SPECIFICATIONS FOR EXTERNAL PAINTING WORKS

1.0 Minimum acceptable specifications for external painting works

Parameter	Minimum acceptable specifications
Texture	
Type of Texture	As specified by the Design team (choices include: Rough Tex, Cross Tex, Bubble, Dholpur etc.)
Thickness of texture coat	2.00 mm
Type of resin used	Acrylic based resin to be used
% weight of resin	12% of total weight of texture material
Top Coats	
Dry Film Thickness (2 coats)	60 microns DFT
UV resistance	Should resist min. 500 hours of exposure in QUV machine as per ASTM standards (equivalent to 5 yrs of resistance)
Water Resistance	Should resist minimum 10 days of continuous showering (equivalent to 5 years of resistance in set up as per ASTM standards
Anti Fungal & Anti Algae Properties	Should resist minimum 30 days in an algae chamber (equivalent of 5 years of resistance)

NOTE:

1. It is expected that the external paint will provide:
    - Significant water proofing to the applied surfaces.
    - Good aesthetic appearance (without discoloration / fungal formation etc.) for a period of minimum of 5 years.
2. The paint manufacturer will supply his Material Test Certificates for UV resistance, Water Resistance, Anti Fungal and Anti Algae properties.
3. The employer is free to test materials delivered for adherence to the stated minimum acceptable specifications. In case a failure is observed, second test shall be carried out after information to the manufacturer and in presence of its representative (if representative chooses to remain present after 48 hours notice from employer). The results of these two tests, seen together, will be binding on all concerned.
4. Irrevocable corporate Guarantee to be provided by the paint manufacturer against failure of its product (either in visible performance or test parameters wrt minimum acceptable parameters) with 5 yrs warranty. The corporate guarantee shall enable the employer to claim any repairs/restoration to make good the defective work/product free of cost by the paint manufacturer to the satisfaction of the employer within a period of 4 months of the same being pointed out by the employer or entitle the employer to claim the cost of reworks plus overheads as per the General Conditions of Contract (GCC) from the paint manufacturer in case the repairs/ restoration is not carried out within 4 months of the same being pointed out.

2.0 WARRANTIES TO BE PROVIDED BY THE PAINT MANUFACTURER

Warranties (valid for 5 years) for following parameters will be provided by the paint manufacturer.

S. No.	Parameter
1	No Peeling of paint film
2	No Flaking of paint film
3	No Shade Fading (UV resistance)
4	No visible fungal or algal growth on paint film.

3.0 PARAMETERS DEFINING EMPLOYER DELIVERABLES TO CONTRACTOR

a). Surface for external painting works subject to following:

Parameter	Acceptable specifications
pH of surface	to be between 8 and 10
Dampness of surface	% moisture content to be less than 10% as per dampness gauge available with paint manufactures
Deposits on surface	No salt deposits, efflorescence, lime blooming or algal/ fungal growth on surface.
No cracks in plaster	No cracks observed on surface (above 0.25 mm thickness)
Adjacent Works	No works that lead to water or any other material dripping from above to be carried out on the same surface during the duration of external painting works.
Preparation of surface	Minimum 7 days of curing and 21 days of drying for conventional surfaces after plaster.
	All visible honey combs and surface undulations beyond 5 mm to be rectified by the employer.

b). Process for determining readyness of surface for external painting works:

1. The paint manufacturer's representative will inspect the surface for readiness and inform its acceptance/lack thereof within 3 working days of the surface being offered for external painting works by Construction Management team of the site.
2. If rejection of surface is not conveyed in written/email form within 3 days of offer, it will be deemed to be accepted.
3. If paint manufacturer accepts the surface, the start date of implementation wrt that surface (and consequently the incentives/penalties) shall be this date.
4. If paint manufacturer does not accept the surface, binding decision of procurement on acceptance/rework will be given within 4 days thereafter. If procurement ask Const mgmt to further prepare surface, steps 1-3 shall stand repeated.

5. Const Mgmt shall be free to provide any surface having height > 70 m in two tiers/installments, subject to the lower tier being physically separated from the upper tier so as to enable work to be carried on in the lower tier.
6. Date of acceptance of surface (as per steps 1-5 above) will be treated as the start date of works for the contract.
7. 'Surface' is any one side of a wing.

4.0 MINIMUM EQUIPMENTS REQUIRED TO BE USED BY THE CONTRACTOR

Material	Specifications
Bamboo	• Fully matured, straight with uniform diameter of 2 to 2.5". • No split ends or cracks along length and no sign of decay or excessive moisture.
Ballis, if required	• Minimum 3" in diameter, straight and of matured wood. • Ballis will be of exact length required for bracing the horizontal ties • Ballis shall be firmly wedged between floor slabs.
Coir rope	• Coir rope shall be new and not less than 3/8" in diameter. • Reuse of this coir rope for next face of scaffolding is allowed only if it has not suffered any monsoons or part thereof.

- Slide Fall arrester should compulsory be used while working on external facadeon a height above 3 meters on single bamboo scaffolding or double bamboo scaffolding . Slide fall arrestors to be with safety rope and full body harness.
- The slide fall arrester should be anchored onto a permanent surface, not onto the scaffolding or any temporary structure.
- Limited amount of double scaffolding may have to be erected for work at ducts, shafts and fins areas due to requirement of higher support for the workers undertaking external painting works in these areas.
- In case repairs to the Mivan surface are required to correct visible undulations, external painting work may need to be carried out with double scaffolding with safety harness due to the requirement of double scaffolding by the civil works agency for carrying out the surface repairs.Where ever double scaffolding is required, approval from COO is mandatory.
- The vendor will be penalized by the employer in case the above mentioned specifications are not met or in case the scaffolding buckles on site , at the rate of one percent of the contract value for every week or part thereof the same remains to be rectified as per the specifications given above.
- Minimum 50% of the scaffolding requirement for the building must be mobilized by the vendor at the start of works.
- The vendor must ensure that the scaffolding is approved by the quality control team at site before commencement of works. Approval of scaffolding by the employer shall in no way whatsoever absolve the contractor from the liabilities arising due to failure of the scaffolding or any accident, for which the contractor shall keep the employer fully indemnified at all the times during the period of this contract.