

缘起梦想，终有超越

Originated from dream

Devoted to beyond



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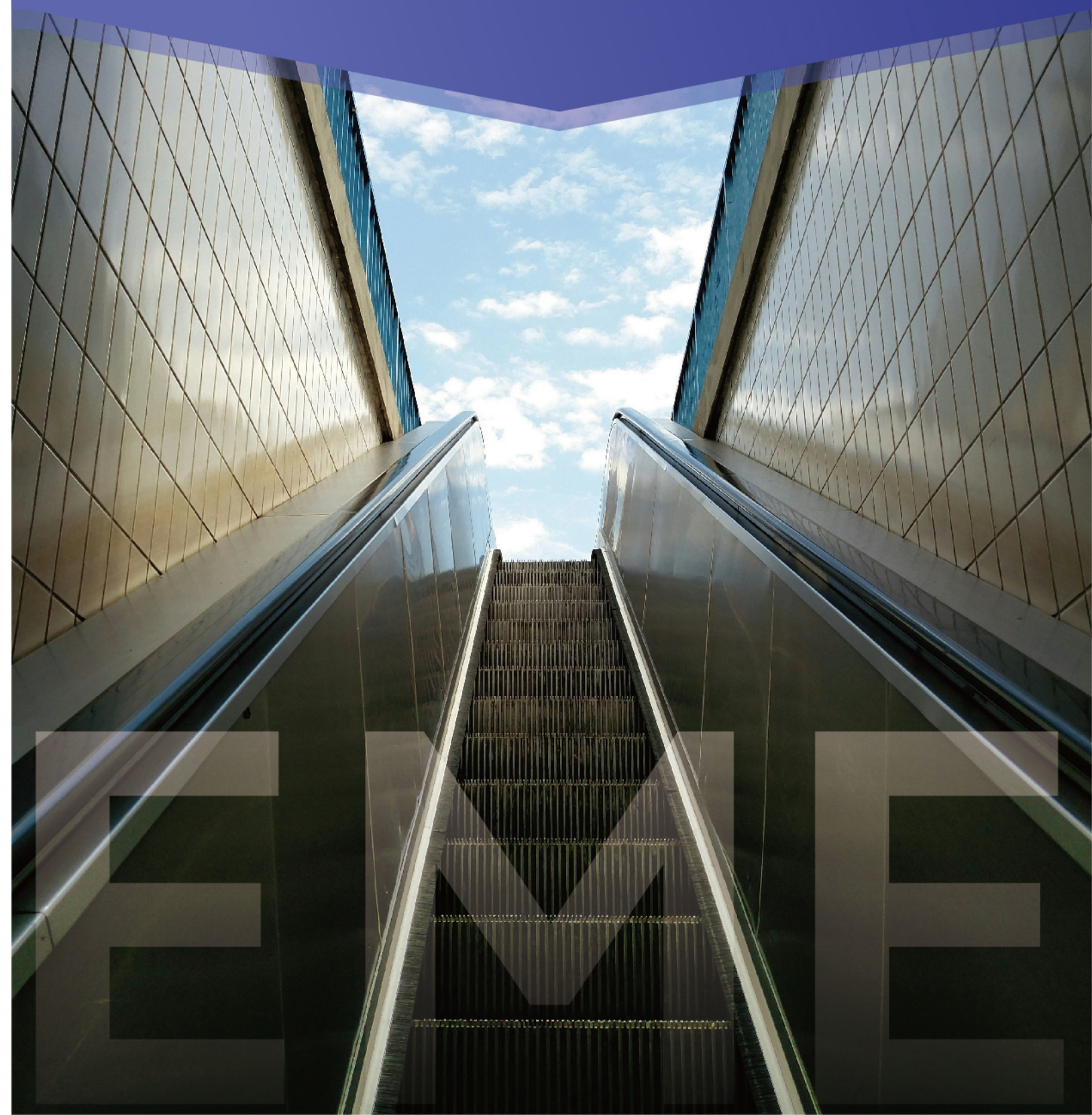
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嵌入式更新型自动扶梯

EMBEDDED MODERNIZATION ESCALATOR



- 专注自动扶梯(自动人行道)技术
- 致力于制造最安全的自动扶梯(自动人行道)产品
- 为全球提供最佳自动扶梯(自动人行道)技术方案和个性化服务
- 为用户创造最大价值

- Focus on escalator (Moving walks) technology
- Dedicated to manufacturing the safest escalator (moving walks)
- Provide the best escalator (moving walks) technology solutions and customized services worldwide
- Creating maximum value for customers

HANSON

汉森电梯



EME TECHNOLOGY

EMBEDDED 嵌入式 MODERNIZATION 现代化 ESCALATOR 自动扶梯

完整保留原扶梯桁架，适用于全球主流品牌及型号的老旧自动扶梯更新

用于减少对建筑物的影响，降低对商业或运营服务的干扰，以及针对不符合现行标准的老旧扶梯进行合规化更新

标准系列化设计和制造

The escalator modernization with the existing truss is completely preserved, which is applicable to the old escalators of global mainstream brands and models.

Designed to reduce impact on buildings, reduce interference with commercial or operational services, and upgrade escalators that are not compliant with existing standards.

Standard series design and manufacturing.



中国与全球专利
CHINA & PCT (Patent Cooperation Treaty)



在扶梯中安装扶梯 建筑中的“微创手术”

Install escalator in escalator
Keyhole surgery in architecture

精密释放空间，安全构筑和谐
Release space precisely and build harmony safely



影响小
Small impact

得益于模块化的设计，对环境的影响最小，不封闭通道或出入口，不停止商业运营，对建筑无任何影响。

Thanks to the modular design, it has the least impact on the environment, does not close the channels or entrances, does not stop commercial operation, and has no impact on the building.



强度提高
Improved strength

得益于EME自身具有足够的强度，从而不依赖原有桁架的强度，与原桁架复合连接后强度有更大的提升。

Thanks to the sufficient strength of EME itself, it does not rely on the strength of existing trusses, so its strength is greatly improved after composite connection with existing trusses.



高可靠性
High reliability

得益于完整的模块化集成设计，因此与普通的扶梯一样，可在工厂整机装配和调试，现场的更新时间极短。并成为标准化系列化的产品。

Thanks to the complete modular integration design, the EME can be assembled and commissioned as ordinary escalators in factory, therefore the on-site update time is extremely short. And become a standardized series of products.



性能升级
Performance upgrade

满足普通自动扶梯的所有功能配置，并可进一步提升性能，如高效驱动主机、预测性维护系统、更多的LED照明应用等。

Satisfy all functional configurations of ordinary escalators and further improve performance, such as efficient of driving machine, predictive maintenance systems, and more LED lighting applications.



灵活安装
Flexible installation

使用小型车辆、手推叉车、电梯等常用设备即可轻松搬运，灵活进入安装现场。

The modules can be easily handled and flexibly entered into the installation site by means of common equipment such as small vehicles, manual forklifts or lifts.



标准系列
Standardized serial products

全部采用普通扶梯的标准部件产品，无定制开发部件，因而保证了整梯产品的稳定性和可靠性。

All standard components of ordinary escalators are used, without customized development components, thus ensuring the stability and reliability of the entire escalator.



普适性
Wide applicability

遵从EN115-1:2017+A1和GB16899-2011,并兼容ASME A17.1-2022, 以及韩国KS标准。

Compliant with EN115-1:2017+A1, GB16899-2011, and compatible with ASME A17.1-2022, as well as Korean KS standards.



绿色低碳
Low-carbon

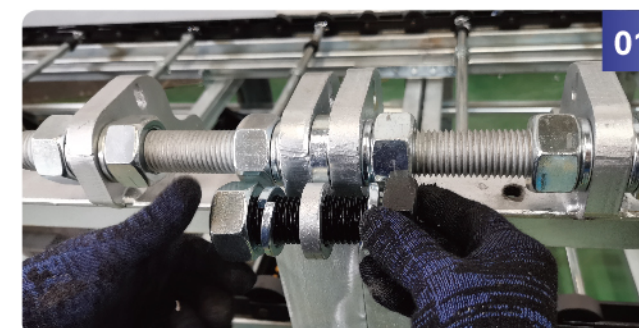
嵌入更新后的模块拆卸便捷，一劳永逸的可持续更新，是绿色低碳的更新产品。

The embedded and updated module is easy to disassemble and can be sustainably updated once and for all, making it a green and low-carbon update product.

独具匠心，以苛求之心锻造极致之美

Individually Crafted for Uncompromised Beauty

- EME在工厂的整机装配与调试是EME在整个EME工程中极其重要的一环。也是EME在全球的完整保留桁架的扶梯更新方案中，最为显著的优势和特点。
- 所有的模块及零部件完整地参与了整机的试运行和测试，确保了现场的快速安装和质量的可靠性。
- 在精确测绘条件下，现场不会有依赖于原桁架的设计带来的不确定性风险，以及更新工期出现停滞或拖沓现象。
- EME自2021年8月首台投产，至今已量产30余台，根据原扶梯及客户的技术要求，可设计与制造连续式、非连续式、单片式，计三大系列（含商用型、公交型）EME产品。
- The overall assembly and commissioning of EME in the factory is an extremely important part of the entire EME project. This is also the most significant advantage of EME's complete retention of truss for escalator modernization solutions worldwide.
- All modules and parts have been fully involved in the trial run and test of finished escalator to ensure the fast installation and quality reliability on site.
- Under precise measurement conditions, there will be no uncertainty risks on site that rely on the design of the existing truss, as well as delays in modernization schedule.
- The first EME was put into production in August 2021, and more than 30 EME have been mass-produced so far. According to the technical requirements of the original escalator and customers, we can design and manufacture three series (including commercial and public transportation) of EME products: continuous, discontinuous, and single piece type.



01

EME模块的框架连接，自身形成有一定强度的刚性整体。
The framework connection of the EME module forms a strong and complete rigid body.



02

利用完整的模块化的桁架，在工厂预安装。除此以外的装配与传统的扶梯方式完全一样。
Pre-install in the factory using a complete modular truss. The assembly is completely the same as an ordinary escalator.



03

EME在工厂内完成装配后，进行静载试验，其挠度已符合标准。
After completing assembly in the factory, EME conducted a static load test and its deflection has met the standard.



04

EME出厂时，整机已拆解为各模块，以及导轨、扶手系统等部件，且独立包装，为现场快速安装做好准备。
When the EME is delivered, it has been disassembled into modules, guide rail, handrail system and other parts, and is packaged separately, making full preparation for fast installation on site.



全球工程实践

Global Engineering Practice

现代科技与传统制造的碰撞
创新与未来的融合

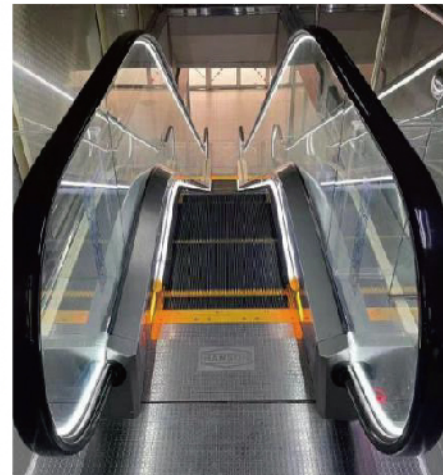
Collision between modern technology and traditional manufacturing
Integration of Innovation and the Future

新加坡布业中心

Singapore Textile Centre

3.7 Meter
提升高度
Rising height

28 Days/unit
安装周期
Installation period



全球首台EME，2021年11月5日竣工，并获得新加坡当地PTO（Permit to Operate）准运证。该扶梯前身为日本某品牌，有近30年的历史，并已停机10年。提升高度3.7米，梯级宽度600mm，采用非连续式模块系列EME。正值疫情爆发时期，4人组安装历时28天。

The world's first EME was completed on November 5, 2021 with a local Singapore PTO Permit to Operate. The escalator, formerly a Japanese brand, has a history of nearly 30 years and has been shut down for 10 years. The lifting height is 3.7m, the step width is 600mm, and the discontinuous module series EME is adopted. During the outbreak of the epidemic, an installation team of 4 people took 28 days to complete the installation.

长沙步行街

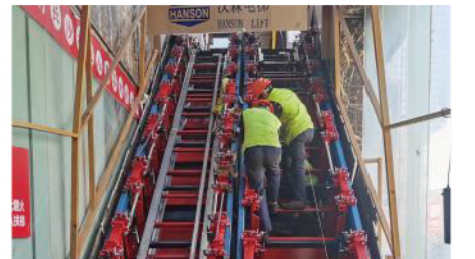
Changsha Walking Street

4.8~6 Meter
提升高度
Rising height

5 Days/unit
安装周期
Installation period

自2021年11月起，对长沙网红之地——黄兴南路步行街运行近20年的某品牌扶梯进行了分期更新。至2024年5月已更新了9台，提升高度为4.8米至6米，4人安装组，平均工期为5天/台。所有更新均不影响周边任何商家的正常营业，是EME经典的大型更新示范工程。为业主所称道。

Since November 2021, a brand escalator that has been running for nearly 20 years in Huangxing South Road Pedestrian Street, the first place of Changsha's popularity, has been updated by stages. By May 2024, 9 sets have been updated, with a lifting height of 4.8 m to 6 m. The installation team of 4 people has an average installation time of 5 days per set. All updates have not affected the normal operation of any surrounding stores, and are typical series updating project of EME. Hanson was highly praised by the owner.

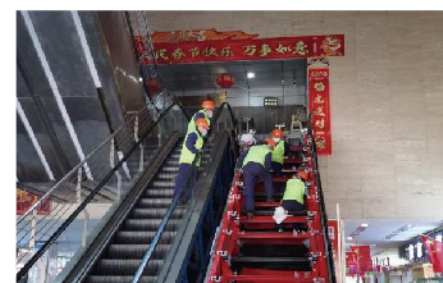
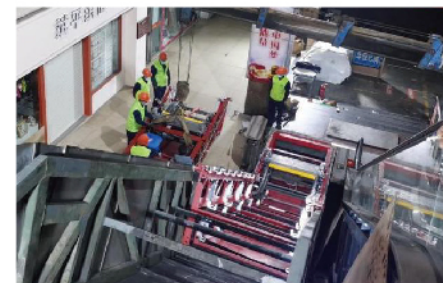


株洲湘东大市场

Zhuzhou Eastern Hunan Market

5.2 Meter
提升高度
Rising height

3 Days/unit
安装周期
Installation period



2022年12月20日至22日，5人安装组，以3天（50小时）的时间创造了一个全新的保留桁架自动扶梯现场更新的记录。根据现场情况，采用悬臂吊嵌入模块，提升高度5.2米。

From December 20 to 22, 2022, a 5-person installation team created a new record of on-site modernization of escalators with truss retained in 3 days (50 hours). According to the site conditions, the module is embedded by truck crane. The height of the escalator is 5.2m..

全球工程实践

Global Engineering Practice

韩国首尔地铁 1号线新林站

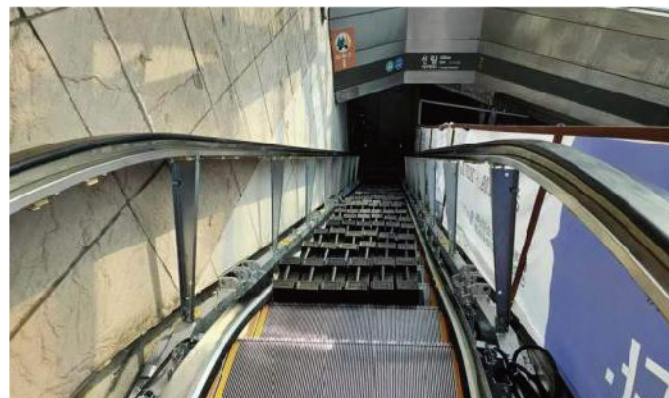
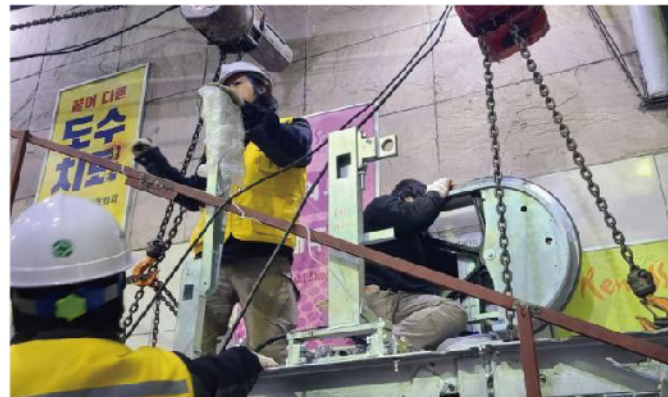
Xinlin Station, Seoul
Metro Line 1, South
Korea

4.76 Meter
提升高度
Rising height

12 Days/unit
安装周期
Installation period

2023年6月，韩国首台，也是全球的首台公交型EME，5人安装组，12天完成，提升高度4.76米。该扶梯由韩国升降机安全管理局测试，同时满足制动距离及加速度极为严苛的制动要求，并顺利通过验收。

In June, 2023, the first public EME in South Korea and the world, was installed by a 5-person installation team in 12 days, and the height of the escalator was 4.76 m. It was tested by the Korea lift safety administration and met the extremely stringent braking requirements for both of braking distance and acceleration, and passed the acceptance successful.



德国科隆地铁 Deutz站

Germany
Cologne
Subway Deutz
Station

4.86 Meter
提升高度
Rising height

2024年2月，欧洲首台EME（公交型）在德国科隆的Deutz站竣工，提升高度4.86米，原扶梯是德国O&K品牌，为梯路内置式驱动，因此汉森采用了创造性的结构，支持了EME成为又一成功案例。并将接受TUV和LIFT INSTITUUT的认证。

In February, 2024, the first EME (public type) in Europe was completed at Deutz station of Cologne Metro in Germany, with a height of 4.86 m. The original escalator is O&K brand, which is driven by the built-in drive of the step band. Therefore, Hanson adopted a creative structure to support EME to become another successful case. And has been certified by TUV and LIFT INSTITUUT.

日本北海道温泉酒店

Hokkaido Hot Spring Hotel, Japan

28 Days
安装周期
Installation period

3 Meter
提升高度
Rising height



2024年4月，位于日本北海道登别市泷本馆的4台原某品牌的扶梯全部采用EME更新，总工期4周。更新对温泉酒店的营业没有任何影响。

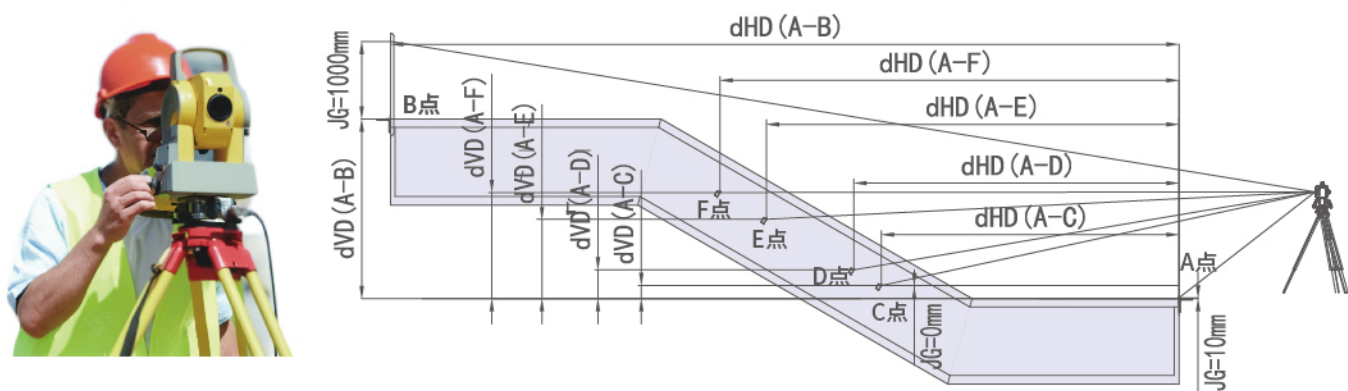
In April 2024, all four escalators of a certain brand located in Takamoto Hall, Tengbe City, Hokkaido, Japan were updated with EME, with a total construction period of 4 weeks. The update has no impact on the operation of the hot spring hotel.

高精度的测绘，才会有完美的结果

High-precision Measurement Leads to Perfect Results

只需关注原桁架的内侧宽度及深度，而无需考虑原桁架的结构，则可基本确定EME方案的可行性。
采用工程用全站仪对支撑角、各中间横杆进行测量。可确保EME模块嵌入的精准度和足够的冗余度。

The feasibility of the EME scheme can be basically determined by focusing only on the inside width and depth of the existing truss without considering its structure.
Total station is used to measure the position of the bearing point and each transverse member to ensure the accuracy and sufficient redundancy of the embedded EME module.



详细的对原扶梯桁架进行的测绘要求及技术信息，请联系汉森的销售部门（见封底）
For detailed measurement requirements and technical information of the existing truss, please contact the sales department of Hanson (see the back cover)

EME 项目流程，如此简单

So simple EME project process

EME项目流程

EME business process



“质”的焕新，“AI”的提升.....

The renewal of "quality" & the improvement of "AI"

EME不只为“刷新”，更意味有更多的品质提升, 并可赋予面向未来的诸多创新技术的新体验。
More than just a "refresh", EME means more quality improvement and gives new experience to many innovative technologies for the future.

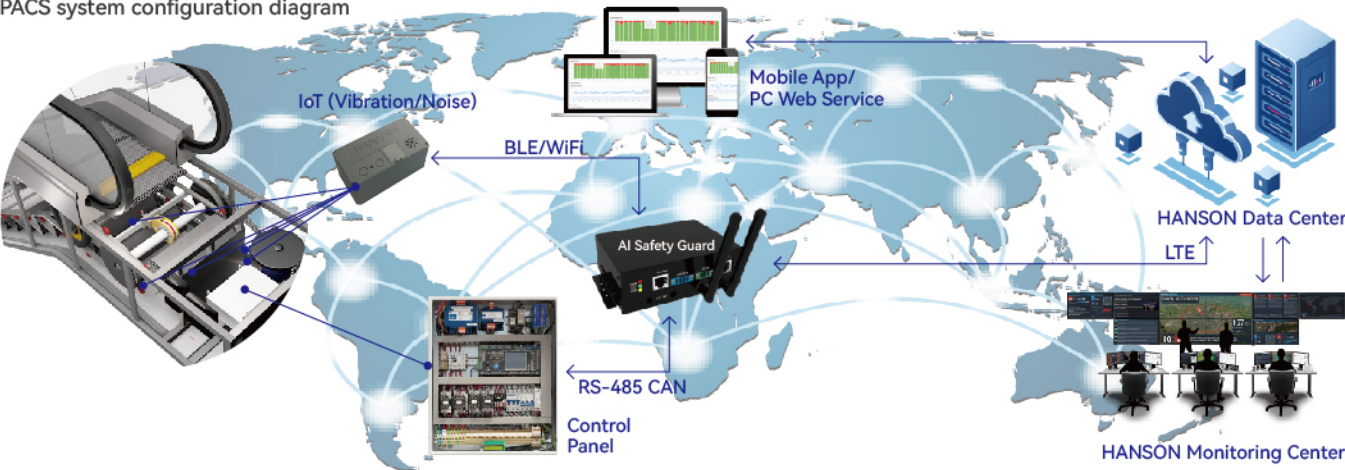


预测性维护智能安全卫士根据扶梯工作状态的反馈数据进行保养，减少了扶梯的停机服务时间，同时也降低了不必要的定期维保次数从而降低人工成本。杜绝了扶梯的过度保养，实现扶梯真正的按需保养，以及有针对故障的精准维护。

PACS AI safety guard performs maintenance according to the feedback data of escalator operation state, which reduces the downtime of the escalator and the number of unnecessary regular maintenance, thus reducing the labor cost. It eliminates excessive maintenance of escalators and realizes real on-demand maintenance of escalators as well as accurate maintenance for faults.

PACS系统配置图

PACS system configuration diagram



AI诊断/故障识别对象

AI diagnosis/fault identification object

控制柜 Control Panel	刹车系统 Brake system	梯级链条 Step Chain	电机 Motor	轴/轴承 Shaft/ Bearing
接触器故障 Contactor failure	制动鼓故障 Brake drum failure	梯级链磨损状态 Wear state of step chain	转子故障 Rotor fault	轴承磨损状态 Wear of bearing
电气安全装置故障 Failure of electrical safety devices	刹车片磨损 Wear of brake pad	梯级链节失效 Step chain link failure	定子故障 Stator fault	内轮/外轮/滚珠故障 Inner/outer wheel/ball failure
继电器类故障 Fault in relay	制动线圈故障 Brake coil failure	减速机 Reducer	轴承故障 Bearing fault	轴故障 Shaft failure
开关类故障 Switch fault	驱动链条 Drive Chain	齿轮磨损 Gear wear and tear	轴故障 Shaft fault	梯级系统 Step
逆变器故障 Inverter failure	驱动链磨损状态 Wear state of driving chain	轴承故障 Bearing failure		梯级间隙 Step clearance
	驱动链节是否有故障 Driving chain link failure	轴故障 Shaft failure		梯级扭曲状态 Twisted state of step