



RESPONSIBILITY FROM ABILITY TECHNOLOGY CHANGES ANTI EPIDEMIC



中国电研
China Electric Institute

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Brief introduction of China National Electric Apparatus Research Institute (CEI) Co.,Ltd

Part 1

Brief introduction of China National Electric Apparatus Research Institute (CEI) Co.,Ltd

1- Company History

SINCE 1958 6国联合组建国家甲级一类综合应用型研究机构——广州电器科学研究所（中国电器院前身）成立。



1999

改制为企业，并加入国机集团。

2007

冠名“中国电器科学研究院”

2010

改制为“中国电器科学研究院有限公司”

2017

完成混合所有制员工持股改革

2019 成功登陆上交所科创板
股票代码：688128



Brief introduction of China National Electric Apparatus Research Institute (CEI) Co.,Ltd

2- Company Introduction

China National Electric Apparatus Research Institute (CEI) Co.,Ltd, has a registered capital of 404.5 million yuan, and now has more than 4, 000 employees, with professional and technical personnel accounting for more than 70% of the total staff.



3- Company Qualification

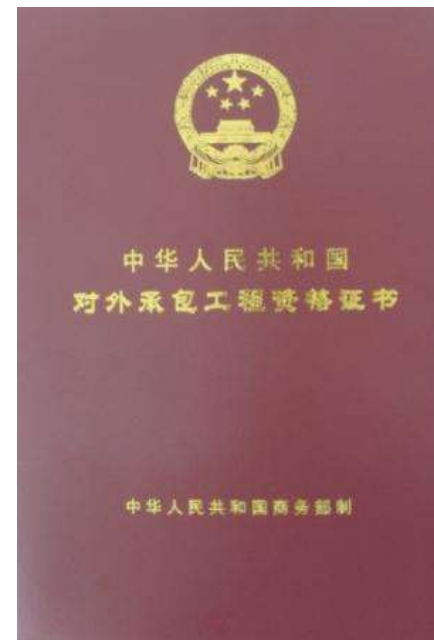
A sound international quality management system and engineering qualifications that help customers avoid the risks of overseas investment processes, patents and standards.



3- Company Qualification

Sound international quality management system and engineering qualifications for customers to avoid overseas investment processes, patents and standard risks

Qualification Certificate of the people's Republic of China for Foreign Contracting projects issued by the Department of Foreign Trade and Economic Cooperation. (the only enterprise in China's home appliance industry with this certificate)



4- Scope of Business

Development headquarters of China Electric Institute(CEI)

- State Key Laboratory
- National Innovative Enterprise
- National-level international scientific and technological cooperation demonstration base
- More than 4300 scientific and technological achievements
- 238 authorized patents
- World-class scientific research equipment with over 100 million yuan

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Service business sector of China Electric Institute (CVC)

- Third-party technical service organization specializing in inspection and certification business
- One of the CB laboratories with the most accredited standards in Asia
- System certification agency authorized by CNCA
- CCC certification body (home appliances, accessories, motors)

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Technology Industry Business Segment of China Electric Institute (Kinte)

- Undertake overall plant planning and general contracting business for household appliances manufacturing plants
- R&D and manufacturing of complete testing equipment
- Sheet metal production equipment
- Production line and logistics transportation
- Painting line
- Laboratory

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CEI Manufacturing system

Guangzhou Kinte (Headquarter)



- Complete set of equipment
- Home appliance test equipment
- Household electrical appliances and moulds
- Painting and surface treatment

Kinte Weijia (COSMA China manufacturing base)



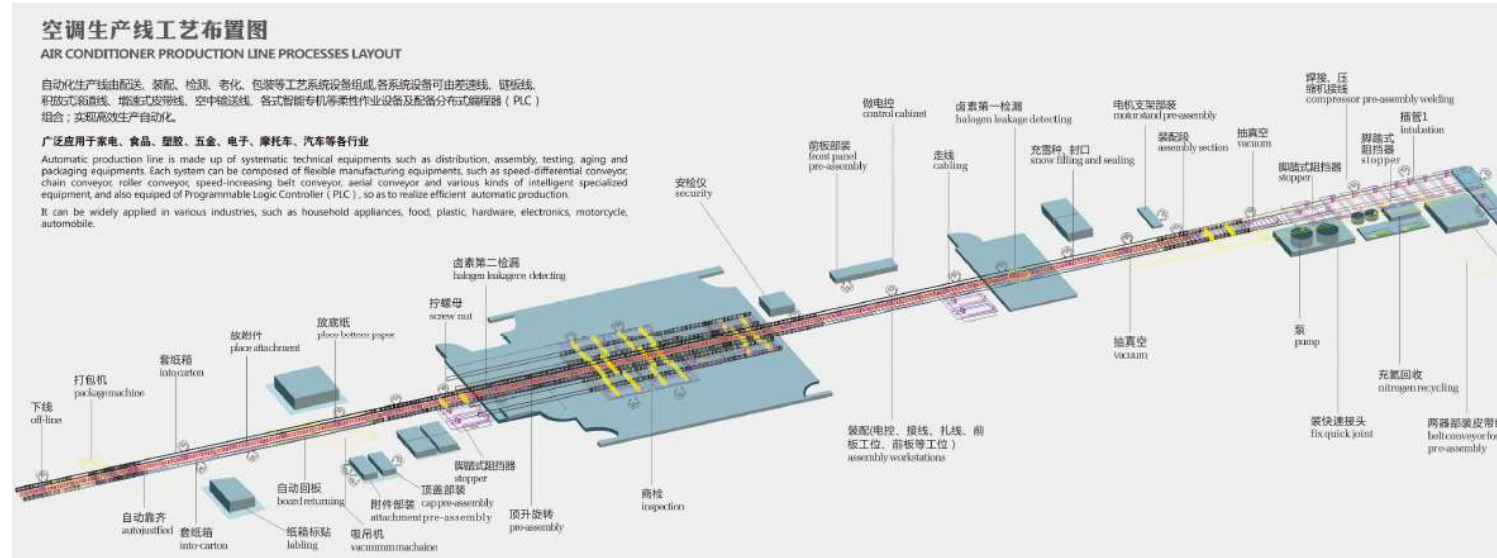
- Sheet metal processing equipment
- Foaming equipment
- Vacuum forming equipment

Kinte Desheng (SCITECH China manufacturing base)

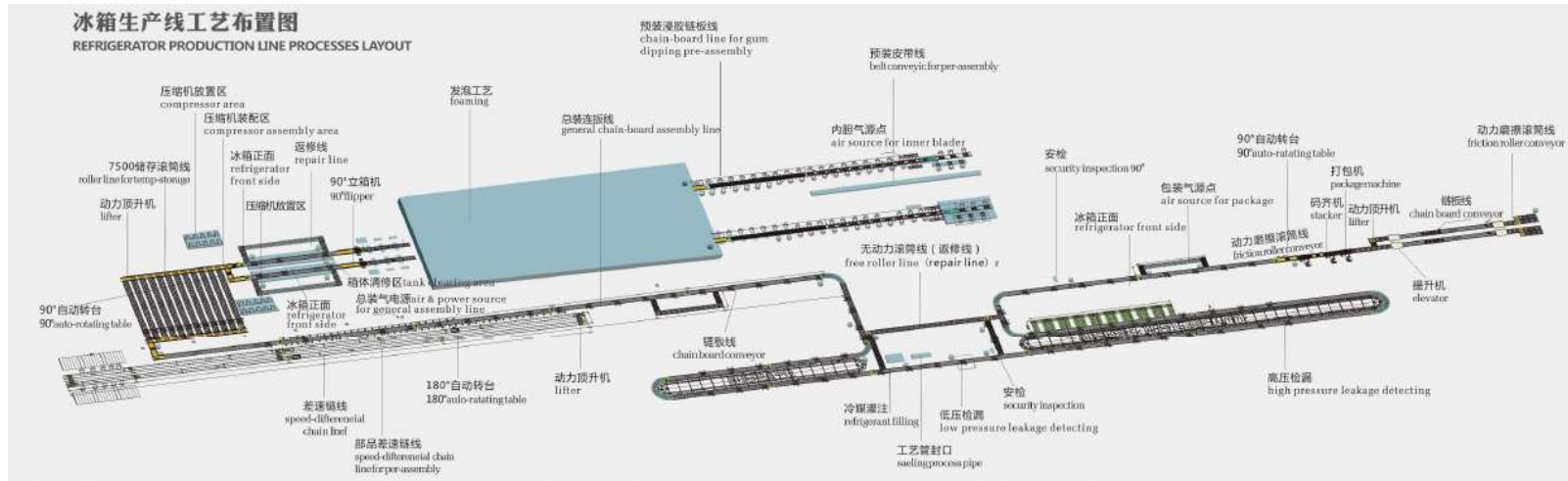


- Production line and logistics transportation
- Testing line
- Storage and retrieval system

AC factory



REF production line



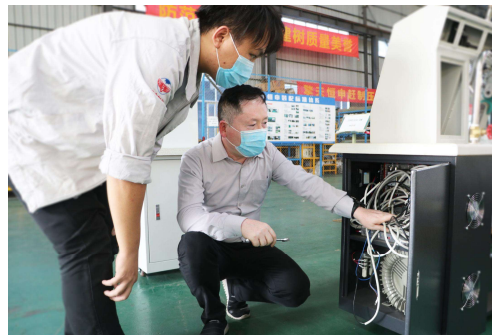


Main job for anti epidemic in 2020

Part 2

Main job for anti epidemic in 2020

The COVID-19 suddenly broke out in China in January 2020, and in early February, CEI appointed by the National Material Support Group for epidemic Prevention and Control, actively engaged in developing anti-epidemic production equipment.



Part 2

Main job for anti epidemic in 2020

CEI coordinated the production of manufacturers, simultaneously, positively participated in the improvement & upgrading of equipment. In the first half year, more than 1,000 sets of equipment are used for production through CEI.





Main job for anti epidemic in 2020

During the epidemic, CEI presided over the formulation of two group standards: "Protective clothing sticking machine" (T/GDMES 0011-2020), "New mask filter material technical requirements: PTFE film". The last standard mentioned above is the first group standard in the related fields in China, and it's also the first domestic standard to clarify the performance evaluation method of PTFE nanoporous film applied to mask filter materials, which fully reflects the advantages of new filter materials replacing the traditional materials. It played a positive role in standardizing the quality requirements in the field of epidemic prevention materials and promoting the high-quality development of new materials for epidemic prevention.



ICS 61.080
Y 99

GDMES

团 体 标 准

T/GDMES 0011—2020

防护服贴条机

Protective clothing sealing machine

2020-02-25 发布

2020-02-25 实施

广东省机械工程学会 发布

股票代码：688128

www.cei1958.com

Part 2

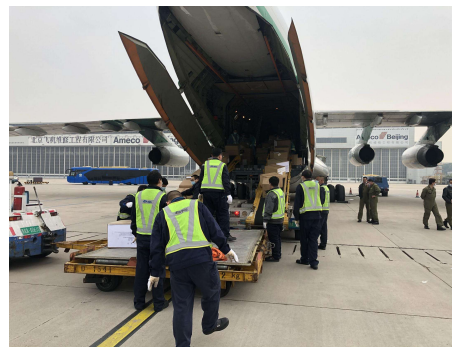
Main job for anti epidemic in 2020

In April, when the overseas epidemic broke out, CEI actively helped our overseas customers and coordinated the preparation and production for anti-epidemic materials and production equipment, regions covering India, Algeria, Iran, Bangladesh, Singapore, Italy, United Kingdom, South Korea and other regions/



Part 2
Main job for anti epidemic in 2020

The first batch of anti-epidemic medical for Algerian government in commercial channel were settled down through CEVITAL Group and CEI cooperation, and were shipped to Algeria by airlift. This batch of material items include 5 million pieces of masks, 500,000 pieces of KN95 masks, 10,000 sets of protective suit, 50,000 pieces of Nucleic Acid Detection Kit, 150,000 throat swabs, etc.



Part 2

Main job for anti epidemic in 2020

The follow-up mask proudction machine and relative mask raw material for Algeria are also provided by CEI.



Part 2

Main job for anti epidemic in 2020

CEI actively participated in the anti-epidemic war and made its contributions to the health of the people. A group of advanced figures emerged and were commended by the Chinese government.

Up to now, we still retain some production capacity of epidemic prevention materials and to ensure the needs of society in case of epidemic repeat outbreak.



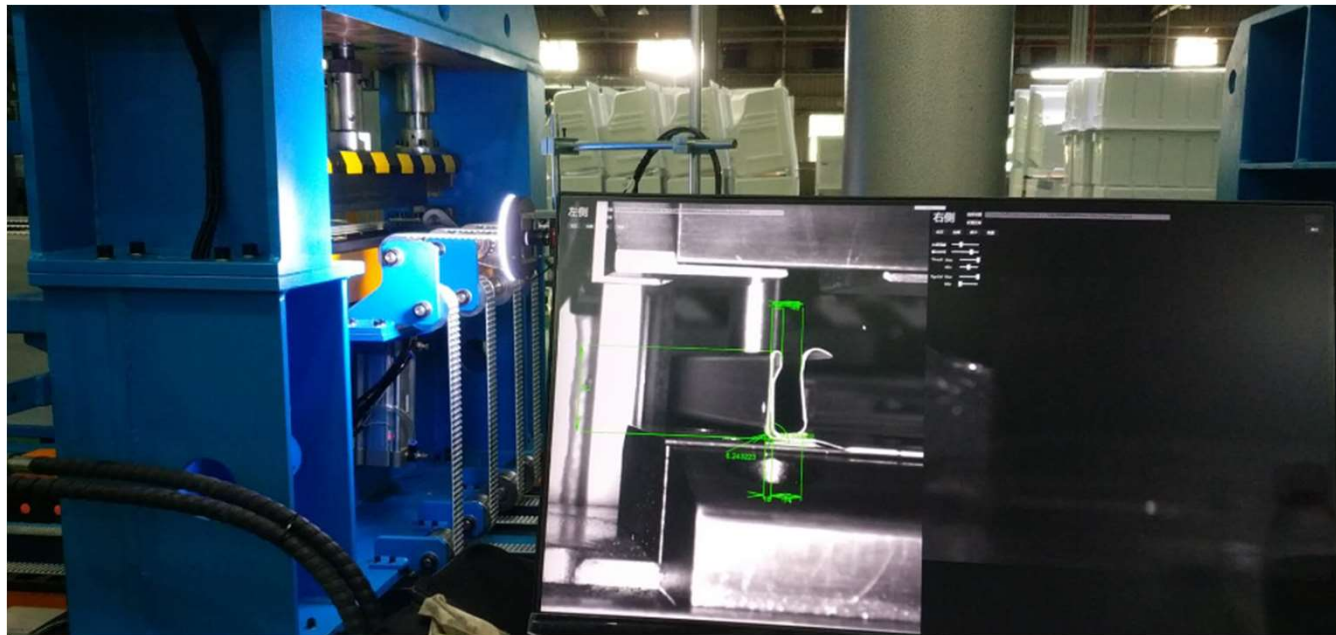
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Technical improvement in the equipemnt

Part 3

Technical improvement in the equipemnt

The vision system is widely used in the field of home appliances with mature technology is mature, which inspired us to apply vision for the mask machine.



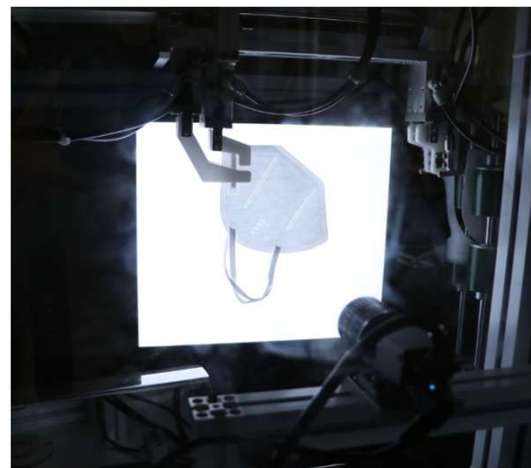
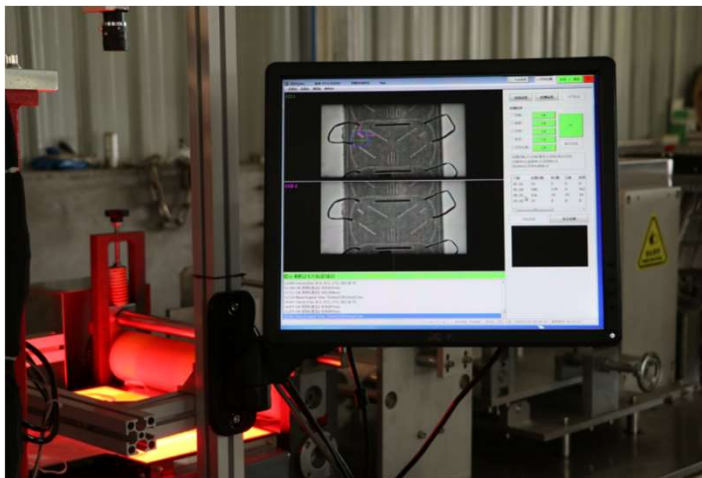
Part 3

Technical improvement in the equipemnt

Traditional mask machine has the following disadvantages:

1. Unable to judge the length and position of the nose bridge;
2. The quality of welding and slitting is judged manually, with different standards;
3. Manual unloading and sorting is not good for the next process: disinfection and bagging automation.

The intelligent KN95 mask line developed by CEI has two sets of visual inspection systems at the position of nose bridge bar and the position of the sealing side.



Technical improvement in the equipemnt

This equipment was selected into the list of the Guangzhou Innovative Product Catalog by the Guangzhou Science and Technology Bureau. It has important practical significance in anti-epidemic work. It allows some temporary mask production factories to produce reliable quality products without skilled workers. And at the same time it enable overseas companies to realize mask production more quickly.

广州市2020年度创新产品目录第一批(疫情防控应急类)拟入选名单

| 序号 | 单位名称 | 产品名称 | 产品领域 |
|----|-----------------|--------------------------------|------|
| 1 | 广州万孚生物技术股份有限公司 | 新型冠状病毒(2019-nCoV)抗体检测试剂盒(胶体金法) | 快速诊断 |
| 2 | 广州市兴世机械制造有限公司 | 全自动高速口罩生产线 | 防控装备 |
| 23 | 佳都新太科技股份有限公司 | 基于红外热成像的体温监测设备及社区(校园)疫情大数据防控系统 | 系统软件 |
| 24 | 中国电器科学研究院股份有限公司 | 智能KN95口罩生产线 | 防控装备 |
| 25 | 广州市瑞合新材料科技有限公司 | 医疗液体硅橡胶 | 防控装备 |

Regarding of production equipment of protective suit, CEI simplified the structure of the hot air Sealing machine, which made the production more reliable and also reduced the production cost.





中国电器科学研究院股份有限公司
China National Electric Apparatus Research Institute Co., Ltd.

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