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COSBER

COSBER EV Inspection Solution

Smart Integration, Global Innovation



01	Company Profile
02	EV Current Situation and Development in China
03	EV Testing Standard in China
04	COSBER EV Electrical Safety Charging Test Terminal
05	Other Test Items Summary

1. COSBER Profile —Leading Equipment Manufacture



Advanced Technology

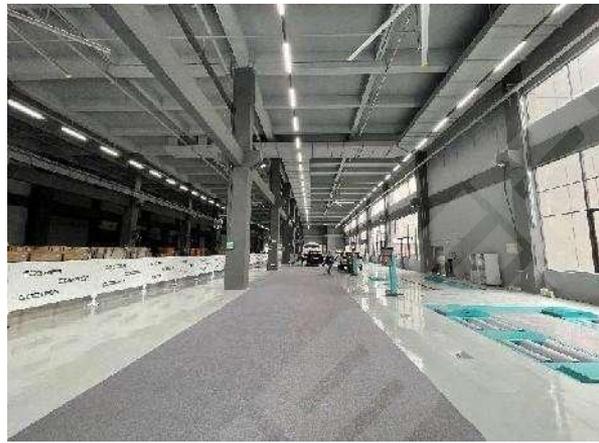
Domestically leading and internationally advanced technical level Technical level and core technical indicators at each level are in an industry-leading position.

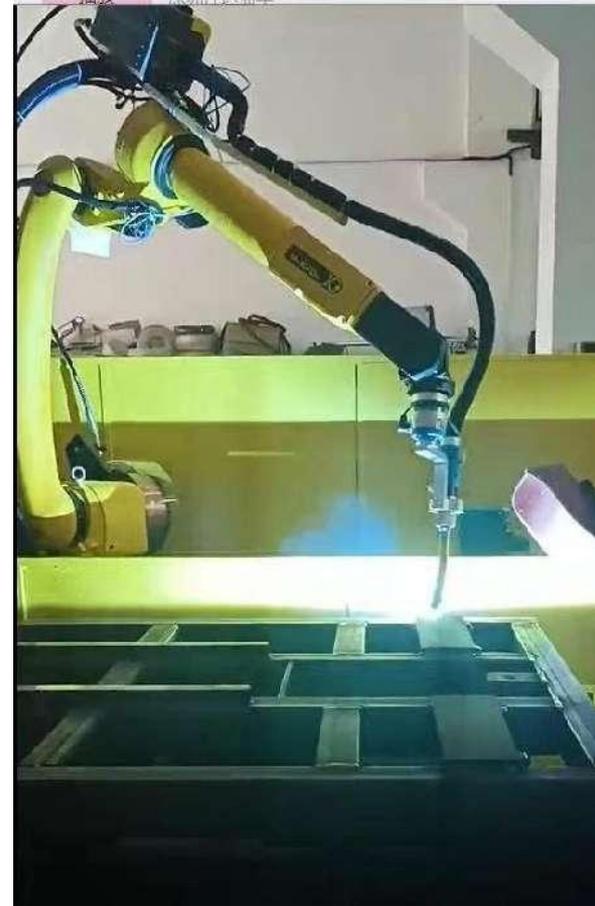


Full Supply Chain

Domestically leading and internationally advanced intelligent production plants have launched a full range of automotive testing products, Diversified new energy testing equipment.











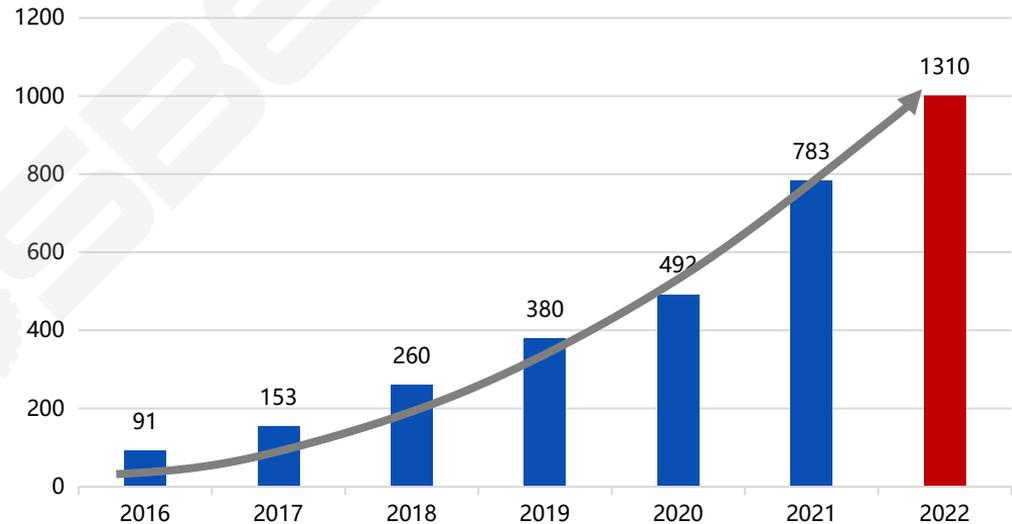


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1.EV Large Quantity and Sharp Increasing Future

-By the end of 2022, China has 13.1 million new energy vehicles, of which 10.45 million (EV).

- And the quantity is sharply increasing every month in Year 2023.





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1. Regulation and law is required to form in and implement.



GB/T 35179 – 2020X (to issue end of 2023)
Bench Test methods for Safe ride performance of in-use Electric Vehicles



GB 38900 – 2020 (Mandatory 01/01/2021)
Items and methods for safety technology inspection of Motor Vehicles.

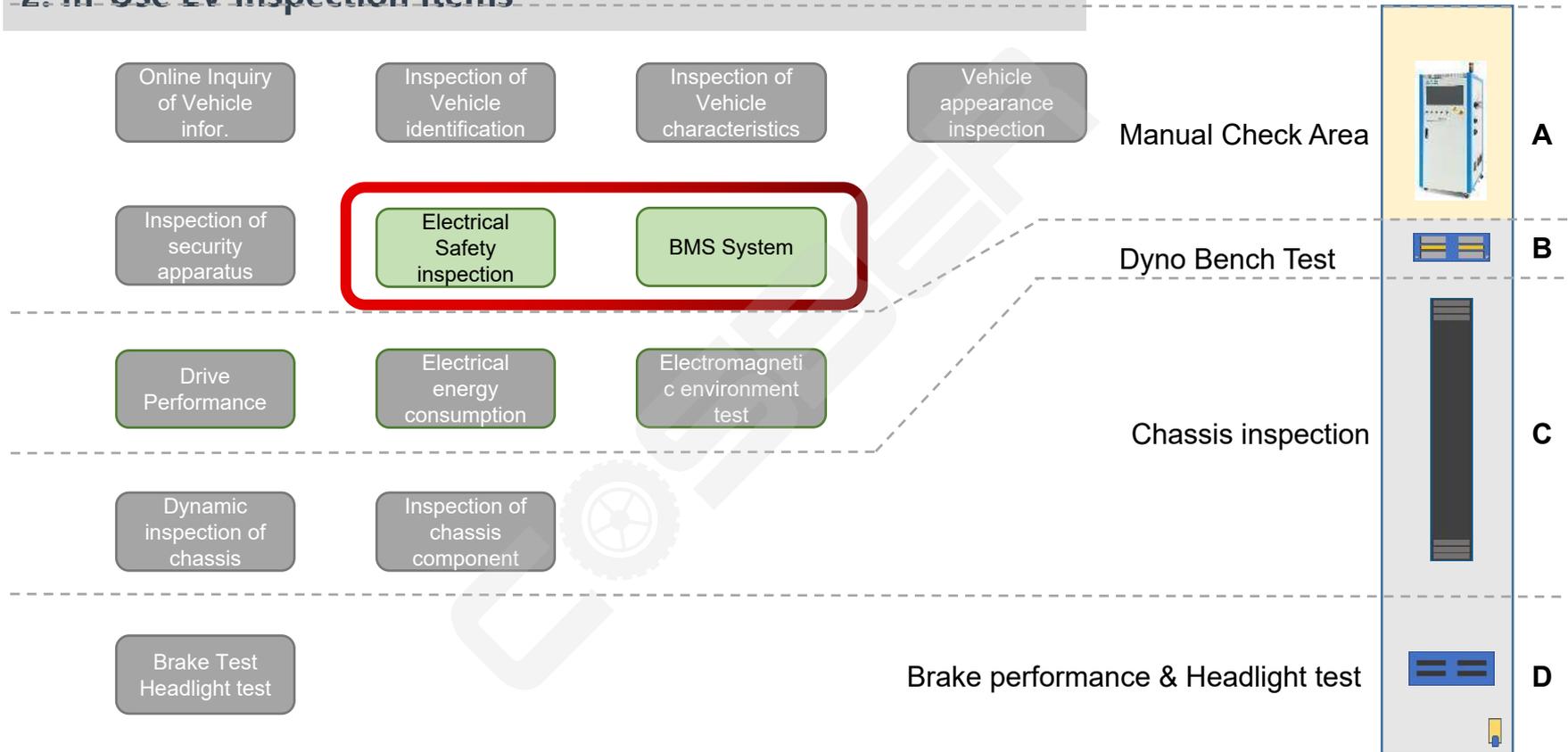
(Passenger car PTI interval: 6 years - 8 -10-11-12 years...)



GB/T 32960-2016 Technical specifications of Remote Service and Management system for Electric Vehicles

- Part 1 General principle series standards 3
- Part I: General Provisions
- Part II: On-board Terminal
- Part III: Communication protocol and data format

2. In-Use EV Inspection Items



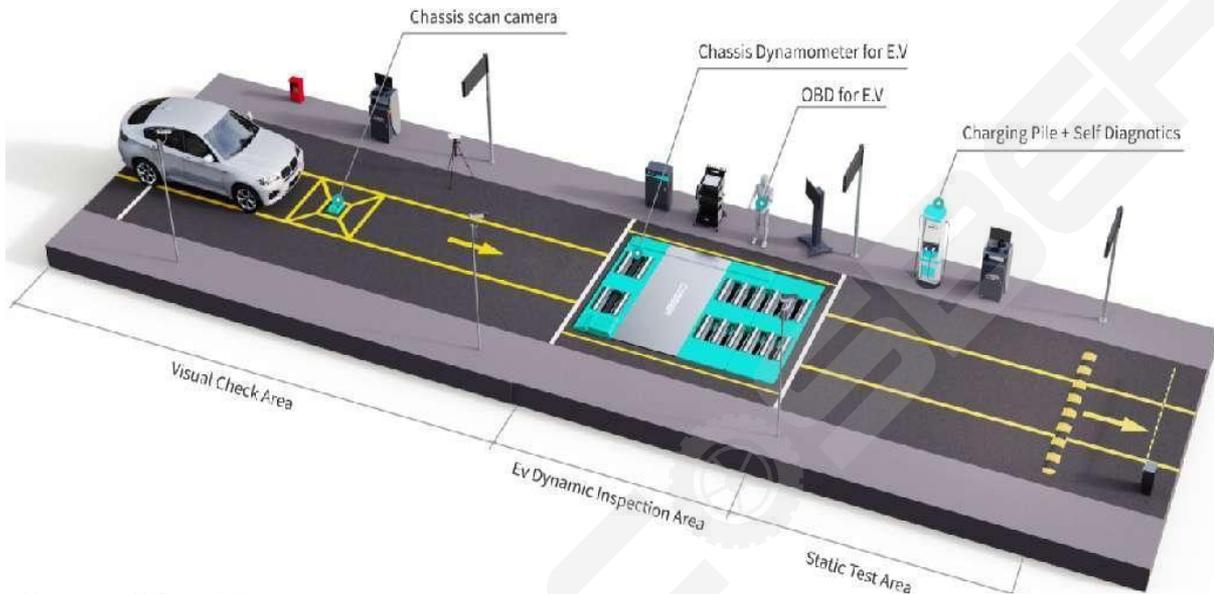


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4. COSBER EV Electrical Safety Charging Test Terminal



1. In-Use EV Inspection Items



- Layout of 3 Section:**
- 1. Visual Safety Check
 - 2. Dynamic Test On Dyno
 - 3. Static Test by EV Electrical Safety Charging Test

Inspection Process



2. Terminal Component modules



- 1) Cabinet made of durable steel ;
- 2) EU Standard Charge head and cable set with protocol ;
- 3) Safety Standard & Electrical inspection module equipped inside;
- 4) Embedded Industrial Computer;
- 5) Test Software Installed

6) Standard Supply Power, Models:
Model: EV-TCT-20kw 3PH 400V-50 A
Model: EV-TCT-40kw 3PH 400V-80 A
Model: EV-TCT-60kw 3PH 400V-120A

Working Power	AC 380V+10%, 50/60HZ+5%
No-Load/Full Load Power Consumption	200W/62.6kW
Work Ambient	Temperature :0~40°C; Humidity:20~80%RH
Dimension (mm)	670W*810D*1745H
Weight	240Kg

3. COSBER EV Electrical Safety Charging Test Terminal



2. Terminal Component Modules Functions & working

Test Category	Test Item by Charge port	Requirement Standard
Power Battery Safety(BMS)	Maximum temperature of power battery	<p>1) The charging interface meets the relevant requirements in GB/T 18487.1;</p> <p>2) The communication transmission protocol meets the relevant requirements in GB/T 27930;</p> <p>3) It has the function of automatic recording and transmission of test data.</p> <p>4) Applicant for passengers vehicles, truck, and special industrial engineering vehicles.</p>
	Maximum voltage of single battery	
	Voltage range of single battery	
	BMS total voltage indication accuracy	
Electrical safety	Insulation resistance of charging socket	<p>5) Inspection according to DIN70121, ISO15118, IEC61851</p>
	Voltage Potential equalization in Vehicle body	

4. COSBER EV Electrical Safety Charging Test Terminal



3. Dynamometer and OBD reading Test



Test Equipment	Test During Discharging
Dynamometer and OBD	Power Battery Performance Test
	Driven Motor Safety Test
	Electrical Control system Safety Tester



4. COSBER EV Electrical Safety Charging Test Terminal



EV Test Report Form/Test result/ Judgement Value				
No	Test Items		Result	Judgement Value
1	Power Battery Safety (BMS)	Battery Charging	Maximum temperature of the power battery	Ternary lithium battery $\leq 60\text{ }^{\circ}\text{C}$ Lithium iron phosphate battery $\leq 65\text{ }^{\circ}\text{C}$
2			Maximum voltage of a single battery	Ternary lithium Battery $\leq 4.4\text{V}$ Lithium iron phosphate battery $\leq 3.7\text{V}$
3			Single battery voltage range	$\leq 3\text{V}$
4			BMS total voltage indication accuracy	-1%~1%
5		Battery Discharging	Maximum temperature of the power battery	Ternary lithium battery $\leq 60\text{ }^{\circ}\text{C}$ Lithium iron phosphate battery $\leq 65\text{ }^{\circ}\text{C}$
6			Minimum voltage of a single battery	Ternary lithium battery $> 1.8\text{V}$ Lithium iron phosphate battery $> 1.5\text{V}$
7			Capacity retention rate of power battery	$\geq 60\%$
8	Driven Motor Safety	Drive motor temperature	$\leq 175\text{ }^{\circ}\text{C}$	
9		Motor controller temperature	$\leq 95\text{ }^{\circ}\text{C}$	
10	Electrical Control system Safety	DC/DC converter temperature	$\leq 95\text{ }^{\circ}\text{C}$	
11	Electrical Safety	Insulation resistance of DC charging socket	$\geq 100\text{ }\Omega/\text{V}$	
12		Insulation resistance of AC charging socket	$\geq 1\text{M}\Omega$	
13		Potential equalization between shell and level table	$\leq 0.1\Omega$	
14		potential equalization between shell and shell	$\leq 0.2\Omega$	



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05	Human Safety protection tool

Warm Tips

1. Personnel Safety:

Operators must wear safety protective equipment such as insulated gloves, insulated shoes, and goggles, and must operate with the load cut off.



2. Reaction to Fire:

If a fire occurs, immediately press the emergency stop button and cut off the input power, and immediately use a dry powder fire extinguisher to extinguish the fire. If a liquid fire extinguisher is used, there may be a risk of electric shock.

3. Forbidden objects:

Liquids or other foreign objects are absolutely not allowed to enter the interior of the equipment.

A light blue world map is centered in the background. Overlaid on the map are several circular icons with glowing centers, connected by thin white lines, suggesting a global network or data flow. The overall aesthetic is clean and professional.

For more information, please visit:

www.cosber.com

Wilson

Thank you!