catalytic" In-depth Crystalline Waterproofing System shall be able to withstand atleast 460 ft. of water head pressure. Both the above characteristics shall be supported with an International Test Report. The Flexible-Matrix "Catalytic" In-depth Crystalline System [offered system : Tamms "Hey'Di K-11" + "SB" Flexibilizer, from M/s. Euclid Chemical Co., USA] shall be applied at a minimum coverage rate of 1.0 kg/sq.m. on the honeycomb-free, levelled plum PCC before tying reinforcement for the RCC raft and on the retaining wall from the external side. Cost to include base preparation including cleaning and wire-brushing the PCC surface, plugging / grouting any leaking points on the PCC with a specialised fast setting mortar, treating all construction joints, cracks, honeycombs on the RCC Raft and retaining wall by plugging / grouting with a specialised non-shrink cementitious compound, etc., complete with a protective layer of 50 mm thick, M-20 concrete screed (if the system requires) admixed with a integral waterproofing compound and a guarantee for minimum period of 15 years from completion.	SQM			
	OR				
	OPTION 2 : APP MODIFIED POLYMERIC BITUMINOUS MEMBRANE SYSTEM : Providing and installing waterproofing treatment with Membrane type waterproofing method in box-type fashion, i.e. on the PCC below raft and on the retaining wall from the external side using APP Polymer Modified Bituminous Membrane (offered system : "Zetagum" / "Monogum", from M/s. VALLI ZABBAN S.P.A., Italy) with UV resistance, underground ground-chemical resistance, high melting points, flexible and elastic with high adhesive strength. The membrane shall be reinforced with a layer of non-woven polyester fabric of minimum 180 g/sqm or composite reinforcement of minimum of 175 g/sqm and reinforced with glass fibre grill of 8 g/sqm. The upper surface is finished with calibrated granules of 0.5 - 1 mm, pressed mechanically into the bitumen. The under surface is finished with a polyethylene foil of 12 micron thickness. The total membrane thickness is 4 mm and minimum weight 4.2 to 4.5 kg/m ² including coating with compatible primer of bituminous base and torch application with overlap of 70 - 100 mm wherever required. The reinforcement provided shall be able to withstand the traffic flow density and after construction and shall carry a minimum guarantee period of 10 years . Cost to include laying and torching the prefabricated overlap at ends. Cost to include necessary protection to layer either by colour slates / granules / 3 mm thick hard bituboard, as approved by consultants, grouting the construction joints, cracks, honeycombs, etc.	SQM			

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2	UG WATER TANK / UG SUMP / STP :				
	Same as Item no.1A (Flexible-Matrix "Catalytic" In-Depth Crystallization System) from inside as well as external side	SQM			
	OR				
	Same as Item no.1B (APP Modified Polymeric Bituminous Membrane) from inside as well as external side	SQM			
3	PODIUM (DRIVEWAY / HARDSCAPE) :				
	Providing and applying waterproofing for Podium (driveway / hardscape) as per the specifications listed below and as approved by the engineer-in-charge with a guarantee of 15 years :				
A	<p>CONCRETE WATERPROOFING:</p> <p>The first part consisting of grouting the porous slab area with non-shrink cementitious grout.</p> <p>The second part consisting of treating the cracks and construction joints by routing-out to a minimum ¾" x ¾" groove and treating it with ZUPA "Repaira", a specialised non-shrink cementitious waterproof compound.</p> <p>The third part consisting of making vata (gola) at the interface joint of the slab and building wall with ZUPA "Repaira", a specialised non-shrink cementitious waterproof compound.</p> <p>The fourth part consisting of sealing all joints of outlet drain pipe, etc. with ZUPA "Repaira", a specialised non-shrink cementitious waterproof compound and topping it with liquid-applied ZUPA "Aquathon", Flexible Cementitious Waterproofing Membrane.</p> <p>The fifth part consisting of providing and applying <u>Cementitious</u> "Catalytic" In-depth Crystalline Waterproofing System as per manufacturers' specification to permanently fix non-soluble crystalline growth throughout the capillary tracts and pores of concrete at a speed of 60 - 65 cms per year inside concrete. The Cementitious "Catalytic" In-depth Crystalline Material [offered system : Tamms "Hey'Di K-11", from M/s. Euclid Chemical Co., USA] shall be applied by brushing / spraying at the coverage rate of 0.68 kg./sq.m on the entire podium driveway / hardscape slab and wall upto 300 mm height.</p> <p>VIBRATION-WITHSTANDING WATERPROOF MEMBRANE WITH HIGH ELONGATION:</p> <p>The sixth part consisting of providing and applying liquid-applied, 100% Polyisoprene-based (Polyurethane) Elastomeric Waterproof Membrane, <u>having elongation of 550%</u>. (offered system : ZUPA "Aquathon 60", from M/s. Zenex Const. Chemicals Inc., USA) at the coverage rate of 20 sq.ft./kg. as per manufacturer's specifications approved by Consultants over the entire podium driveway / hardscape slab and walls upto 300 mm height.</p> <p>PROTECTION FOR THE MEMBRANE :</p> <p>The seventh part consisting of providing and sprinkling of protective 8/12 grade quartz pieces on the second coat of the wet membrane, to provide for protection of the membrane as well as bonding of the subsequent screed, as per manufacturer's specifications approved by Consultants. Brushing off the excess sand after the membrane has set.</p>	SQM			
B	<p>CONCRETE SCREED FOR SLOPE :</p> <p>The eighth part consisting of laying and finishing avg. 50 mm thick, M-20 sloping concrete screed (utilizing 12 - 20 mm baby chips) admixed with ZUPA Santulan Integral Waterproofing Compound @ 100 ml / bag of cement, ZUPA Polyproof Integral Insulative Compound @ 300 ml / bag of cement and ZUPA Mr. Fiber 100% virgin polypropylene fibres of fibrillated grade @ 1 packet / bag of cement. (Note : RMC shall be supplied by the client free-of-cost. The waterproofing agency shall supply the integral compounds for the concrete screed and it is included in the rate).</p>	SQM			

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4	PODIUM (LANDSCAPE GARDEN) :				
	Providing and applying waterproofing for Podium (landscape garden) as per the specifications listed below and as approved by the engineer-in-charge with a guarantee of 15 years :				
A	<p>CONCRETE WATERPROOFING :</p> <p>The first part consisting of grouting the porous slab area with non-shrink cementitious grout.</p> <p>The second part consisting of treating the cracks and construction joints by routing-out to a minimum ¾" x ¾" groove and treating it with ZUPA "Repair", a specialised non-shrink cementitious waterproof compound.</p> <p>The third part consisting of making vata (gola) at the interface joint of the slab and building wall with ZUPA "Repair", a specialised non-shrink cementitious waterproof compound.</p> <p>The fourth part consisting of sealing all joints of outlet drain pipe, etc. with ZUPA "Repair", a specialised non-shrink cementitious waterproof compound and topping it with liquid-applied ZUPA "Aquathon", Flexible Cementitious Waterproofing Membrane.</p> <p>The fifth part consisting of providing and applying <u>Cementitious</u> "Catalytic" In-depth Crystalline Waterproofing System as per manufacturers' specification to permanently fix non-soluble crystalline growth throughout the capillary tracts and pores of concrete at a speed of 60 - 65 cms per year inside concrete. The Cementitious "Catalytic" In-depth Crystalline Waterproofing System shall be able to withstand atleast 460 ft. of water head pressure. The Cementitious "Catalytic" In-depth Crystalline Material [offered system : Tamms "Hey'Di K-11", from M/s. Euclid Chemical Co., USA] shall be applied by brushing / spraying at the coverage rate of 0.68 kg./sq.m on the entire landscape garden concrete slab and walls upto 300 mm above the top level of soil.</p> <p>WATERPROOFING-CUM-ROOT REPELLENT MEMBRANE:</p> <p>The sixth part consisting of providing and applying water-based, liquid-applied, 100% Polyurethane Flexible Waterproofing-cum-Root Repellant Membrane having elongation of 350%, (offered system : ZUPA "Plastifect-PU", from M/s. Zenex Const. Chemicals Inc., USA) at the coverage rate of 20 sq.ft./kg. on the entire landscape garden concrete slab and walls upto 300 mm above the top level of soil, as per manufacturer's specifications approved by Consultants.</p> <p>PROTECTION FOR THE MEMBRANE :</p> <p>The seventh part consisting of providing and sprinkling of protective 8/12 grade quartz pieces on the second coat of the wet membrane, to provide for protection of the membrane as well as bonding of the subsequent screed, as per manufacturer's specifications approved by Consultants. Brushing off the excess sand after the membrane has set.</p>	SQM			
B	<p>CONCRETE SCREED FOR SLOPE :</p> <p>The eighth part consisting of laying and finishing avg. 50 mm thick, M-20 sloping concrete screed (utilizing 12 - 20 mm baby chips) admixed with ZUPA Santulan Integral Waterproofing Compound @ 100 ml / bag of cement, ZUPA Polyproof Integral Insulative Compound @ 300 ml / bag of cement and ZUPA Mr. Fiber 100% virgin polypropylene fibres of fibrillated grade @ 1 packet / bag of cement. (Note : RMC shall be supplied by the client free-of-cost. The waterproofing agency shall supply the integral compounds for the concrete screed and it is included in the rate).</p>	SQM			

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5	WATER BODY AREA ON PODIUM :				
	<p>Providing and laying waterproofing for water bodies on podium, as per specifications listed below with a minimum guarantee period of 15 years :</p> <p>The first part consisting of grouting the porous slab area with non-shrink cementitious grout.</p> <p>The second part consisting of treating the cracks and construction joints by routing-out to a minimum $\frac{3}{4}$" x $\frac{3}{4}$" groove and treating it with ZUPA "Repaira", a specialised non-shrink cementitious waterproof compound.</p> <p>The third part consisting of making vata (gola) at the interface joint of the slab and wall with ZUPA "Repaira", a specialised non-shrink cementitious waterproof compound.</p> <p>The fourth part consisting of sealing all joints of outlet drain pipe, etc. with ZUPA "Repaira", a specialised non-shrink cementitious waterproof compound and topping it with liquid-applied ZUPA "Aquathon", Flexible Cementitious Waterproofing Membrane.</p> <p>The fifth part consisting of providing and applying <u>Cementitious</u> "Catalytic" In-depth Crystalline Waterproofing System [offered system : Tamms "Hey'Di K-11", from M/s. Euclid Chemical Co., USA] shall be applied by brushing / spraying at the coverage rate of 1.0 kg./sq.m on the entire water body area on podium slab and entire walls from inside.</p>	SQM			
6	TOILET / BALCONY / UTILITY (SUNK SLAB) :				
	<p>Providing and laying waterproofing for toilets/balcony/utility (sunk slab) as per specifications listed below with guarantee of 15 years :</p>				
A	WATERPROOFING + PROTECTIVE PLASTER :				
	<p>The first part consisting of grouting the porous slab area (if required) with non-shrink cementitious grout.</p> <p>The second part consisting of treating the cracks and construction joints by routing-out to a minimum $\frac{3}{4}$" x $\frac{3}{4}$" groove and treating it with a specialised non-shrink cementitious compound (ZUPA "Repaira").</p> <p>The third part consisting of making vata (gola) at the interface joint of the toilet slab and masonry wall with a specialised non-shrink cementitious compound (ZUPA "Repaira").</p> <p>The fourth part consisting of sealing / packing all joints of outlet pipes, etc. with a specialised non-shrink cementitious compound (ZUPA "Repaira") and topping it with liquid-applied, Flexible Cementitious Waterproofing Membrane.</p> <p>The fifth part consisting of providing and applying 2-component, liquid-applied, Flexible Cementitious Waterproof Membrane (ZUPA "Aquathon", from M/s. Zenex Const. Chemicals, Inc, USA) <u>having elongation of 125%</u>, at the coverage rate of 1.5 kg/sq.m. as per manufacturer's specifications approved by Consultants over the entire toilet / balcony / utility sunk slab and walls upto 1 M height from FFL in case of dry area and upto 2 M height from FFL in case of shower area.</p> <p>The sixth part consisting of providing and laying avg. 15 mm thick, CM 1:4 plaster admixed with ZUPA Santulan Integral Waterproofing Compound @ 100 ml / bag of cement and ZUPA Mr. Fiber 100% virgin polypropylene fibres of fibrillated grade @ 1 packet / bag of cement, over the fifth part.</p>	SQM			
B	BRICK BAT COBA FILLING IN SUNK + LEVELLED PLASTER TOPPING:				
	<p>The sixth part consisting of providing and filling brick-bat coba in CMB 1:4:8 topped with 20 mm thick, CM 1:4 plaster. The mortar for the plaster shall be admixed with integral waterproofing compound @ 100 ml/bag of cement and mortar plasticizer @ 200 ml/bag of cement, curing, complete. The top-finish coat shall be broom-finished suitable for laying tiles. The cost should include screening the river sand, working at all leads, lifts, heights, scaffolding, with proper slope to drain-off water entirely, complete, etc. Curing shall be done for 7 days by ponding with water. (ONLY PLAN AREA CONSIDERED FOR MEASUREMENTS IN PART 6.B.). (Note : cement, sand and brick-bats shall be supplied by the client free-of-cost. The waterproofing agency shall supply the integral compounds for the brick bat coba and it is included in the rate.)</p>	SQM			

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7	TOILET (FLAT SLAB) :				
	<p>Providing and laying waterproofing for toilets (flat slab) as per specifications listed below with guarantee of 15 years :</p> <p>The first part consisting of grouting the porous slab area (if required) with non-shrink cementitious grout.</p> <p>The second part consisting of treating the cracks and construction joints by routing-out to a minimum ¾" x ¾" groove and treating it with a specialised non-shrink cementitious compound (TAMMS "Tammspatch" / ZUPA "Repaira").</p> <p>The third part consisting of making vata (gola) at the interface joint of the toilet slab and masonry wall with a specialised non-shrink cementitious compound (TAMMS "Tammspatch" / ZUPA "Repaira").</p> <p>The fourth part consisting of sealing / packing all joints of outlet pipes, etc. with a specialised non-shrink cementitious compound (TAMMS "Tammspatch" / ZUPA "Repaira") and topping it with liquid-applied, Flexible Cementitious Waterproofing Membrane.</p> <p>The fifth part consisting of providing and applying Cementitious "Catalytic" In-depth Crystalline Waterproofing System [offered system : Tamms "Hey'Di K-11", from M/s. Euclid Chemical Co., USA] as per manufacturers' specification to permanently fix non-soluble crystalline growth throughout the capillary tracts and pores of concrete at a speed of 60 - 65 cms per year inside concrete. The Cementitious "Catalytic" In-depth Crystalline Waterproofing System shall be able to withstand atleast 460 ft. of water head pressure. Both the above characteristics shall be supported with an International Test Report. The Cementitious "Catalytic" In-depth Crystalline Material shall be applied by brushing / spraying at the coverage rate of 0.8 kg./sq.m as per manufacturer's specifications approved by Consultants over the entire toilet flat slab and walls upto 1 M height from FFL in case of dry area and upto 2 M height from FFL in case of shower area.</p>	SQM			
8	ROOF TERRACE :				
	OPTION 1: 100% POLYISOPRENE-BASED ELASTOMERIC WATERPROOFING MEMBRANE WITH BRICK-BAT COBA INSULATION SYSTEM:				
	Providing and applying waterproofing and slope-cum-insulation for roof terrace as per the specifications listed below and as approved by the engineer-in-charge with a guarantee of 15 years : (ONLY PLAN AREA CONSIDERED FOR MEASUREMENTS)				
A	WATERPROOFING + PROTECTIVE LAYER :				
	<p>The first part consisting of grouting the porous slab area with non-shrink cementitious grout.</p> <p>The second part consisting of repairing the cracks and construction joints by routing-out to a minimum ¾" x ¾" groove and treating it with a specialised non-shrink cementitious compound (ZUPA "Repaira").</p> <p>The third part consisting of making vata at interface joint between slab / parapet with a specialised non-shrink cementitious compound (ZUPA "Repaira").</p> <p>The fourth part consisting of providing and applying liquid-applied, single-component, 100% Poly-isoprene (Polyurethane) based Elastomeric Waterproof Membrane, <u>having elongation of 550%</u> (offered system : ZUPA "Aquathon 60", from M/s. Zenex Const. Chemicals Inc., USA), at the coverage rate of 0.8 kg /sq.m. in 2 coats, as per manufacturer's specifications, over the entire roof terrace concrete slab and parapet walls upto 300 mm height.</p> <p>The fifth part consisting of providing and sprinkling of 8/12 grade quartz pieces on the second coat of the wet membrane, to provide for protection of the membrane as well as bonding of the subsequent screed, as per manufacturer's specifications approved by Consultants. Brushing off the excess sand after the membrane has set.</p>	SQM			

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B	<p>INSULATION + SLOPE, WITH BRICK-BAT COBA SYSTEM :</p> <p>The sixth part consisting of providing and laying rigid insulation and slope making with avg. 115 mm thick brick-bat koba system comprising of 20 mm thick, CM 1:4 base coat, avg. 75 mm thick brick-bat coba in CM 1:5 mortar and 20 mm thick, CM 1:4 top-finish coat. The mortar for the brick-bat koba shall be CM 1:4 and admixed with integral waterproofing compound @ 100 ml/bag of cement, curing, complete. The top-finish coat shall be suitably finished (either smooth IPS with 30 cm x 30 cm false marked squares <u>or</u> broom-finished suitable for laying china mosaic tiles). The cost should include treatment of cove (wata) at the interface of floor and parapet, sealing the annular space between the pipe and the masonry, making khurras, river sand screened and washed, at all leads, lifts, heights, scaffolding, with proper slope to drain-off water entirely, complete, etc. Curing shall be done for 7 days by ponding with water. (Note : cement, sand and brick-bats shall be supplied by the client free-of-cost. The waterproofing agency shall supply the integral compounds for the brick bat coba and it is included in the rate).</p> <p>The seventh part consisting of sealing all joints of outlet drain pipe and making khurras, etc. with ZUPA "Repaira".</p>	SQM			
	OR				
8	ROOF TERRACE :				
	OPTION 2 : SINGLE-PLY PVC WATERPROOFING MEMBRANE WITH EXTRUDED POLYSTYRENE BOARD INSULATION FOR GREEN BUILDING CERTIFICATION :				
	Providing and applying waterproofing, insulation, slope and tile-finish for roof terrace as per the specifications and as approved by the engineer-in-charge with guarantee of 10 years : (ONLY PLAN AREA CONSIDERED FOR MEASUREMENTS)				
A	<p>CONCRETE SCREED FOR SLOPE :</p> <p>The first part consisting of providing and laying avg. 75 mm thick, M-20 concrete screed admixed with ZUPA Santulan Integral Waterproofing Compound @ 100 ml / bag of cement and ZUPA Mr. Fiber 100% virgin polypropylene fibres of fibrillated grade @ 1 packet / bag of cement, <u>laid to proper slope (gradient) of atleast 1 : 120</u>, and ending in a proper vata (cove) at the periphery of the parapet wall. (Note : RMC shall be supplied by the client free-of-cost. The waterproofing agency shall supply the integral compounds for concrete screed and is included in the rate).</p>	SQM			
B	<p>WATERPROOFING :</p> <p>The second part consisting of providing and laying Polyester-reinforced, Single-ply, PVC Waterproofing Membrane (offered system : "Zetagum PL", from M/s. VALLI ZABBAN S.P.A., Italy) of size 1 m x 10 m, 2.5 mm thick, on application of PVC glue. The Membrane shall be protected with slates and torched with the other sheet with a 50 - 70 mm overlap in all directions, as per manufacturer's specifications, over the entire roof terrace slab and parapet wall upto minimum 1 M height. The Membrane shall be tucked into the groove made in the parapet wall and then finished with Polymer Modified Mortar.</p>	SQM			
C	<p>INSULATION WITH EXTRUDED POLYSTYRENE BOARD :</p> <p>The third part consisting of providing and laying rigid insulation consisting of 50 mm thick Extruded Polystyrene Board (offered system : "Styrofoam" from M/s. Dow, USA / "X250 Insuboard" from M/s. Feininger, China / equivalent), having R-value of 9, U-Value of 0.051 Btu/Hr.Sft.°F, Density of 31 Kg./Cu.m. and Compressive Strength of 250 kPa; including jointing with approved adhesive.</p>	SQM			
D	<p>SEPARATION LAYER :</p> <p>The fourth part consisting of providing non-woven polyester geotextile fabric (offered system : from M/s. Freudenberg Politex, Italy / equivalent) of density 40 g/sq.m.</p>	SQM			
E	<p>HEAT-RESISTANT TILES / CHINA MOSAIC TILES ON A BEDDING MORTAR :</p> <p>The fifth part consisting of providing and laying avg. heat-resistant tiles / china mosaic tiles over 25 mm thick bedding mortar admixed with ZUPA Santulan Integral Waterproofing Compound @ 100 ml / bag of cement (Note : Cement, sand and tiles shall be supplied by the client free-of-cost).</p> <p>The sixth part consisting of sealing all joints of outlet drain pipe, making khurras, etc. with a specialised non-shrink cementitious compound (ZUPA "Repaira").</p>	SQM			

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9	SWIMMING POOL :				
	<p>Providing and laying waterproofing for OH swimming pool as per specifications listed below with a minimum guarantee period of 15 years :</p> <p>Checking the swimming pool by filling it with water fully and marking the defective porous areas.</p> <p>The first part consisting of grouting the porous concrete with non-shrink cementitious grout.</p> <p>The second part consisting of treating the cracks and construction joints by routing-out to a minimum $\frac{3}{4}$" x $\frac{3}{4}$" groove and treating it with a specialised non-shrink cementitious compound (TAMMS "Tammspatch" / ZUPA "Repaira").</p> <p>The third part consisting of making vata (gola) at the interface joint of the RCC slab and wall with a specialised non-shrink cementitious compound (TAMMS "Tammspatch" / ZUPA "Repaira").</p> <p>The fourth part consisting of sealing / packing all joints of outlet pipes, etc. with a specialised non-shrink cementitious compound (TAMMS "Tammspatch" / ZUPA "Repaira").</p> <p>The fifth part consisting of providing and applying Cementitious "Catalytic" In-depth Crystalline Waterproofing System [offered system : Tamms "Hey'Di K-11", from M/s. Euclid Chemical Co., USA] as per manufacturers' specification to permanently fix non-soluble crystalline growth throughout the capillary tracts and pores of concrete at a speed of 60 - 65 cms per year inside concrete. The Cementitious "Catalytic" In-depth Crystalline Waterproofing System shall be able to withstand atleast 460 ft. of water head pressure. The Cementitious "Catalytic" In-depth Crystalline Material shall be applied by brushing / spraying at the coverage rate of 1.0 kg./sq.m on the entire concrete slab and walls from inside.</p>	SQM			
10	OH WATER TANK :				
	<p>Providing and laying waterproofing for OH water tanks as per specifications listed below with a minimum guarantee period of 15 years :</p> <p>Checking the overhead water tank by filling it with water fully and marking the defective porous areas.</p> <p>The first part consisting of grouting the porous concrete with non-shrink cementitious grout.</p> <p>The second part consisting of treating the cracks and construction joints by routing-out to a minimum $\frac{3}{4}$" x $\frac{3}{4}$" groove and treating it with a specialised non-shrink cementitious compound (ZUPA "Repaira").</p> <p>The third part consisting of making vata (gola) at the interface joint of the RCC slab and wall with a specialised non-shrink cementitious compound (ZUPA "Repaira").</p> <p>The fourth part consisting of sealing / packing all joints of outlet pipes, etc. with a specialised non-shrink cementitious compound (ZUPA "Repaira").</p> <p>The fifth part consisting of providing and applying Acrylic Polymer Modified Cementitious Waterproof Coating (offered system : ZUPA "Hydro-Tight", from M/s. Zenex Const. Chemicals Inc., USA) at the coverage rate of 7 - 8 sq.ft./kg. in 2 coats as per manufacturer's specifications approved by Consultants over the entire RCC slab and wall.</p> <p>The sixth part consisting of providing and laying 20 - 25 mm thick, CM 1: 3 screed admixed with ZUPA Santulan Integral Waterproofing Compound @ 100 ml / bag of cement and ZUPA Mr. fiber 100% virgin polypropylene fibres of fibrillated grade @ 1 packet / bag of cement. (Note : cement and sand shall be supplied by the client free-of-cost. The waterproofing agency shall supply the integral compounds and it is included in the rate).</p>	SQM			

PROJECT :



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11	EXPANSION JOINT :				
	<p>Providing and laying waterproofing of expansion joint, as per specifications listed below with a minimum guarantee period of 10 years :</p> <p>The first part consisting of providing and fixing the polyethylene backer The first part consisting of wire-brushing the internal sides of the concrete where the sealant is to be applied. Also wire-brushing the top surface of the concrete upto atleast 200 mm on either side of the expansion joint.</p> <p>The second part consisting of providing and fixing the polyethylene backer sheet into the expansion joint leaving 'Y' mm depth from the top of the slab</p> <p>The third part consisting of providing and applying Polyurethane primer coating onto the sides of the expansion joint upto 'Y' mm from top of the slab, as shown in the diagram below.</p> <p>The fourth part consisting of providing and filling Polyurethane sealant (offered system : ZUPA "35 Year Sealant", from M/s. Zenex Const. Chemicals Inc., USA / "Seal 'N' Flex", from M/s. Bostik, Germany / equivalent) having elongation of 500% into the slot 'X' mm wide by 'Y' mm deep upto the surface of the slab.</p> <p>The fifth part consisting of providing and fixing aluminium sheet onto concrete, screwing it at every 300 mm distance on either side of the sheet, as shown in the diagram.</p> <p>(a) For 25 mm (w) x 12 mm (d) (b) For 50 mm (w) x 25 mm (d)</p>	RMT RMT			
	TOTAL FOR WATERPROOFING :				