क्रमांक 10496 / यॉत्रिकी / पविनि / 14 भोपाल दिनांक 23 / 12 / 2014

कोटेशन – नोटिस

म0प्र0 राज्य पर्यटन विकास निगम की होटल कल्चुरी रेसीडेंसी जबलपुर में पुरानी पैसेंजर लिफ्ट को निकालकर उसके स्थान पर नवीन 06 व्यक्तियों हेतु लिफ्ट लगाने के कार्य हेतु इस क्षेत्र में प्रतिष्ठित अनुभवी, दक्षताप्राप्त लिफ्टनिर्माता अथवा लिफ्टप्रदाता (अधिकृत डीलर) से उनकी दरें अधोहस्ताक्षरकर्ता के कार्यालय म0प्र0 राज्य पर्यटन विकास निगम, पर्यटन भवन भदभदा रोड भोपाल में दिनांक 02 / 01 / 2015 अपरान्ह 3.00 तक आमंत्रित किये जाते है। इसके बाद प्राप्त कोटेशन दरों को सम्मिलित नहीं किया जायेगा तथा डाक में देरी की जिम्मेदारी निगम की नहीं होगी। प्राप्त कोटेशन उसी दिन अपरान्ह 4:00 बजे उपस्थित पार्टियों अथवा उनके प्रतिनिधियों के समक्ष खोले जायेंगे।

कोटेशन प्रपत्र एवं शर्ते निगम की बेबसाईट **www.mpstdc.com** से डाउनलोड किये जा सकते है अथवा अधोहस्ताक्षरकर्ता के कार्यालय से दिनांक 01 / 01 / 2015 शाम 5:00 बजे तक प्राप्त किये जा सकते है।

कार्यपालन यंत्री

M.P. State Tourism Development Corporation Limited Bhopal

Quotation proforma

1	Name of work	Dismantling of old lift and installation of new automatic 06 passenger lift at Hotel Kalchuri Residency, Jabalpur.
2	P.A.C.	15.00 lacs
3	Time for completion of work	03 Months (i/c mobilization period from date of issuing work order)
4	Company name and full address with phone number	
5	Service center full address and phone number	
6	Rate Quoted	
7	TIN No	
8	PAN No.	
9	Service tax No.	
10	EPF Registration No.	

Date: - ----------

Place: - ----------

Authorized Sign

Authorized Name and Address

TERMS & CONDITIONS:-

1- Bidder should be manufactured or authorized dealer of Lift Company.

2- Bidder should have at least 1.25 crore turnover per year in last three financial year and at least 6.00 crore total turnover in last five years.

3- Bidder should have valid license for installation of lift issued by Govt. of M.P.

4- Bidder should have TIN, PAN and Service tax no.

5- Lift should be of an ISO company.

6- Bidder should have experience of Installation at least 10no. Passenger lifts.

7- Lift company should have there service centre in M.P.

8- Bidder should submit the technical specification as in annexure-I

9- Bidder must read the specification section 1.1 to 1.5 before bidding.

10- The work should be completed within 3 months (including rainy season) of issuing work order. If Contractor fail to complete the work in 3 months a penalty will be imposed. Amount of penalty will be decided by the department after completion of work.

11- Bidders are advised to visit the site before bidding(quoting rate)

12- Bidder should dismantle the old lift and remove all material and put them at a pre decided place in the same campus.

13- All documents submitted should by duly signed by authorized signatory.

14- From the date of installation of lift, maintenance will be done by the bidder for one year.

BIDDER SHOULD SUBMIT FOLLOWING DOCUMENTS:-

1. **Copy of manufactures/dealership certificate (envelope 'A')**
2. **Copy of last 5 year balance sheet certificate. (envelope 'A')**
3. **Copy of valid license for installation of passenger lift (envelope 'A')**
4. **Copy of TIN no., PAN no. and Service tax no. (envelope 'A')**
5. **Copy of ISO certificate. (envelope 'A')**
6. **Copy of experience certificate. (envelope 'A')**
7. **Annexure 'I' and any other technical features, details, catalogue etc complete.(envelope 'B')**

Date :- ----------
Place:- ----------

Authorized Sign
Authorized Name and address:-

Specifications for lifts
Section 1-1

General Instructions:-

1.0 Scope of work

1.1 The contractor's scope of work coves dismantling of old passenger lift carrying out all material of old lift and post it at a decided place in same campus including cleaning, repairing of Hoistway and supply, installation, commissioning and testing of the complete lift installation as specified. Make : - **JHONSON / KONE / OTIS / VENUS or equivalent**

2.0 Location

2.1 The works are to be carried out at HOTEL KALCHURI RESIDENCY JABALPUR . all electrical equipment and area shell be designs for an average ambient of 40 Deg. C with a peak of 45 Deg. C.

3.0 Power Supply

3.1 Power will be made available at 415/240 V. 3 phase 4 wire 50 HZ earthed neutral system and all equipment shall be suitable for the above power supply with a variation of +/- 12.5% (Twelve and half percent). Any equipment/component operating at other than the above power supply shall be provided with necessary transformer.

4.0 Drawings, specifications & deviations.

4.1 The drawings and specifications lay down minimum standards of equipment and workmanship. should the tender wise to depart from the provisions of the specifications and drawings either on account of manufacturing practice or for any other reasons, he should clearly draw attention in his tender to the proposed points of departures and submit such complete information, drawings and specifications as will enable the relative merits of the deviations to be fully appreciated. In the absence of any deviations, it will be deemed that the tender is fully satisfied with the intents of the specifications and drawing and their compliance with the statutory provisions and local codes. Any deviations or departures from the specifications not indicated shall be disregarded and shall not be binding on the contract.

4.2 In case of discrepancy between the drawings and specification, the tender shall assume the more stringent of the two and furnish his rates accordingly.

4.3 The contractor shall prepare fabrication and working drawing and all work shall be to approved working drawings. Approval of drawings does not relieve the contractor of his responsibility to meet with the intents of the specifications; all such drawings for approval shall be in duplicate.

4.4 Equipment data shall be submitted as per Annexure-I. Tenders not submitting data in full will do so at the risk of their tenders being evaluated with such information as may be available with the consultant.

5.0 Tools and spare parts

5.1 All tools, tackle, scaffolding and staging required for erection and assembly of the equipment and installation covered by the contract shall be obtained by the contractor himself. All other materials such as foundation bolts, nuts, etc. required for the installations of the plant shall also be supplied and included in the contract.

6.0 Testing & handing over

6.1 The contractor shall carry out tests on different equipment as specified in various sections in the presence of representatives of clients. Architects and consulting engineers in order to enable them to determine whether the plant, equipment and installation in the general comply with the specifications.

6.2 All equipment shall be tested after carrying out necessary adjustments and balancing to establish equipment ratings and all other design conditions. At least four sets of readings shall be taken for each item tested and submitted. Instruments required for testing shall be furnished by the contractor along with initial requirements of all consumables.

6.3 The plant shall be handed over after satisfactory testing along with four sets of documentation each consisting:

I. Detailed equipment data in the Performa approved by the consulting engineers/Employer.
II. Manufacture's maintenance and operating instructions.
III. Set of as-built drawings, showing plant layouts, piping, ducting etc.
IV. Approved test readings.
V. Certificates of approval from statutory or local authorities ** for the operation and maintenance of the installation and equipment, wherever such approval or certification is required.
VI. List of recommended spares.

** MP Licensing board (Elect) etc.

VII. Certificate from the contractors that they have cleared the site of all debris and litter caused by them during the construction.

6.4 Submission of the above documentation shall form a precondition for the final acceptance of the plant and installation and final payment.

7.0 Performance guarantee.

7.1 All equipment and the entire installation shall be guaranteed to yield the specified ratings and design conditions plus/minus 3% tolerance. Any equipment found short of the specified ratings by more than the allowable tolerance as determined by the test readings shall be rejected.

8.0 Defects Liability.

8.1 All equipment and the entire installation shall be guarantied against defective materials and workmanship for a period of 12 months reckoned after the plant is commissioned and handed over to the clients along with the 4 sets of completion documents and in case the testing of the plant is delayed for any reason, the defects liability shall extend for a minimum period of 6 months from the date the test readings are accepted. During the defects liability period, The contractor shall rectify, repair or replace defective parts and components free of cost except in the case of those which are due to normal wear and tear.

9.0 Statutory inspections.

9.1 The contractor shall be fully responsible for meeting all the statutory obligations and local inspectorates wherever applicable to the works carried out by them. The

contractor should prepare all working drawings and obtain approval of competent authorities ** and also have the

** MP licensing Board (Elect) etc.

Equipment and installation inspected and got. approved. All official fees will be paid by the clients directly against demand in writing from the appropriate authority and all other expenses for submission and approval of the various and relevant statutory/bodies shall be embodied in the tender prices.

10.0 Safely Precautions.

10.1 A component and authorized supervisor shall be on the site whenever the contractor's men are at work. The supervisor should ensure that all plant and machinery used on the site are rendered safe for working and meets with the Indian or international safety standards applicable for the use and operation of such machinery. The supervisor should also ensure that the workmen are supplied with and made to use safety appliances such as safety belts, life lines, helmets etc. The supervisor shall not leave the work site without permission from Employer's Project manager or his nominee.

10.2 Smoking shall not be encouraged on the site but altogether strictly prohibited in areas where combustible and inflammable goods/materials are stored or laying about.

10.3 Any hot job such as welding, soldering, gas cutting shall not be carried out without the permission of the Engineer-in-charge. Such jobs shall not be carried out where inflammable materials are stored or laying about. All electric connections shall be through adequately sized mechanically protected cables without any joints and with proper and adequate terminals. All power supplies shall be through properly. All power supplies shall be through properly rated fuses with isolating devices. No such hot jobs shall be carried out on holidays and without the presence of the contractor's supervisor.

10.4 It is entirely the responsibility of the contractor to practice the principles of safety first during the entire tenure of work with adequate insurance covering injury or death to workmen, loss by theft or damage to materials and property in position or not and third party.

10.5 The contractor should clear the site of all debris every day to avoid accidents. In case this is not done, the owners may engage necessary labour to maintain the cleanliness of the premises and removal of debris. ad debit all or part of the expenditure so incurred from the contractors.

SECTION: 1.2

ELEVATORS

1.0 Codes & standards

1.1 Design of elevator components, their installation and operation shall meet with

a) IS: 1860-1968 Code of practice for installation, operation and maintenance of electric passenger and goods lifts.

b) IS: 4666-1980 Specification for electric passenger and goods lifts.

c) Indian electricity Act. 1910 and Indian electricity rules 1956.

d) Local lift codes and rules.

e) Schedule of requirements-Appendix – I

1.2 All codes and standards referred herein mean the latest and any work to alternate codes or practice shall be specifically stipulated by the bidder citing the variations for acceptance by Architects/ consultants. It is the responsibility of the elevator contractor to obtain the necessary approvals and licenses from the local authority. Licensing fees be paid by the clients.

2.0 Hoist way

2.1 A clear hoist way without any openings or holes will be provided. The contractor shall use shear-type fasteners of adequate size to derive supports for all his requirement. Elevator supplier shall periodically inspect the hoist way during construction to ensure plumpness of the hoist way any other provisions required for elevator installation.

2.2 Car and counter weight buffers shall be of spring type for speeds up to 1.5 mps and hydraulic for higher speeds, with necessary supporting channels and struts. The buffers shall be capable of withstanding twice the fully-loaded car and two times the counter weight at contract speed+15% and the fully compressed buffer top shall be not less than 1.2m from the pit bottom.

2.3 Car and counter weight guides shall be machined rolled steel T-sections with smooth, sliding, tongued and grooved joints. The quite rails shall be continuous throughout the travel. The brackets for fixing the quite rails shall be of steel and spaced so that the deflection shall not exceed 5mm under normal operation.

2.4 Counter weights shall be made up of cast iron weights enclosed in a steel frame, counter weight shall be car-weight plus 40% of contract load or any other value providing smooth and economic operation. Counter weight shall be provided with necessary guards at the bottom of the hoist way for at least 1.8 m.

2.5 All hoist way materials shall be non-flammable and traveling cables shall be rendered flame resistant suitable cladding.

3.0 Elevator Entrances.

3.1 Entrances shall be centre opening or two speed or collapsible gates with jamb openings as shown under schedule of requirements. Entrances shall be complete with necessary frames, doors, sills, facia, toe guards, dust covers, headers, hanger, tracks, cover plates and all hardware.

3.2 Architrave shall be inside the scope of the elevator supplier and these will be provided through interior Designs.

3.3 Doors for elevators shall consist of hollow metal panels pressed out of 16 SWG stainless sheets adequately reinforced to form a rigid assembly and acoustically treated. So that noise intrusion to corridors is not more than 20 DB on all octave bands. Doors shall have safety restricting shoes.

3.4 Each door shall have integral hangers with balanced two point suspension. Main and up-thrust rollers shall have neoprene or any other suitable tyres and be mounted on factory lubricated ball bearings for smooth and noiseless operation. Roller tracks shall preferably be integral with the header assembly. Each door leaf shall be fitted with bottom Teflon/nylon stabilizers.

3.5 Frames, fascia, hanger and dust covers and toe guards shall be of not less than 14 SWG sheet steel. sills shall be of extruded aluminum with necessary non-slip groove. The entire door assembly shall be fire-rated for not less than 1.5 hrs.

3.6 Frames, doors and other exposed parts shall have a baked enamel finish of approved color. All steel members shall receive a suitable treatment for rust inhibition before receiving the after coats of primer, filler and paints. Unexposed structural members shall be provided with necessary shop coats and one field coat of paint. Final color and finish selection for the car rests with the Architects and no work shall be carried out until written instructions are issued.

4.0 Car

4.1 Car frame supporting the car platform and enclosure shall be made of structural steel with isolating rubber cushion. Platform deflection shall not exceed 3mm under maximum loading conditions. Car shall be complete with:

a. Frame structure.

b. Car body shall be fabricated from 16 SWG stainless steel panel with mirror finish with glass.

c. Wiring for lighting up to 600 watts incandescent/ fluorescent.

d. Ventilating fan concealed selected specially for noiseless operation.

e. Stainless steel car operating panel.

f. Non-slipping extruded aluminum threshold plate.

g. Provision for interphone with a cabinet for a handset and 3 pair music cable.

h. Emergency lighting with necessary battery for 30 minutes.

i. An overload feature which defeats the operating circuit when the car load reaches 110 % of contract load.

4.2 The Car platform shall be constructed of structural steel frame with double layer of teak wood flooring carried in the frame. The platform shall be equipped with a suitable threshold plate. The wooden platform shall consist of a top layer of 20 mm tongued and grooved teak wood and a bottom layer of 45 mm thick teak wood. The underside of the platform shall be covered with sheet steel. The platform shall be covered with heavy duty

Bhor vinyle tiles of approved design and color.

The complete platform shall rest on rubber pads of suitable density supported on an auxiliary steel frame which shall be fastened to the car frame to provide sound isolation.

This arrangement shall form an isolating cushion between the car and the steel frame.

The complete platform shall be securely fastened to the car frame to relieve the car enclosure of all stresses. It shall be braced by four adjustable iron stay rods and securely fixed to the channel uptight of the car frame.

4.3. Car size shall be not less than the size indicated. The car enclosure shall be of stainless steel with glass. Interior finishes including the lighting is also the scope of work of elevator contractor. The car Design shall provide for the minimum weight of interior wall and wall finishes as specified in the schedule of requirements. Similarly, the architraves shall be designed and provided by other. In the case of service elevators the floor and wall finishes shall be as shown in the schedule of requirements.

4.4 The car operating panel shall be stainless steel flush type and shall have the following devices.

a. Hall buttons corresponding to the landings serviced.
b. Up and down direction indicators.
c. Emergency stop switch.
d. Alarm button connected to an alarm bell situated on the ground floor complete with wiring.
e. Key-operated selector switch for (‘Attendant’ and ‘ Automatic’ operation)
f. Door ‘open’ and ‘close’ buttons.
g. Fan switches.
h. Key operated non-stop emergency switch.

All buttons shall be touch type.

4.5 An alpha-numeric car position indicator shall be provided in each car. This should be digital type.

4.6 Car doors shall be centre opening hollow metal doors or as specified in the schedule of requirements. Door construction suspension etc. shall be as specified for entrance Doors.

4.7 A key operated switch with up-down buttons and a 100 W lamp shall be provided for testing on top of the car.

5.0 Door Operator for automatic doors.

5.1 Door operator shall be electric driven and shall work through a low speed gear reducer. Operator shall provide smooth. Quiet and positive operation of the car and hoist way doors simultaneously driving them to fully opened or fully closed positions. Doors shall be smoothly brought to rest at the end of travel by a rotary type of hydraulic cushioning device and also through drive motor torque reduction. An adjustable timing device shall hold the door open for a set time interval after a stop is made except when the photo-cell monitor over-rides. A photo cell monitor shall be incorporated to initiate door closing 2 seconds after last beam interruption.

5.2 Door operator shall have the following safety interlocks:

a. Only the door at the landing where the car is stopping can be opened and no other hoist way door.

b. Car cannot move when the car or hoist way door is open.

c. During emergencies car and hoist way doors shall be capable of being opened from outside.

5.3 For other safety devices refer section on ‘Safety Devices’.

6.0 Signals

6.1 Signals shall be provided as shown in schedule of requirements.

6.2 Hall buttons shall have car direction lights which will remain illuminated when the call is registered and shall remain so. until the call is answered.

6.3 Car position indicator at each landing shall be incorporated for each elevator. These should be LFD or any other electronic display with up-down arrows and a gong.

6.4 All fixtures shall be of stainless steel and be approved by the Architect.

7.0 Ropes & sheaves

7.1 The suspension ropes shall be of special acid quality steel or high grade traction steel of suitable size. Construction and number specially designed for lift duty, having a factor of safety at least equal to that specified in IS: 2365-1977 or approved equivalent standard. Approved means of attaching the ropes to the car and counter weigh shall be provided for each rope and all ropes anchored to a winding drum shall have not less than one complete turn of the rope on the winding drum when extreme limits of travel are reached.

7.2 Governor ropes shall be of steel.

7.3 Tests shall be carried out at the manufactures works to ascertain that the ropes comply with the appropriate code ‘of standard and test certificates shall be submitted to the consultants for approval prior to shipment.

7.4 The traction sheave shall be made from close grained cast iron of the proper hardness accurately grooved for the proper number and size of hoisting ropes and shall be designed to give constant traction and long rope life. All deflector sheaves necessary to obtain proper lead of the ropes shall be provided and shall have similar construction to the extraction sheaves.

7.5 A guard extending below the machine level shall be provided underneath deflector and secondary sheaves.

8.0 Elevator Machine

8.1 AC drive motors shall be selected for high starting torque and low starting current. All drive motors shall be rated for not less than 150 starts per hour.

8.2 The motor shall be thirstier controlled with capability to run at the full asynchronous motor speed irrespective of car load and running direction. The drive system shall operate on electronically computed acceleration and deceleration reference achieving maximum interflow speeds while providing consistently smooth ride and accurate stopping. The starting ‘current shall be not more than 2.5 times the normal current. The processor shall control the drive motor speed through pre-calculated acceleration and deceleration through distance dependant speed reference to achieve the specified leveling criteria. The controller should achieve maximum interflow speeds.

8.3 A spring applied and electrically released brake assembly with non asbestos lining shall be provided on the drive ‘shaft. A cranking device for manual operation of elevator car shall also be provided to meet emergencies together with manual break release. The manual break release and cranking device upon application shall automatically ‘interrupt power supply.

8.4 A micro-leveling feature shall be incorporated. Micro leveling shall correct for over travel, under travel and rope stretch, within its zone independently of the operating device. Car leveling at each landing shall not exceed +/- 4mm with or without load and down or upward travel.

9.0 Controller

9.1 The lift controller shall be of the vertical, totally, enclosed cubical type constructed of steel with hinged doors on the front and screwed panels or hinged doors on the back, giving easy access to all components inside the controller. The cubical enclosures shall be such as not to pose any danger of shock or injury to persons. The cubical shall be well ventilated by means of louvers or other approved method. Such that the temperature inside never exceeds that safe temperature limit of the components and the same time operate comfortably at the machine room ambient temperature.

9.2 The controller shall have a micro-processor with solid state switching devices sequenced and interlocked. All operations shall be software controlled with facility for interfacing with the building fire alarm system and building management system. The controller shall operate within the supply voltage fluctuations specified and shall incorporate necessary impute voltage stabilizers. The system shall have proven reliability.

9.3 The controller shall provide protection against the following:
a. No-voltage or sustained under voltage.
b. Over current in any component
c. Phase reversal of the power supply
d. Single phasing.

9.4 The controller shall be arranged to cut-off the power supply, apply the brake and bring the car to rest in the event any of the above failures occur.

9.5 Remote indicating panel shall be provided.

10.0 Safety Devices

10.1 An automatic stopping device shall stop the car at the terminal landing independent of the regular operating device. In the event the car travels beyond the zone of the above stopping device, the final limit switches in the hoist way should arrange to stop the car and also prevent normal operation until reset.

10.2 A mechanical safety shall be mounted on the car frame and should actuate the fly ball governor area which shall cause the following:
a. Disconnect power to elevator machine.
b. Apply the main brake.
c. Apply the guide rail safety jaws.
The safety gear shall be manually reset.

10.3 Retractable safety shoes shall be provided on the car and hoist way doors together with an infra red scanner.

10.4 For car and entrance door safety interlocks refer section on ‘Door operator for automatic doors’.

10.5 An emergency stop switch in the elevator pit shall be provided to stop the car.

SECTION: 1.3
ELECTRIC WIRING

1.0 Scope of work

1.1 Power will be supplied in the machine room with a switch fuse until/circuit breaker for each of the elevators. All further wiring to motors and controllers, wiring to hall buttons, alarm bell, car position indicators, and emergency selector switch shall be provided by the elevator contractor. Necessary auxiliary switches and fuses for separating lighting and control circuit from main power feeder shall be provided as shown on drawings.

2.0 **Standards & codes.**

2.1 All electrical work carried out shall conform to the Indian standard codes of practice and all equipment, drive motors etc. Shall meet with the relevant Indian standards.

2.2 All electrically operated equipment shall be so designed that it will continue to function without damage to itself or otherwise if the voltage and frequency vary within the following tolerances:

Voltage : Plus or minus 10 percent
Frequency : Plus or minus three percent

3.0 Wiring

3.1 All wires and cables shall be insulated with polyvinyl chloride based insulation rendered flame retardant and rated for 1100 volt service and suitable for use in dry and wet locations. Makes of wires and cables shall be subject to the approval of the Architects/consultants before use.

3.2 Conductors shall be stranded copper for traveling cable only.

3.3 Power and control circuits shall be in separate cables or run inside separate armored heavy gauge rigid black enameled conduits. Wires and cables subject to movement and abrasion shall be protected by flexible galvanized steel conduit.

3.4 Traveling cables shall be best grades for the service and shall originate at steel junction boxes in hoist way and end at steel junction boxes on the car, hung so that the proper size loop may be obtained. They shall have a fire and moisture/resistant outer covering and contain a steel supporting strand. Traveling cables shall be suitably suspended to relieve strains in individual conductors. Traveling cables shall be provided for telephone, signals, controls, lights and fans of lifts.

SECTION: 1.4
ERECTION COMMISSIONING & TESTING

1.0 Erection

1.1 The elevator contractor should furnish detailed drawings showing their requirements of cutouts, holes and beams, before the machine room floor is cast. In case no such details become available, the machine room floor will be cast and all such openings shall be made by the elevator contractor at his own cost.

1.2 All structural steel required for mounting the machinery's controllers etc should form part of elevator supplier's scope of work. This includes all supporting beams, hoisting beam etc. All minor builder's work shall also be included in the scope of work and this shall include chasing of floors, walls, fixing of hoist way brackets etc.

1.3 Elevator machine shall be mounted on suitable vibration isolation pads to prevent machine vibration being transmitted to the structure.

1.4 All wiring inside the machine room shall be neatly done in conduit or wire race. The elevator machine, motor alternator, controller and the car shall be double earthed in accordance with IS:3043-1966. The main earth will be brought to the main panel. Suitable guards for counter weights and deflectors shall be provided.

1.5 Entire insulation shall conform to the requirements of local lift inspectorate and necessary approvals shall be obtained from the statutory authorities for the use of the elevator.

1.6 All exposed elevator metal work shall be given one shop coat of paint and one field coat after installation, testing and commissioning.

2.0 Commissioning and Testing

2.1 The precommissioning checks shall among others, consist of the following:

1. Insulation resistance testing of drive motors and alternator with 1000 V meager.
2. Insulation resistance testing of cabling and wiring.
3. Proving testing on various interlocks and safety devices.

All results of the precommissioning checks shall be recorded and four copies submitted to the consultants.

2.2 All contractor load test under the supervision of the local authority and in the presences of Architects/consultant shall be carried out before each elevator is put in regulator service. during the test, the brakes, limit switches, buffers, car safety devices shall be caused to function with the contract load in the elevator and the operation of various safety devices shall be recorded.

2.3 The leveling gear shall be tested on-load and off-load to ensure car leveling within limits.

2.4 The elevator must be tested for contract speed with the full contract load.

2.5 The elevator shall be accepted upon satisfactory completion of the above tests.

SECTION: 1.5
MAINTENANCE

1.0 Defects liability period

1.1 During the defects liability period the contractor shall furnish services of inspection and maintenance for the equipment installed under this contract for a period of twelve months from the date of acceptance of the complete installation. The maintenance during the above period shall be free of cost and shall cover inspection of equipment, carrying out necessary adjustments, oiling, greasing except replacement of parts due to misuse or accidents or negligence of others. The periodicity of such inspection maintenance services shall be not less than once a month. The above maintenance schedule is over and above break-down calls. A record of such maintenance shall be maintained.

ANNEXURE-I

EQUIPMENT DATA

(To be filled in separately by the contractor for each elevator)

Particulars

1. Manufacture
2. Capacity (kg) --------- 408kg
3. Max. Passengers (No) ----- 6
4. Speed (m/s)
5. Motor
    a. Type and make
    b. Rating (HP)
    c. Voltage (V)
    d. Speed (rpm)
    e. Insulation class
    f. Starting torque (kgm)
    g. (I) Geared/ Gearless
       (II) Gear Ratio
6. Roping
    a. Number of ropes
    b. Make
    c. Size
    d. Roping ratio
    e. Factor of safety
7. Guide rail size for car
8. Car weight
9. Counter weight (kg)
10. Buffers
11. Controller
    a. Type
    b. Make
12. Guide rail size for counter weight