

TEST REPORT

Test according to the requirements of the international union of urban transport (UITP) relating to
UITP PROJECT E-SORT 1/2/3

Sample Name: Pure electric city buses

Sample Model: OCEÂNTIA BLUECITY 7 / HYK6701GBEV

Client: OCEÂNTIA, Lda / Heng Yang Intelligent
Electric Refitting Vehicle

Test Category: Entrusting test

Sending date: 2023 年 9 月 1 日

Test Center of China Automotive Engineering Research Institute Co., Ltd



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P.C.:	401122

Client:	OCEÂNTIA, Lda / Heng Yang Intelligent Electric Refitting Vehicle
Add:	/Rua Zambeze, N8 – 1Esq / No. 1, Xinxing East Road, Yanfeng District, Hengyang City, Hunan Province (eastern area of Baishazhou Industrial Park)
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P.C.:	1990-069 Lisbon – Portugal / 421000

Test Report

Sample name	Pure electric city buses	Sample model	BLUECITY 7 / HYK6701GBEV
		Trademark	OCEANTIA / YANCHENG
Client	Heng Yang Intelligent Electric Refitting Vehicle/OCEANTIA, Lda	Test category	Entrusting test
Manufacturer	Heng Yang Intelligent Electric Refitting Vehicle	Sample grade	---
Delivery location	Test Center of China Automotive Engineering Research Institute Co., Ltd	Date of receipt	2023.7.02
Sample size	1	Deliverer	Xinping Wang
Sampling agency	---	Sampler	---
Lot size	---	Original number or Date of manufacture	2023.06
Test basis	UITP PROJECT E-SORT Cycles for electric vehicles(edition 2014)		
Test items	UITP PROJECT E-SORT 1/2/3		
Test conclusion	Through test, The test results of the samples of OCEANTIA BLUECITY 7 / HYK6701GBEV meet the technical requirements of <i>Requirements and test results</i>'.  Issue date: 2023年9月1日		
Remark	---		

Approved by: 李军祥

Reviewed by: 胡强

Tested by: 张汝林

Test Report

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1. ATTACHMENTS

N/A

2. GENERAL INFORMATION

1.	Make (trade name of manufacturer)	OCEÂNTIA / Heng Yang Intelligent Electric Refitting Vehicle
2.	Type	Pure electric city buses
3.	Commercial name(s)	BLUECITY 7 / HYK6701GBEV
4.	Means of identification of type, if marked on the vehicle	N/A
5.	Location of that marking	N/A
6.	Category of vehicle	M ₃
7.	Company name and address of manufacturer	Heng Yang Intelligent Electric Refitting Vehicle
8.	Name(s) and address(es) of assembly plant(s)	No. 1, Xinxing East Road, Yanfeng District, Hengyang City, Hunan Province (eastern area of Baishazhou Industrial Park)
9.	Name and address of the manufacturer's representative (if any)	N/A

Date : 26.07.2023
Location : DAZU CHONGQING
Test expert : Runqiu Zhang

3. REASONS FOR EXTENSION

N/A

4. TEST EQUIPMENT AND CONDITION

4.1. Equipment name		ID Number
Velocity:	:	RACELOGIC, VBOX 3i-V4, SN 043213
Power analyzer:		Hioki, 3390, SN 091206729
Vehicle weight:		Changzhou hongli, SCS-60, SN A1409409

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Tire pressure:		AUTO TOOLS, SN 1828/JB-Y-016
Weather station	:	Kestrel 5500, SN 2269456

5. IDENTIFICATION OF TEST SAMPLE

VIN : LHUG6CNB9PH000151
Commercial name : BLUECITY 7 / HYK6701GBEV
Vehicle category : M₃



Item		Value	Unit
Vehicle type		Pure electric city buses	
Length		7000	m
Width		2300	m
Height		3100	m
Wheelbase		4100	m
Empty weight	1st axle	2820	kg
	2nd axle	4541	
	Total	7361	
Mileage		612	km

Engine manufacturer : Dana (Beijing) Electric Motor Co. Ltd.
Engine code : TZ368XSPE180WH-E

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Working principle : BEV

Item	Value	Unit	At
Engine orientation	longitudinal	-	-
Engine calibration	-	-	-
Engine capacity	-	cc	-
Maximum power	170	kW	360 VDC
Maximum torque	1900	Nm	450 A
Driving mode of engine ventilator	-		

Gearbox :

Item	Value
Manufacturer and type	DDAC gearbox for electric vehicle
Program used	-
Torque converter (Kn / Stall Torque)	-

Tyres :

Item	Value	Unit
Manufacturer and type	MICHELIN	-
Dimensions	215/75R17.5	-
Front axle nominal pressure	102	Psi
Rear axle nominal pressure	102	Psi
Pattern depth of new tyres	10.6	mm
Actual pattern depth measured	MICHELIN	mm

Gearbox lubricant :

Item	Value
Type	GL-5 85W-90
SAE Grade	80W-90
Other features	-

Low voltage batteries :

Item	Value	Unit
Type	Lead Acid	-
Number	2	Pieces
Nominal unit voltage	12V	V

Miscellaneous equipment :

Item	Value
Number of doors	1
ABS/ASR	1
Retarder	-
Steering pump	QUANXING MACHINING
Engine starter	-
Alternator	-
Air compressor	NAILI
A/C compressor	Shangdong Longertek Technology Co., Ltd.
Other	-

Item	Test Weight
Front Axle (kg)	3607
Rear Axle (kg)	5135
Total (kg)	8742

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6. REQUIREMENTS AND TEST RESULTS

1. Street Conditions

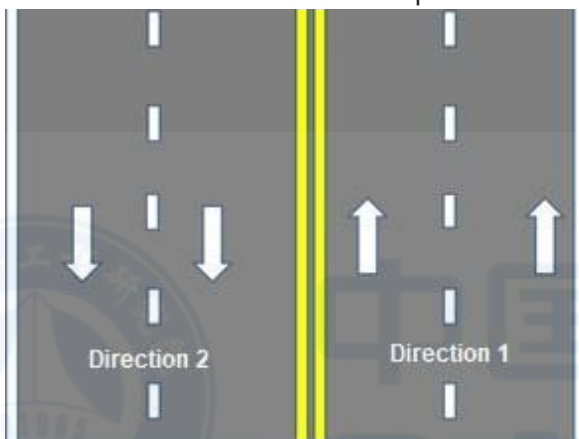
1.1 The track chosen will be in good condition with no potholes, raised sections or loose surface impediments and the test track surface shall be dry.

In conformity

Item	Value	Unit
State of track surface	Dry	
Max. longitudinal gradient	+/- 0,2	%
Track altitude	10	m
Min. radius	--	m
Track length	2200	m
Place of test	Performance pavement (Chongqing Dazu)	N/A

1.2 The track will be horizontal with a max. gradient of 1.5 %. Tests must be carried out in both directions. The results in both directions must be presented as an average.

In conformity



1.3 The altitude of the track is closely interlinked with the atmospheric pressure.

In conformity

1.4 The test is normally performed on a straight track.

In conformity

1.5 The track must be at least long enough to perform one full cycle.

In conformity

2. Weather Conditions

2.1 Wind speed will be below 3 m/s. Short wind gusts of up to 8 m/s are acceptable.

In conformity

2.2 Wind direction is not relevant since tests must be carried out in both directions. The results in both directions must be presented as an average.

In conformity

2.3 External temperature will range between 0 and 30° C. The actual test temperature will be mentioned in the test protocol (sheet 3). Later a possible confirmation test will be performed within a +/- 5°C margin compared to this reference temperature.

In conformity

2.4 Humidity level will be below 95 %.

In conformity

2.5 The acceptable pressure is as described in DIN 70030-1, ambient temperature and pressure are measured. These data enables one to calculate the air density according to a given formula. The result must be within a +/- 7.5% margin of the reference pressure of 1 bar.

In conformity

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Item	Value		Unit
Load factor CL (load)	$CL = 116.19 \times (L - 1.20) \times W$	1550.0	kg

SORT Weight

Item	Value		Unit
Empty weight	7130		kg
Optional equipment (1)	0		kg
Other factors (2) (External destination displays excluding driver and measuring equipment)	247		kg
Load=CL-(1)-(2)	1303		kg
Empty weight + load	8433		kg
Measured weight (Total weight at the test without driver)	8680		kg

Fuel N/A

Rechargeable Electric Energy Storage Systems (REESS)

Parameter	
Types	180 battery cells in series, each 3.22 V and 302Ah
Nominal tension	579.6 V
Power	175.03kWh
Weight	1085 Kg
Capacity C3	302 Ah
Minimum SOC level	0%
Warning SOC level	8%
Maximum SOC level	100%
REESS temperature before test	26.6
REESS temperature after test	30.5

Electric motors

Parameter	
Types	TZ368XSPE180WH-E
Number	1
Power	101kw (额定) /170kw (峰值)
Weight	177 kg

Parameter of the test area

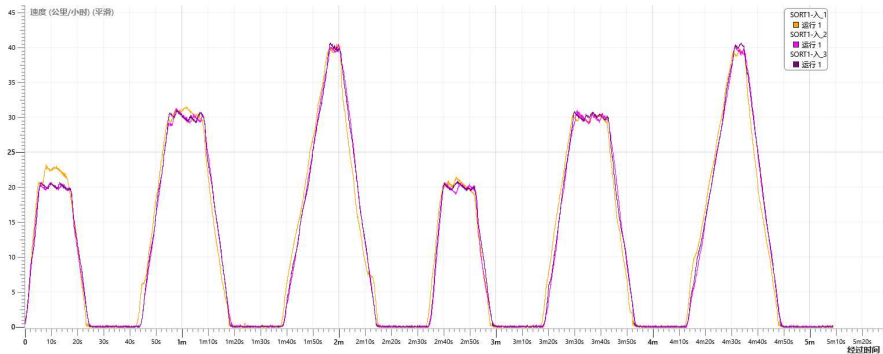
Test course:	Longitudinal inclination beyond the regulation limit with the track length > 2000 m	
	Start of testing	End of testing
Temperature of air:	28.3 °C	27.3 °C
Velocity of wind:	0.8 m/s	0 m/s
Relative air humidity:	87.2 %	84.4 %
Barometric pressure:	962.9 hPa	963.8 hPa

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Test cycle
SORT 1:

SORT 1-Direction 1

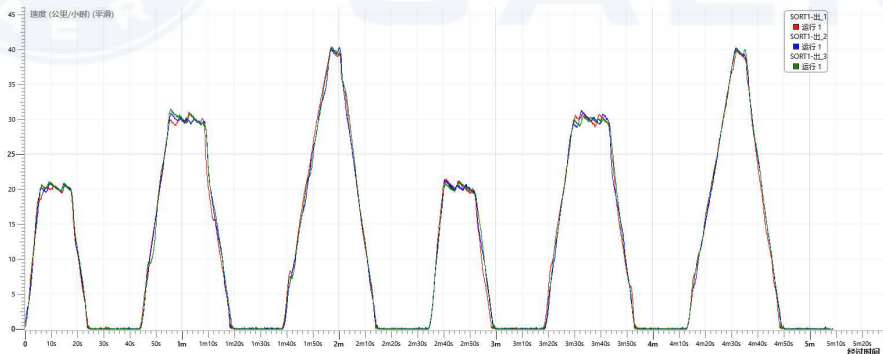
No.	Distance(m)	Time(s)	Speed(km/h)	Power(kw.h)	Fuel consumption(kw.h/100km)
1	1044.57	308.6	12.19	0.497	47.563
3	1032.62	308.6	12.05	0.493	47.729
5	1039.57	308.6	12.13	0.495	47.619



Speed vs time graph at direction 1

SORT 1-Direction 2

No.	Distance(m)	Time(s)	Speed(km/h)	Power(kw.h)	Fuel consumption(kw.h/100km)
2	1028.57	308.6	12.00	0.513	49.407
4	1028.68	308.6	12.00	0.505	49.120
6	1038.73	308.6	12.12	0.501	48.696



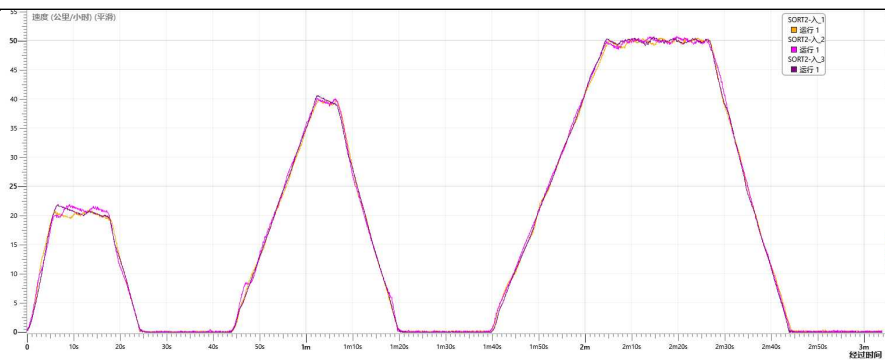
Speed vs time graph at direction 2

SORT 2:

SORT 2-Direction 1

No.	Distance(m)	Time(s)	Speed(km/h)	Power(kw.h)	Fuel consumption(kw.h/100km)
1	917.38	183.85	17.96	0.430	46.827
3	924.05	183.85	18.09	0.428	46.349
5	917.67	183.85	17.97	0.427	46.596

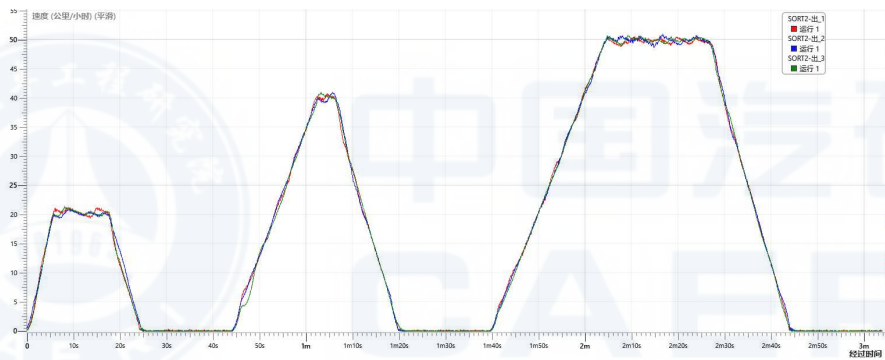
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Speed vs time graph at direction 1

SORT 2-Direction 2

No.	Distance(m)	Time(s)	Speed(km/h)	Power(kw.h)	Fuel consumption(kw.h/100km)
2	916.85	183.85	17.95	0.443	48.305
4	920.59	183.85	18.03	0.441	47.953
6	914.04	183.85	17.90	0.441	48.218

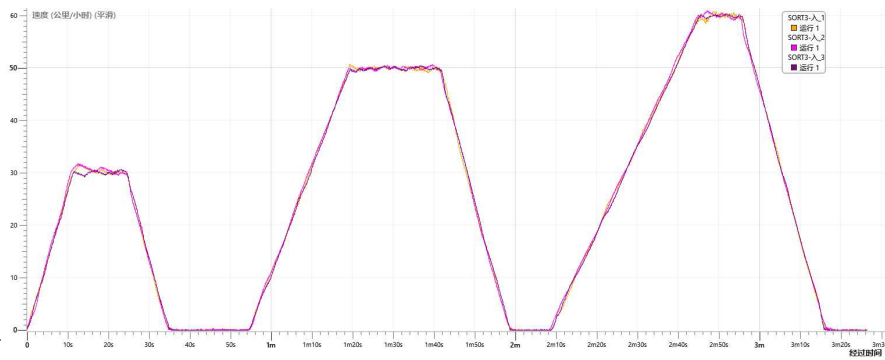


Speed vs time graph at direction 2

SORT 3:

SORT 3-Direction 1

No.	Distance(m)	Time(s)	Speed(km/h)	Power(kw.h)	Fuel consumption(kw.h/100km)
1	1443.84	206.3	25.20	0.695	48.138
3	1449.86	206.3	25.30	0.691	47.665
5	1441.84	206.3	25.16	0.691	47.941

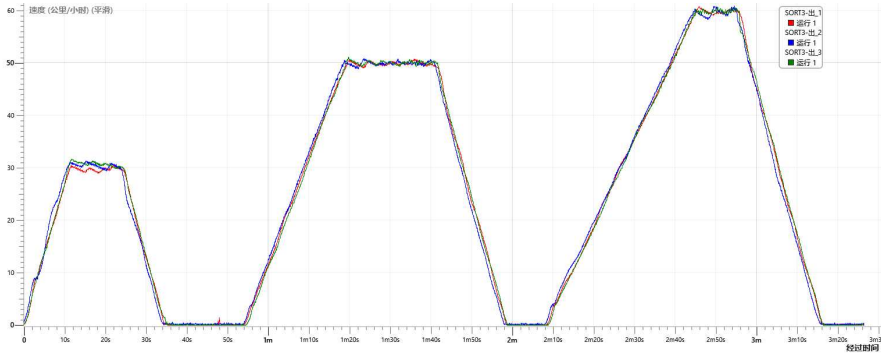


Speed vs time graph at direction 1

SORT 3-Direction 2

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No.	Distance(m)	Time(s)	Speed(km/h)	Power(kw.h)	Fuel consumption(kw.h/100km)
2	1446.35	206.3	25.24	0.729	50.405
4	1443.24	206.3	25.18	0.726	50.199
6	1447.65	206.3	25.26	0.719	49.643



Speed vs time graph at direction 2

Usable Energy

Item	Definition	Value	Unit
EGMax	Energy from the grid	182.897	kW.h
ECMax	Energy from the charger	171.49	kW.h
-	Nominal charging power	124.28	kW
-	Charge duration (maximum 6 hours)	1 hour and 24 minutes	h

Energy Consumption

	SORT 1	SORT 2	SORT 3
di [m]:	1038.9/1032.0	919.7/917.2	1445.2/1445.7
Ei [kW.h]:	0.495/0.507	0.428/0.442	0.692/0.725
Battery pack outside temperature at the beginning of the test [°C]:	25~32	25~32	25~32
Battery pack outside temperature at the end of the test [°C]:	25~32	25~32	25~32
Ci [kW.h/100 km]:	48.355	47.375	49.00
Di Max [km]:	354.64	361.99	350.00

7. Test Team

Tester: Runqiu Zhang
Test Leader: Ruling Zhang
Report Editor: Runqiu Zhang
Report Proofreader: Rongwei Liu

-----End of inspection report-----