

Ex



直升机平台助降系统

HELICOPTER PLATFORM TO HELP REDUCE THE SYSTEM



华荣科技股份有限公司

WAROM TECHNOLOGY INCORPORATED COMPANY



WAROM TECHNOLOGY INCORPORATED COMPANY is a joint-stock and mainboard listing company without area sales restriction in China, whose stock code is warom Technology 603855, located in Jiading district, Shanghai, with registration capital 331.07 million RMB. It manufactures the explosion-proof lighting fixtures, explosion-proof electric apparatus, water-proof dust-proof light fixtures, and water-proof dust-proof electric apparatus which are used in factory, mine, marine and ocean platform etc. As the standing unit of China Electrical Equipment Industry Association, the vice-director unit of China Explosion-proof Electric Association, the member unit of China Shipping Industry Association, the member unit of China Quality Association, Shanghai Foreign Trade Association and member unit of China Association of Lighting Industry, Warom is a professional leading company in China explosion proof industry.

◆ After thirty years' effort, Warom possesses a strong workgroup of technology and more than 600 patent certificates of products, and it was designated as the "Patent Pilot Cult-ivation Enterprise" in Shanghai City. It leads the new trend of China explosion-proof electric apparatus and steps closer to international advanced technology. At present, Warom estab-lishes a technical centre and wins the qualification of Technical Centre in Shanghai city. Our company is the member of China Technical Standard Association, the commissioner of Standard-ization Administration of China, Standardization administration of China Explosion Protection and member of International Electro Technical Commission IECEx ex-mark commission. Our company also attends to draft and edit the GB3836, GB50058 series explosion-proof standards.

◆ After thirty years' development, Warom founded explosion-proof manufacture bases, which covers more than 150,000 sq.m, the building covers 300,000 sq.m. There is more than 2,500 staff and the yearly production capacity is about 3 billion RMB. Warom becomes the biggest explosion-proof manufacture base in China.

◆ Quality is the life of enterprise. Warom establishes many requests in strict accordance with ISO9001-2015 and EN13980 Quality Management System, such as requirements for ma-nufacturing, standard of inspection, record for process, traceability for responsibility, co-rrection for misplay, precaution for idden trouble, continuous betterment for problems, etc.

◆ WAROM brand are already well-known and be one of the leading company in China explosion-proof industry. we are devoted to the market development. we have established a completed sales network in China,with over 200 local sales branch offices.Warom has gained strong brand recognition in China; and from Aerospace industry to Military Industry, Oil exploitation in land and offshore, from oil refinery to Fine chemical, from Heavy industrial smelt to shipbuilding, from Vintage and Winery to Pharmaceutical manufacturing, and also Coal mining, Warom's products have been widely used in different industries. For the past 10 years till now, Warom has been the No.1 in terms of sales and production in the explosion-proof industry of China.

◆ We are currently increasing our effort in developing the international market, and have appointed distributors and agents in over 30 countries and regions, including Russia, Spain, Turkey, South Africa, Iran, Dubai, Vietnam, Thailand, and Brazil, etc. foreign sales achievement growth has multiplied each year.

直升机平台助降系统

Helicopter Landing Platform Aid System



执行标准/Executive Standard

- ◆ 符合CAP 437、ICAO附件14、IMO标准要求；
- ◆ 符合GB3836、GB12476、IEC60079、EN60079标准要求；
- ◆ 符合CCS入级规范要求。
- ◆ Comply with CAP 437 ICAO Annex 14, IMO standard requirements.
- ◆ Comply with GB3836, GB12476, IEC60079, EN60079 standards.
- ◆ Comply with CCS classification rules.

应用场所/Application

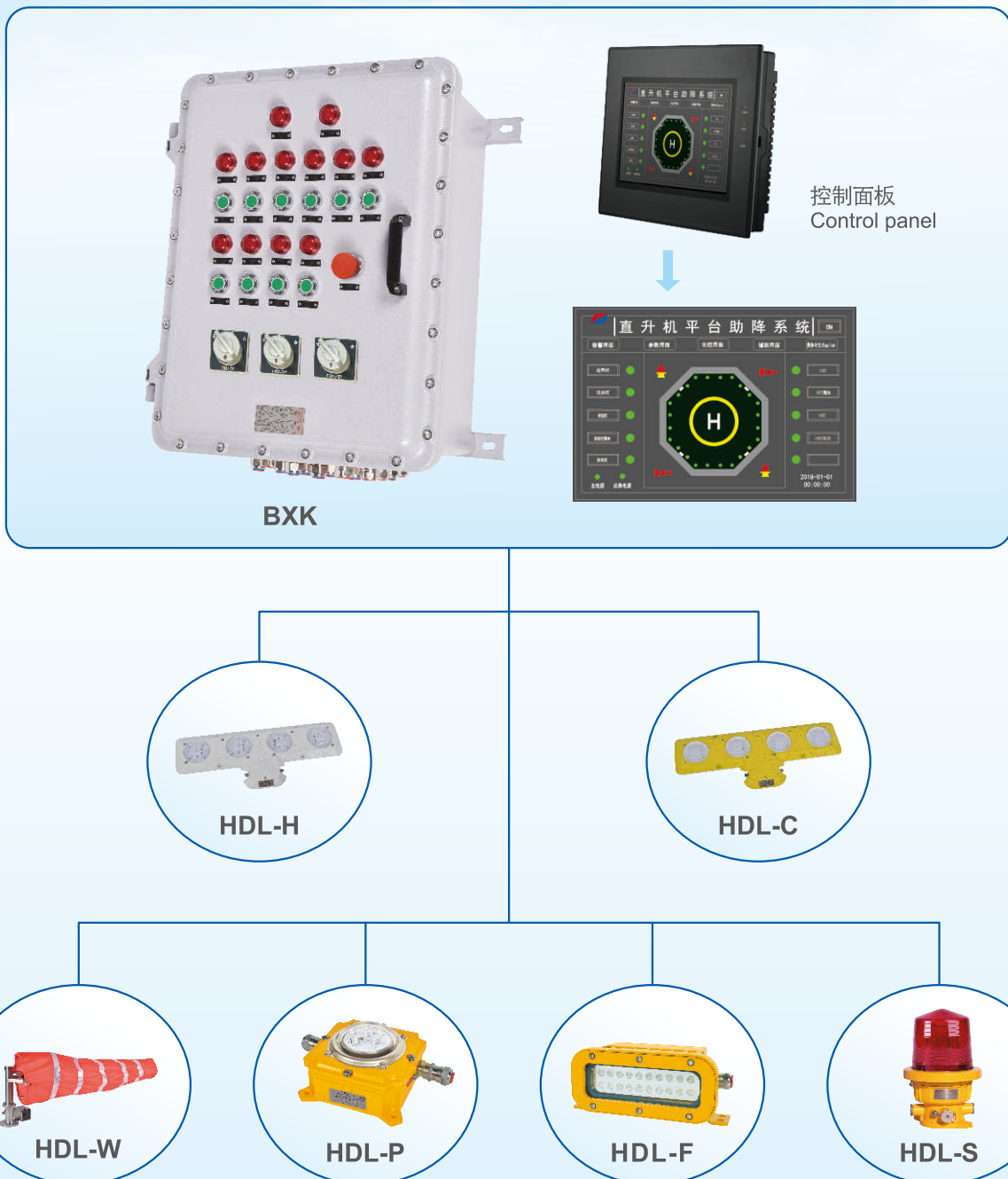
- ◆ 广泛应用于海洋工程油气钻采平台、舰船等危险区域直升机平台做助降信号指示；
- ◆ 可在潮湿、振动、腐蚀等恶劣环境中可靠工作；
- ◆ 适用于爆炸性环境1区、2区等场所。
- ◆ Widely used for landing aid signal on helideck of marine engineering oil and gas drilling platforms and ships etc. hazardous area.
- ◆ Can reliably work in severe environment where is easily affected by moisture, vibration, or corrosion.
- ◆ Explosive hazardous atmosphere Zone 1, Zone 2.

系统特色/System Features

- ◆ 高性能防爆安全；
- ◆ 长寿命LED光源 > 100000h；
- ◆ 高防护等级：IP66/IP67；
- ◆ 高防腐设计，适应海洋环境；
- ◆ 温度范围：-40℃~+55℃。
- ◆ High-performance explosion-proof security
- ◆ Long-life LED light source > 100000h
- ◆ High degree of protection: IP66 / IP67
- ◆ High anti-corrosion design, adapt to the marine environment
- ◆ Temperature: -40℃~+55℃

系统描述/System specification

- ◆ 系统照明设计组成：平台边界、着陆区域、定位标识及状态指示；
 - ◆ 系统可通过控制箱进行现场手动控制，也可实现远程控制面板或操作柱控制；
 - ◆ 系统两路电源供电，当正常电源故障时，自动切换到备用电源工作，同时发出报警信号；
 - ◆ 系统可接入现场有毒气体、火灾、急停等危险信号，自动开启报警功能。
- ◆ System lighting design components: platform boundaries, landing area, location identification and status indication;
 - ◆ System can be manually controlled by the control box on-site, can also through the remote control panel or control station;
 - ◆ The system can be two-way power supply, when the normal power failure, you can directly switch to standby power supply, at the same time alarm signal is given;
 - ◆ System can access the scene danger signal of toxic gases, fire, and emergency stop and with automatic warning function.



直升机平台助降系统

Helicopter Landing Platform Aid System

HDL-W

防爆风向灯

Explosion-proof Wind Direction Lamp

安装在平台较高的位置，随风转动，在白天和夜晚均可以清晰指示风向。

Distributed on the higher area of platform, rotate with wind, provide lighting indication of wind direction day and night.



HDL-F

直升机平台防爆泛光灯

Helideck Explosion-proof Floodlight

光束垂直指向平台中心，作降落定位照明。Light is vertical to the centre of platform, used for landing location lighting.



HDL-S

防爆状态灯

Explosion-proof Status Light

对平台上存在的可能对直升机或机上人员有危险的情况发出警告，安装在平台上或其附近。

Warning for hazardous conditions for helicopter or personnel may exist on platform, mounting on the platform or nearby.



HDL-H

直升机平台防爆H灯

Helideck Explosion-proof H Light

安装于平台中央着陆区，为直升机飞行员提供“H”标志的灯光指示。

Distributed on the central landing area of platform, provide lighting indication of "H" sign for helicopter pilot.



HDL-C

直升机平台防爆C灯

Helideck Explosion-proof Circle Light

安装于平台中央着陆区，为直升机飞行员提供“TD/PM”圈的灯光指示。

Distributed on the central landing area of platform, provide lighting indication of "TD/PM" circle for helicopter pilot.



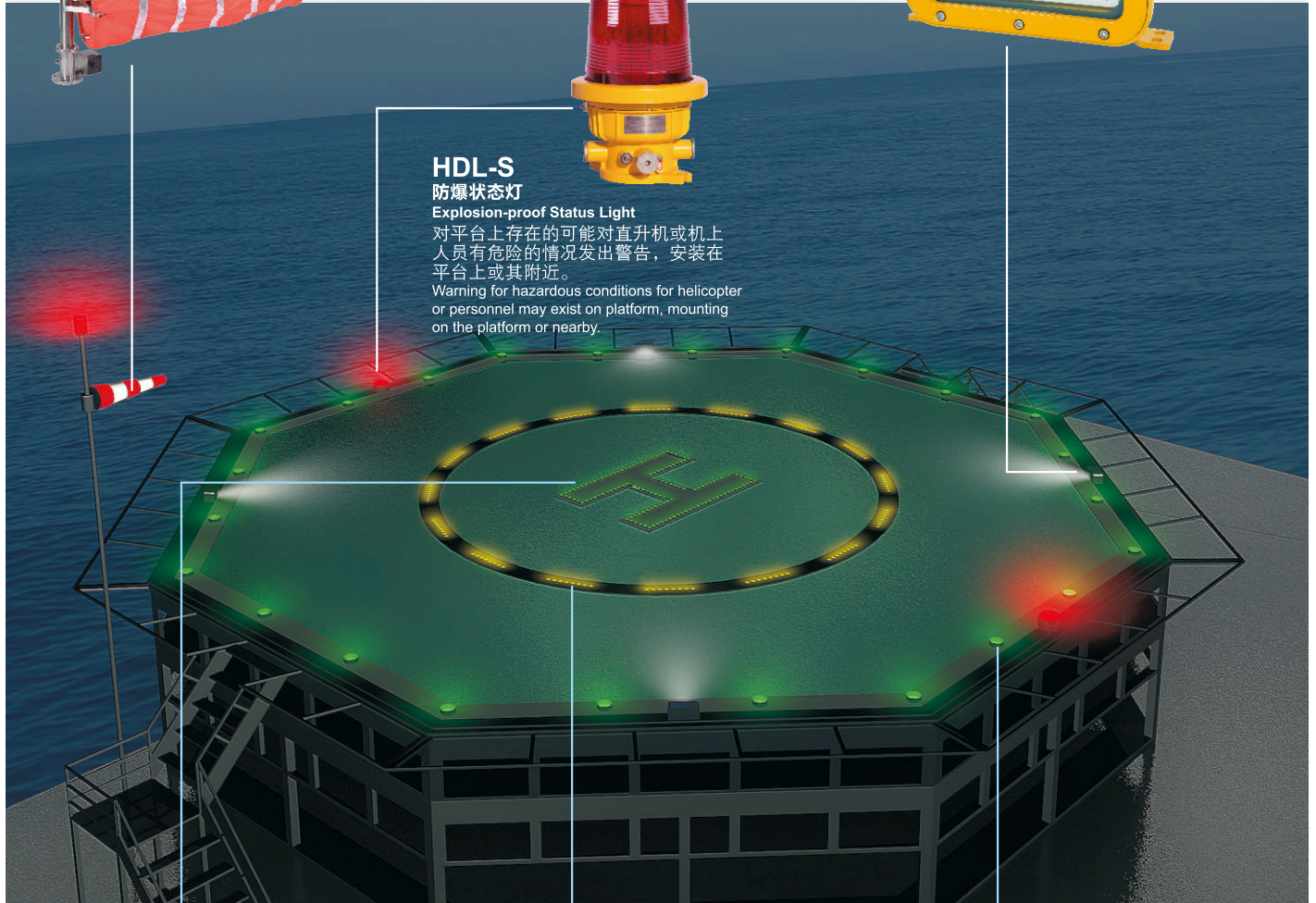
HDL-P

防爆边界灯

Explosion-proof Perimeter Light

均匀分布在平台的边缘，为直升机飞行员指明降落的边界范围。

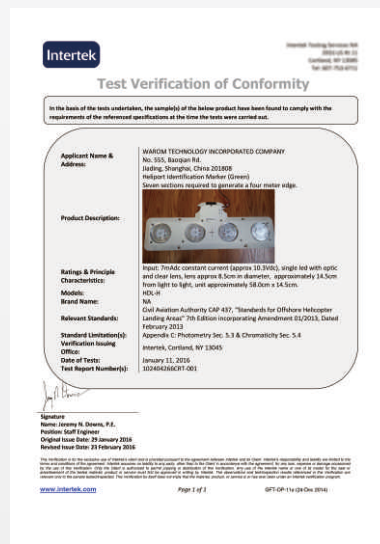
Distributed on the boundary of platform, provide boundary range of lighting indication of sign for helicopter pilot.



产品证书

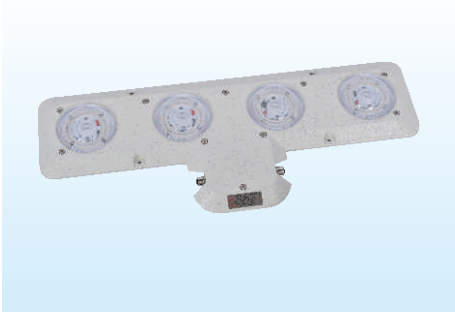
Product Certificate

- ◆ 产品取得了Ex、ATEX、IECEX等防爆证书
- ◆ 产品取得了CAP437标准证书
- ◆ 产品取得了CCS型式认可证书
- ◆ Products with Ex, ATEX, IECEX and other explosion-proof certificates
- ◆ Products with CAP437 standard certificate
- ◆ Products with CCS classification type approval certificate



平台灯具介绍 / Platform lamp specification

- ◆ 系统满足CAP437、国际民航ICAO规范；
- ◆ 所有安装在直升机平台上的产品和配件，适用于环境温度范围（-40℃~+55℃）内安装操作；
- ◆ 所有安装在直升机平台上的防爆灯及外露紧固件，均能够抗海洋恶劣环境的腐蚀；
- ◆ 所有的灯具最少满足IEC 国际保护（IP）标准IP66 的要求，也就是防尘和防强力水喷注。
- ◆ Systematically meet CAP 437, ICAO standards;
- ◆ All the products and accessories installed on the platform of the helicopter platform are suitable for mounting in the range of ambient temperature(-40°C~+55°C);
- ◆ All explosion proof lamps and exposed fasteners installed on helicopter platforms can resist the corrosion of ocean environment.
- ◆ All lamps meet at least the requirements of the IEC international protection (IP) standard IP 66, i. e. Dust proof and strong water injection.



HDL-H

直升机平台防爆H灯
Helideck Explosion-proof H Light
Ex d e mb IIC T6 Gb

- ◆ 壳体采用优质海工铝，适用于海洋环境；
- ◆ LED绿色光源，寿命长达10万小时；
- ◆ 可通过控制系统，对灯具发出调光指令，实现灯具标准亮和明亮的切换；
- ◆ 专业光学软件设计的二次配光系统，符合CAP437标准要求；
- ◆ 总高度≤25mm，防护等级高达IP67。

- ◆ Enclosure uses high quality maritime aluminium alloy, which is applied to the ocean environment.
- ◆ LED green light source, service life is up to 100000 hours.
- ◆ Standard light and bright light of light fittings can be switched through controlling the system and the dimming instruction of light fittings.
- ◆ Professional optics software designed secondary light distribution system, conform to CAP437 standard requirements.
- ◆ Total height is less than 25mm, protection degree is higher to IP67.



HDL-C

直升机平台防爆C灯
Helideck Explosion-proof Circle Light
Ex d e mb IIC T6 Gb

- ◆ 壳体采用优质海工铝，适用于海洋环境；
- ◆ LED黄色光源，寿命长达10万小时；
- ◆ 可通过控制系统，对灯具发出调光指令，实现灯具标准亮和明亮的切换；
- ◆ 专业光学软件设计的二次配光系统，符合CAP437标准要求；
- ◆ 总高度≤25mm，防护等级高达IP67。

- ◆ Enclosure uses high quality maritime aluminium alloy, which is applied to the ocean environment.
- ◆ LED yellow light source, service life is up to 100000 hours.
- ◆ Standard light and bright light of light fittings can be switched through controlling the system and the dimming instruction of light fittings.
- ◆ Professional optics software designed secondary light distribution system, conform to CAP437 standard requirements.
- ◆ Total height is less than 25mm, protection degree is higher to IP67.



HDL-P

防爆边界灯
Explosion-proof Perimeter Light
Ex d e mb IIC T6 Gb

- ◆ 壳体采用316不锈钢精铸而成，精加工后表面喷塑，防强腐蚀；
- ◆ LED绿色光源，寿命长达10万小时；
- ◆ 专业光学软件设计的二次配光系统，符合CAP437标准要求；
- ◆ 总高度≤100mm，防护等级高达IP66。

- ◆ Enclosure is precision casting by 316 stainless steel, powder coated on surface after finish machining, strong corrosion resistance.
- ◆ LED green light source, service life is up to 100000 hours.
- ◆ Professional optics software designed secondary light distribution system, conform to CAP437 standard requirements.
- ◆ Total height is less than 100mm, protection degree is higher to IP66.



HDL-F

直升机平台防爆泛光灯

Helideck Explosion-proof Floodlight
Ex d e mb IIC T5 Gb

- ◆ 壳体采用海工铝，经防腐处理后表面喷塑；
- ◆ LED白色光源，寿命不低于6万小时；
- ◆ 内装恒压恒流驱动电源，宽电压输入，恒功率输出，启动快，性能稳定，防浪涌、过流、开路、短路等保护功能；
- ◆ 总高度≤135mm，防护等级高达IP66。

- ◆ Enclosure uses maritime aluminium alloy, powder coated on surface after preservative treatment.
- ◆ LED white light source, service life is up to 100000 hours.
- ◆ In-built constant voltage constant current driving power, wide voltage input, constant power output, fast start, stable performance, surge resistance, overcurrent, open circuit, short circuit, etc. protection function.
- ◆ Total height is less than 135mm, protection degree is higher to IP66.



HDL-S

防爆状态灯

Explosion-proof Status Light
Ex d e mb IIC T6 Gb

- ◆ 壳体采用海工铝，经防腐处理后表面喷塑；
- ◆ 内装集成芯片，具有多种保护电路，性能可靠；
- ◆ 红色LED闪烁发光，闪烁频率显示危险状态指示，符合CAP437标准要求；
- ◆ 总高度≤250mm，防护等级高达IP66。

- ◆ Enclosure uses maritime aluminium alloy, powder coated on surface after preservative treatment.
- ◆ In-built integrated chip, with multiple protective circuit, reliable performance.
- ◆ Red LED flash, flicker frequency shows hazardous situation indication, conform to CAP437 standard requirements.
- ◆ Total height is less than 250mm, protection degree is higher to IP66.



HDL-W

防爆风向灯

Explosion-proof Wind Direction Lamp
Ex d e IIC T6 Gb / Ex tD A21 IP66 T80°C

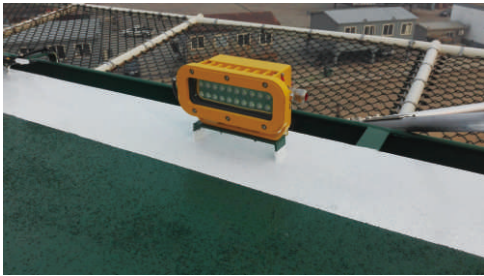
- ◆ 不锈钢316骨架，灯具为海工铝材质，防腐处理后表面喷塑；
- ◆ LED白色光源，寿命长达6万小时；
- ◆ 活动滑环结构，随风向水平360°自由旋转；
- ◆ 防护等级高达IP66。

- ◆ Stainless steel 316 framework, lamp is of maritime aluminium alloy, powder coated on surface after preservative treatment.
- ◆ LED white light source, service life is up to 60000 hours.
- ◆ Flexible slip ring structure, horizontal 360° free rotation with wind.
- ◆ Protection degree is higher to IP66.

现场应用 Field Application

我们重视产品的质量，重视客户的需求，
产品已应用于国内外多个项目，
深受用户好评！欢迎您的意见和反馈。

We attach importance to the quality of the products
and pay attention to the needs of our customers.
The products have been applied to many projects at
home and abroad. Well received by the users!
Welcome your opinion and feedback.



直升机平台防爆泛光灯
Helideck Explosion-proof Floodlight



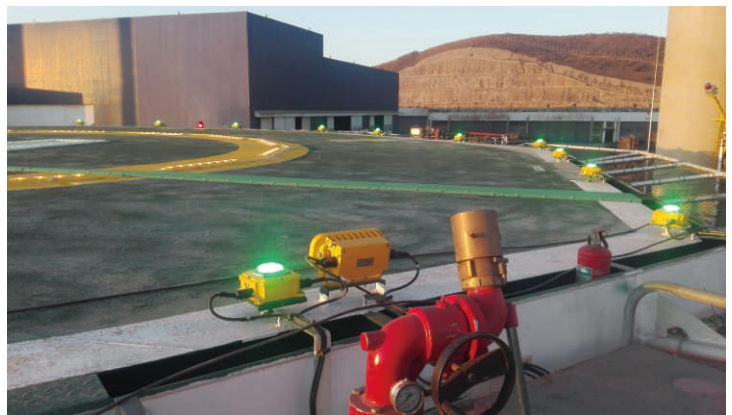
防爆风向灯
Explosion-proof Wind Direction Lamp



直升机平台助降系统夜景图
Night View Map of Helicopter Landing Platform Aid System



直升机平台助降系统效果图
Effect Map of Helicopter Landing Platform Aid System



防爆边界灯
Explosion-proof Perimeter Light

现场服务

Field Service

我们组建了直升机平台系统的专业团队，集研发、销售、技术服务、现场安装调试于一体，为客户提供全方位服务。

我们提供C灯、H灯现场安装的电缆和安装附件，并由专业的技术团队负责现场安装与调试。我们希望与客户密切合作，积极交流，提供最佳解决方案，在更多的领域开展合作。

We set up a professional helicopter platform system team, integrated research and development, sales, technical services, on-site installation and commissioning, providing comprehensive service for customers. We provide the cables and mounting accessories for Circle lamps, H lamps, and on-site installation and commissioning is provided by a professional technical team.

We hope to cooperate closely with customers, actively exchange and develop innovative solutions so that our products will continue to improve.



C灯现场安装
Circle Lights On-site Installation



H灯现场安装
H Lights On-site Installation



技术人员现场调试
Technical Staff On-site Commissioning



技术人员现场测量
Technical Staff On-site Commissioning

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公众号



Pubic Account



官方网站



Official Website



珍惜资源, 善待环境

Take good care of the resources. Be kind to the environment