

From,  
Director,  
State Urban Development Agency,  
UP, Lucknow

To,  
Central Farm machinery Testing and  
Training Institute. (CFMT&TI)  
Tractor Nagar, Budni, Sehore,  
M.P. -466445

Letter No.- 4083/04/सात/रि.पो./2014-15 Date-17-01-2015

Sub- Testing of E-Rickshaws –regarding

As you are aware, the Government of U.P. is in the process of providing E-Rickshaws to cycle rickshaw pullers of urban areas of U.P. state. A Technical Committee constituted to finalise the specifications of the E-Rickshaws in consultation with IIT Delhi, has finalised the following brief specifications.

“Four-Seater E-Rickshaw with a maximum loading capacity of 380 kg (four passengers, driver and 40 kg luggage), maximum speed of 20 to 25 kmph, minimum range of 80 km, minimum speed of 5 kmph at a gradient of 3° and with starting and moving capability at 7° gradient, driven by a brushless AC or DC motor of output power 850 W or above but not more than 2000 W, driven from a EV grade battery of 100 Ah, conforming to the Ministry of Road Transport and Highways GSR No. 709 (E) dated 8 October 2014 and Notification No. S.O. 2590 (E) dated 8 October 2014 and also the additional tests specified elsewhere in this document”.

The detailed Specifications and the tests required to be done are given below:

**A. Specifications of the Four-Seater E-Rickshaw:**

Sl. No.	Description	Specifications	Remarks/Reference Standards/Test Standards
1	Type of E-Rickshaw	Fully Electric, Battery Operated	Four-Seater E-Rickshaw



13	Battery Capacity	100 Ah or more	
14	Battery Type	Lead-acid or better,  EV grade, tubular deep discharge and high cycle life	
15	Battery Charger	220/230 V nominal Input Voltage, high efficiency	
16	Overall Efficiency of the Electric Rickshaw	75% or more	To be tested at full load, with maximum speed for the full range  <b>AIS-039</b>
17	Gradeability	3°gradient – Start and move with a minimum speed of 5 kmph or above  7°gradient - Ability to start and move	To be tested at full load.  <b>Procedure as per AIS-003</b>
18	Ground Clearance	180 mm or more	<b>IS: 9435</b>
19	Overall Size of the E-Rickshaw	Length < 2.8 m  Width < 1 m  Height < 1.8 m	
20	Windshield	Glass windshield with wiper motor	Components Compliance to be submitted to testing agency
21	Brakes	Parking and service brake, safe	



		and efficient	
22	Instrument Panel	Speedometer, and battery charge indicator	Components Compliance for the speedometer to be submitted to testing agency
23	Roof	fiber glass or a combination of fiber glass and good quality metal	
24	Controls	Start/Stop switch and indicators	
25	Tyres	3 - 12" minimum	

**B. Fitness, Compliance & Test Certificates to be submitted for the E-Rickshaw:**

1. Fitness/Compliance Tests as per the Ministry of Road Transport and Highways GSR No. 709 (E) dated 8 October 2014.
2. Compliance Certificate for the following tests to be carried out as per the Safety Standards for E-Rickshaws as per the Ministry of Road Transport and Highways Notification No. S.O. 2590 (E) dated 8 October 2014.

Sl. No.	Parts/Components/Assemblies	Test Standards
1	Automotive lamps used in motor vehicles for the following applications: (i) Head Lights Main and Dip (ii) Parking Light (iii) Direction Indicator Lamp (iv) Tail Lamp	AIS-034/2004



	(v) Reversing Lamp (vi) Stop Lamp (vii) Rear Registration Mark Illuminating Lamp	
2	Wheel rims	AIS-073/2007
3	(a) Installation requirement for lighting and light signaling devices  (b) Performance requirement of lighting, light signaling devices	AIS-009/2001  AIS-012/2004  AIS-010/2004
4	The requirements for construction and functional safety of battery operated vehicles	AIS-038/2003
5	The measurement of net power and the maximum thirty minute power and speed for battery operated vehicles	AIS-041/2003
6	Traction batteries used in battery operated vehicles	AIS-048/2009
7	Requirement of handholds	AIS-046/2009

**C. Compliance/Test Certificates for the following additional tests to be carried out for the E-Rickshaw:**

Sl. No.	Parts/Components/Assemblies/Performance	Test Standards
1	Range	AIS-040
2	Overall Efficiency	AIS-039
3	Gradeability	Procedure as



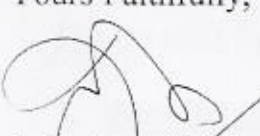
		per AIS-003
4	Ground Clearance	IS-9435

We had a pre-bid conference today at the SUDA office at Lucknow with the probable suppliers/vendors. They have been advised to approach the Government of India approved testing agencies to get the E-Rickshaws tested as per the above test requirements. They may be approaching you for the same. Kindly take the testing of these E-Rickshaws on priority as the Government of U.P. would like to distribute these E-Rickshaws during this financial year itself in the first phase.

It may be noted that apart from the tests required as per the Ministry of Road Transport and Highways GSR No. 709 (E) dated 8 October 2014 and Notification No. S.O. 2590 (E) dated 8 October 2014, we have requested them to do four additional tests to ensure quality and uniformity in the E-Rickshaws being offered by the suppliers/vendors. These are listed separately above in Item C. above. Apart from this, the suppliers/vendors are required to submit to you the Components Compliance for the windshield and speedometer as per the Sl. Nos. 20 and 22 respectively as given in the Table in Item. We would also like to know does this changes has any impact on E-Rickshaw classifications as per G.O. and also is it feasible to introduce this test in the present E-Rickshaw category.

We anticipate your full cooperation in this matter on public interest.

Yours Faithfully,

  
Sriprakash Singh,  
Director, SUDA

17/10/2015