

	Period of contract:	Seven Months (07 Months)
ISSUED TO:	EMD :	Rs. 81,000/-

**Sub: Providing waterproofing treatment to existing rain water Gutters inside various hangars & replacement of old existing gutters with new gutters in tool room & bogie frame hangar in Bangalore Complex, BEML Limited, Bangalore.**

**SCHEDULE 'A' - BILL OF QUANTITIES**

Sl. No	Description	Unit	Qty	Rate/unit in fig. & in words Rs.	Amount (Rs)
<b>1</b>	Cleaning the existing rain water Gutters inside the hangars at various heights (10m to 14 m approximately) using wire brushes, including removal of dust, grime, muck, debris & other foreign material laying over gutters including disposal of debris outside the site premises to a distance not exceeding 5.0KM not objected by local civil authorities including lead, lift etc., complete all as specified & directed by Engineer in Charge.	RMT	1650		

Sl. No	Description	Unit	Qty	Rate/unit in fig. & in words Rs.	Amount (Rs)
2	<p>Preparing the surfaces and providing Bitumat Synroof Hi- build elastomeric premium quality liquid waterproofing system including one layer of 60 GSM thermally bonded special polyester reinforcement for all Gutters etc., complete with the following scope of works:</p> <p>a) Supplying and applying premium quality acrylic waterproofing primer @ 250 grams per square meter after diluting as per the manufacturer's recommendations by allowing 3 to 4 hours for the primer to dry completely.</p> <p>b) Applying 2nd coat of premium quality acrylic waterproofing coating @ 350 grams per square meter using roller / brush after diluting as per the manufacturer's recommendations and simultaneously over this install 60 GSM thermally stabilized polyester reinforcement with 100mm side Laps and 150mm end laps and applying additional coat of quality acrylic waterproofing coating @ 350 grams per square meter using roller / brush.</p> <p>To Ensure there are no wrinkles or folds on the reinforcement membrane and allow it to dry for 24 hours. Applying final coat of premium quality acrylic waterproofing system @ 350 grams per square meter using roller / brush after diluting as per the manufacturer's recommendations after 24 hours of drying.</p> <p>All dilutions shall be strictly as per the manufacturer's instructions as shown in the product catalogue.</p> <p>The same system shall be carried out over the vertical areas like parapets if any.</p> <p>Note 1) All materials are to be produced with samples and to obtain prior approval of EIC before commencing the work</p> <p>2) The water proofing materials shall be tested as per the standards prescribed from the reputed laboratory for the following parameters and cost involved for conducting such test shall be borne by the Firm. The quoted rate shall be deemed to include for the cost of testing:</p> <p>a) Solid content ( % )</p>	SQM	1170		

Sl. No	Description	Unit	Qty	Rate/unit in fig. & in words Rs.	Amount (Rs)
3	<p>Providing &amp; applying Bitumat Synroof Hi – Build elastomeric premium quality liquid waterproofing system including one layer of 60 GSM thermally bonded special polyester reinforcement carried out over the Peripheral areas of the AC/GI Sheet ventilator fans, Gutter joints, each No. of approximate area of 3.5 Sqm for each fan/sheet/gutter joint area as detailed below: .</p> <p>a) Supplying and applying premium quality acrylic waterproofing primer @ 250 grams per square meter after diluting as per the manufacturer's recommendations by allowing 3 to 4 hours for the primer to dry completely.</p> <p>b) Applying 2nd coat of premium quality acrylic waterproofing coating @ 350 grams per square meter using roller / brush after diluting as per the manufacturer's recommendations and simultaneously over this install 60 GSM thermally stabilized polyester reinforcement with 100mm side Laps and 150mm end laps and applying additional coat of quality acrylic waterproofing coating @ 350 grams per square meter using roller / brush.</p> <p>To Ensure there are no wrinkles or folds on the reinforcement membrane and allow it to dry for 24 hours. Applying final coat of premium quality acrylic waterproofing system @ 350 grams per square meter using roller / brush after diluting as per the manufacturer's recommendations after 24 hours of drying.</p> <p>All dilutions shall be strictly as per the manufacturer's instructions as shown in the product catalogue.</p> <p>The same system shall be carried out over the vertical areas like parapets if any.</p> <p>Note 1) All materials shall be produced with samples and to obtain prior approval of EIC before commencing the work</p> <p>2) The water proofing materials shall be tested as per the standards prescribed from the reputed laboratory for the following parameters and cost involved for conducting such test shall be borne by the Firm. The quoted rate shall be deemed to include for the cost of testing:</p>	NOS	180		
4	Taking down/dismantling the broken north light plain/round glass carefully from the MS/metal frames by hacking out old putty or removing beads including making good breakages if any in taking out etc., complete all as specified & directed by the Engineer-in-charge	SQM	470.00		

Sl. No	Description	Unit	Qty	Rate/unit in fig. & in words Rs.	Amount (Rs)
5	Supplying and fixing M/s. Tufflite/PC Lite/Lexon make plain 2mm thick (uniform thickness) polycarbonate sheet for north light glasses conforming to relevant IS with necessary hardware screws/washers and sealant, sheets fixed to suite the existing galvalume roof sheet profile such that no leakage occurs etc., complete all as specified & directed by Engineer in charge.	SQM	470.00		
6	Removing the existing GI/AC/aluminium gutter from the existing steel members including removing the supports if necessary & stacking at a place shown etc., disposal of debris outside the site premises to a distance not exceeding 5.0KM not objected by local civil authorities including lead, lift etc., complete all as specified & directed by Engineer in Charge. Complete all as specified and directed by the Engineer-in-charge	RMT	260.00		
7	Supplying, fabricating and fixing 3mm thick GI valley gutter of approximate width 1.50Mtr including bending to the required profile to suit the site conditions, welding and erecting to the required height & to the correct line and level and making the joints water tight using suitable sealant/adhesives etc., complete all as specified and directed by Engineer in charge.	RMT	270.00		
8	Supplying, fabricating and fixing in position 3mm thick GI funnels of required diameter to fix to rain water gutters including welding to the gutters to ensure a leak proof joint with necessary hardware items, silicon sealant etc complete all as specified & directed by the Engineer-in-charge.	NOS	100.00		
9	Taking down the existing PVC rain water downtake pipes any diameter including any fittings etc., and stacking the usable pipes at a place all as shown & refixing the PVC rain water downtake pipes back in position of 110mm/160/200 mm diameter with all necessary hardware fittings, fixtures after necessary modifications to GI/MS Gutters etc., complete all as specified and directed by the Engineer-in-charge. <b>Note:-</b> The rate quoted is deemed to include for providing & removal of scaffolding, staging, safety nets wherever necessary.	RMT	200.00		
10	Providing & fixing 160mm diameter 6kg/cm <sup>2</sup> PVC pipes manufactured by M/s.Supreme/ Astral conforming to relevant IS for rain water downtake laid in gradient in walls including all standard PVC Fittings like elbows, bends, tees, & fixtures such as pipe clips, PVC clamps wooden plug, screws, washers etc fixed/ secured firmly etc.,complete all as specified and directed by Engineer in charge. <b>Note:</b> The rate quoted for the item deemed to include for Providing & removal of scaffolding, staging wherever necessary etc.	RMT	55.00		

Sl. No	Description	Unit	Qty	Rate/unit in fig. & in words Rs.	Amount (Rs)
11	Supplying fabricating and fixing MS brackets to support for Gutter/ down take pipes using MS structural steel angles, plate, channels etc including welding to the existing MS members, tools, tackles, screws etc., complete all as specified & directed by Engineer in charge. <b>Note:-</b> The rate quoted for the item is deemed to include for Providing & removal of scaffolding, staging/safetynets wherever necessary.	Kgs.	1600.00		
12	Preparing the steel surfaces by scrapping & applying two coats of synthetic enamel paint of first quality, approved brand and colour, Manufactured by M/s Asian paints/Berger over a coat of yellow/red oxide zinc chromate primer etc., Complete all as specified and directed by Engineer in charge. <b>Note:</b> The rate quoted is deemed to include for providing and removal of scaffolding, staging/ladder wherever necessary and protective measures etc	SQM	100.00		
<b>Total value of work excluding GST (Rs).</b>					
<b>GST (Rs).</b>					
<b>Total value of work inclusive of GST (Rs)</b>					

**Note:**

- 1) The work shall be carried out at heights of 10 to 14 approximately.
- 2) The work shall be carried out after observing all safety precautions and after obtaining safety work permit for the day's work as per BEML Safety norms & policy.
- 3) The Contractor is solely responsible for safe execution of work and work shall be carried out strictly under supervision of qualified technical personnel of the Contractor till the completion of days work.
- 4) It is responsibility of the contractor to provide all safety / PPE for the labour/ workmen employed for the work and the work to be carried out after obtaining necessary safety permit as per BEML format for the day's work.
- 5) The contractors/ prospective bidders shall visit the site and acquaint themselves with the site conditions before submission of bid/ quote.

(Total Amount in words Rupees.....  
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Sl. No	Description	Unit	Qty	Rate/unit in fig. & in words Rs.	Amount (Rs)
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Authorised Signatory  
(Purchase Dept.)

Signature of the Contractor with seal