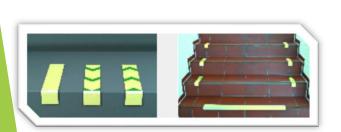


## **Photoluminestcent System**





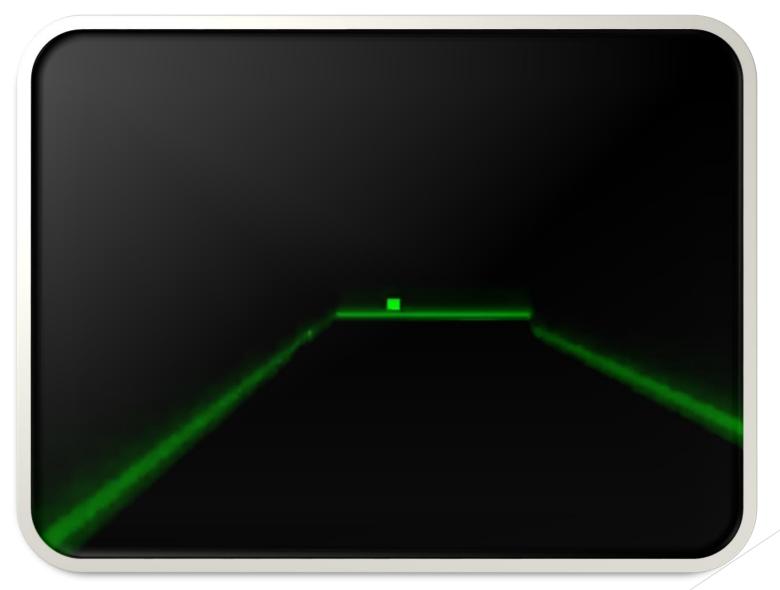




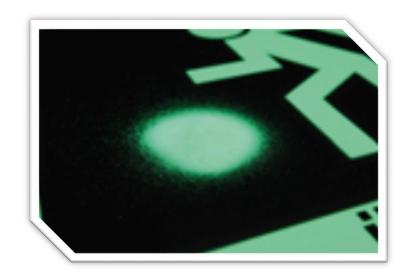




# SAFETY GUIDANCE SYSTEMS

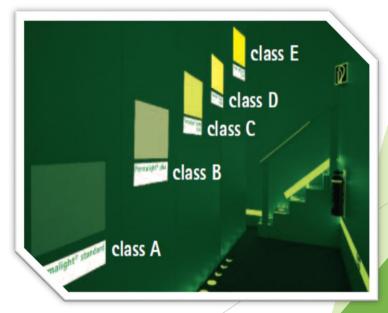


## GLOW IN DRAK? PIGMENTS



There are two sorts of photoluminescent pigments: Zinc Sulfide and alkaline earth, also called rare earth pigments. The alkaline earth pigments are higher quality pigments and reach considerably better luminance values. Depending on the application purpose, different grain sizes are being used.







Non-toxic

Flame retardant

Work without electricity

Free of Phosphorus

## STANDARD AND COMPLIANCE

- ASTM E2072 : Standard Specification for Photoluminescent Safety Markings
- DIN67510 : LONGTIME AFTERGLOWING PIGMENTS AND PRODUCTS (Measurement and marking at the manufacturer)
- NFPA101 : Life Safety Code
- UL1994 : Luminous Egress Path Marking System
- ISO (International Organization for Standardization): ISO 15370–Low-Location on Passenger Ships, ISO 16069–Graphical Symbols, Safety Signs, Safety Way GuLighting idance Systems (SWGS) and ISO 7010–Graphical symbols Safety colours and safety signs -- Safety signs used in workplaces and public areas.
- etc



## CAUSE CRITICAL

(ปัจจัยความเสี่ยง)

- ► Earthquake ---- แผ่นดินไหว
  - ► Conflagration ---- อัคคีภัย
    - ► Terrorism ---- วินาศกรรม
  - ▶ Tsunami ---- สึนามิ
- ▶ Power failure for long time ---- ไฟฟ้าดับเป็นเวลานาน





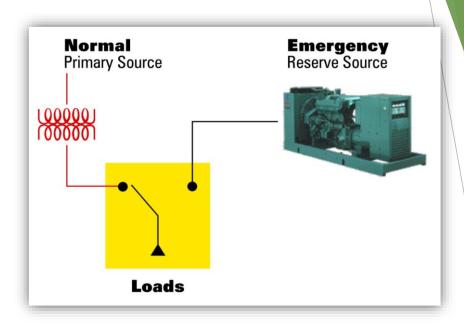


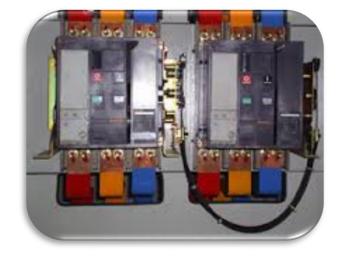


## CAUSE CRITICAL

# (ปัจจัยความเสี่ยง)







- ► ATS % Transfer
  - ►สัญญาณสั่ง Start มีปัญหา
- ▶เครื่องยนต์ขัดข้อง

# ข้อกำหนดตามกฎหมาย

จำเป็นต้องติดตั้ง ไฟฉุกเฉิน และ ป้ายบอกทาง

โดยมี Battery back up อย่างน้อย 2 ชั่วโมง

- ความเสี่ยง
  - ไม่ทำงาน ตกหล่น จากแรงสั้นสะเทือน
  - ขาดการบำรุงรักษา แบตเตอรี่หมดอายุ
  - อาจเกิดลัดวงจร จากน้ำจากระบบดับเพลิง



# ความเสี่ยง







FIRE HOSE REEL

ป้ายระบุตำแหน่งถังดับเพลิง ปกติ



ไม่สามารถมองเห็นได้ในกรณี มืดสนิท

# ความเสี่ยง





หกล้ม บาดเจ็บ เหยียบกัน

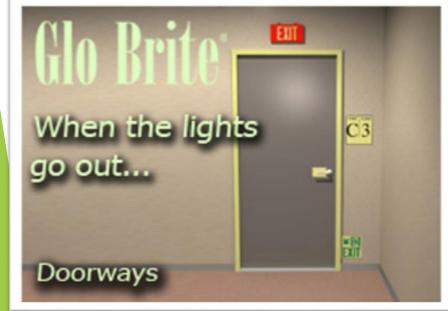
# PHOTOLUMINESCENT GUIDANCE SYSTEM

ระบบน้ำทางเรื่องแสง

เพื่อการอพยพความปลอดภัย

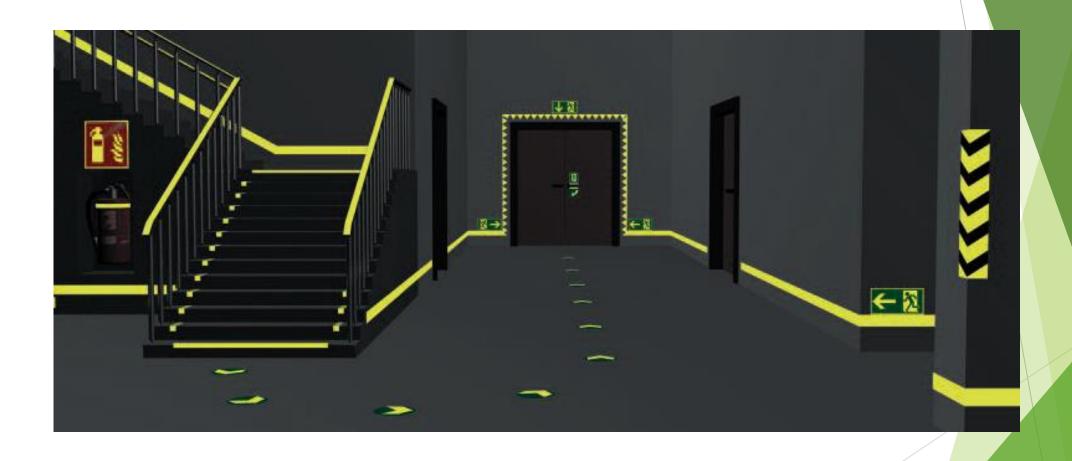
**Guidance System** 







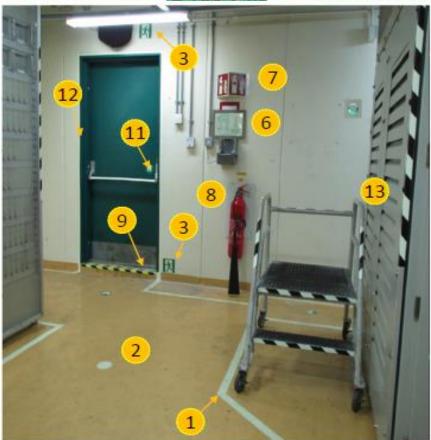
# SAFETY GUIDANCE SYSTEM



- 1. Anti-slip marking strips for floor demarcation and showing exit path
- 2. Anti-slip floor dots for exit path marking
- 3. High level and low level directional signs
- 4. Bumper guards for visual warning and injury protection against obstacles
- 5. Marking strips highlight key switches/ID on panel cabinet
- 6. Photoluminous evacuation map
- 7. V-shape fire equipment signage

- 8. Fire extinguisher Backing
- 9. Anti-slip & warning aluminium stair nosing
- 10. Day Light Fluorescent anti-slip marking (R13)
- 11. Push Sign for door opening marking
- 12. Vinyl guidance line for door frame/highlight marking
- 13. Photoluminious Warning Marking (Blk/White)
- 14. Protection Corner

#### RMAIGHT Photo Reports for HV Room G07





Made in German

GREEN SOLUTIONS

· With normal lighting

- 1. Anti-slip marking strips for floor demarcation and showing exit path
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#### ERMAIGHT Photo Reports for HV Room G07







Blackout Situation

 without normal lighting and EXIT light-box

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#### ERMAIGHT Photo Reports for HV Room G07





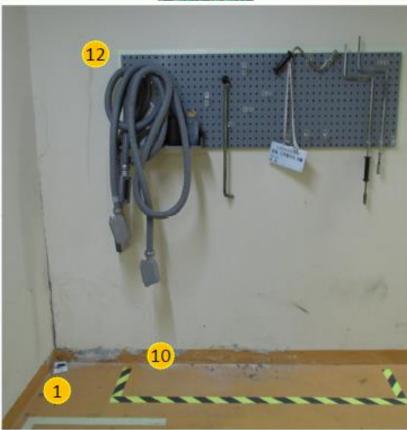


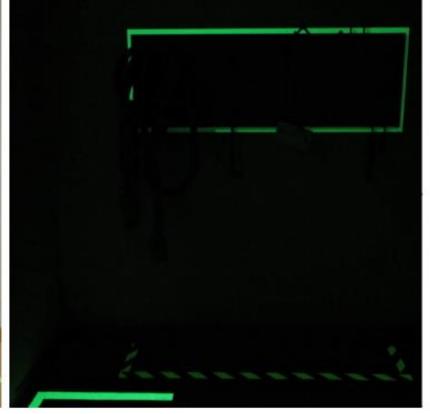
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#### PERMAIGHT Photo Reports for HV Room G07



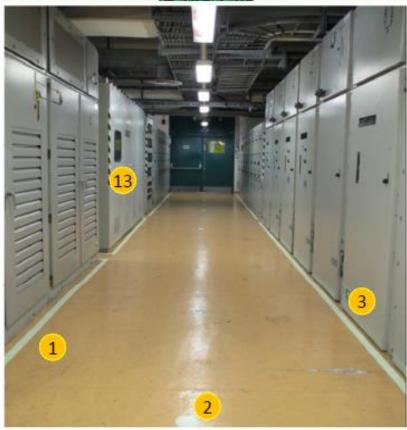


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#### PERMALIGHT Photo Reports for HV Room GO





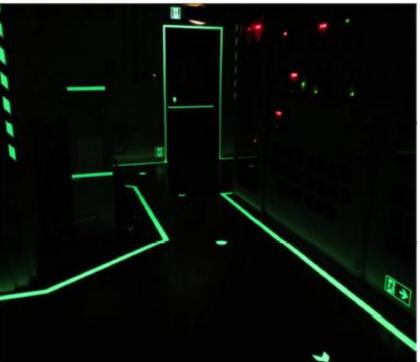
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#### ERMAIGHT Photo Reports for HV Room G07





Made in German

GREEN SOLUTION

· With normal lighting

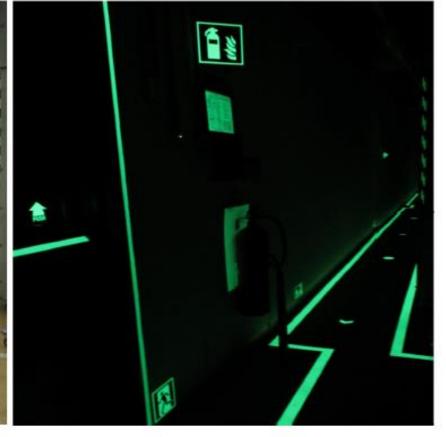
- Blackout Situation
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#### FRMA GHT Photo Reports for HV Room G07





GREEN SOLUTIONS

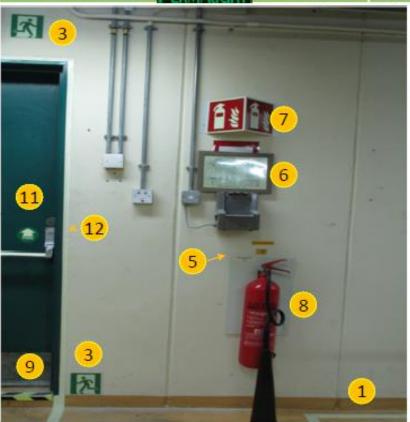
· With normal lighting

Blackout Situation
 -without normal lighting and EXIT light-box

- 1. Anti-slip marking strips for floor demarcation and showing exit path
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#### PERMAIGHT Photo Reports for HV Room GO







Made in German

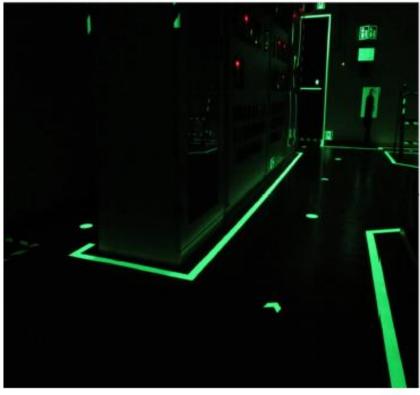
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#### PRMAIGHT Photo Reports for HV Room G07





Made in German

GREEN SOLUTION

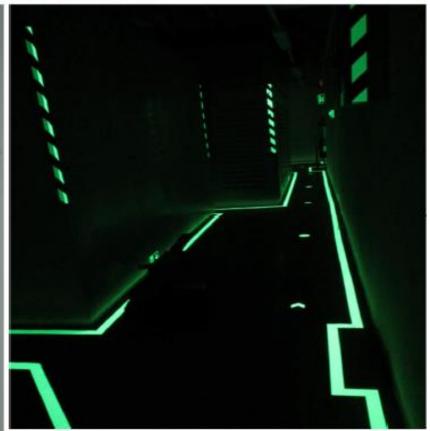
· With normal lighting

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#### ERMA GHT Photo Reports for HV Room GO





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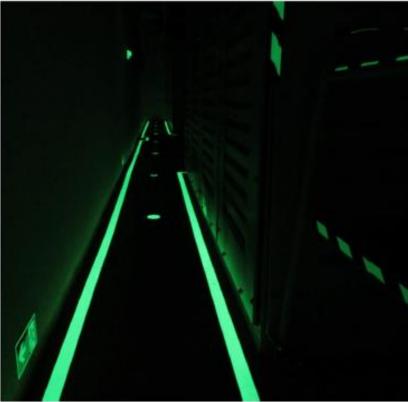


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#### ERMAIGHT Photo Reports for HV Room GOT





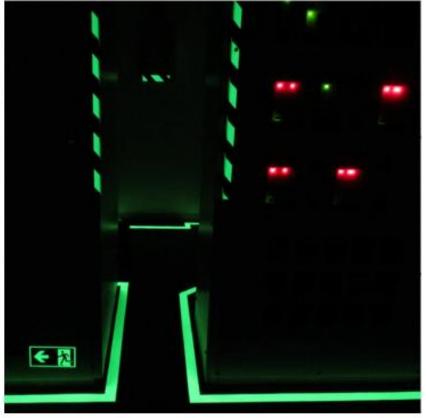
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#### PERMAIGHT Photo Reports for HV Room G07





Made in German

GREEN SOLUTIONS

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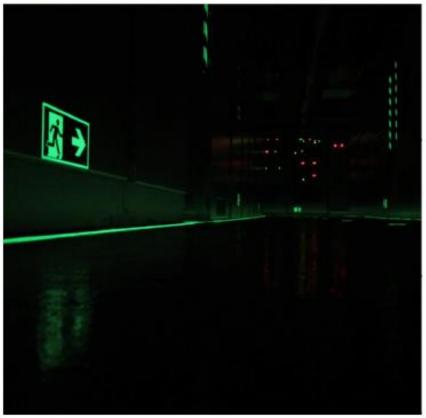
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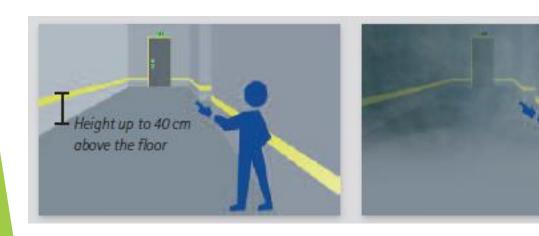






# Safety Guidance System Guidance Lines for Walls







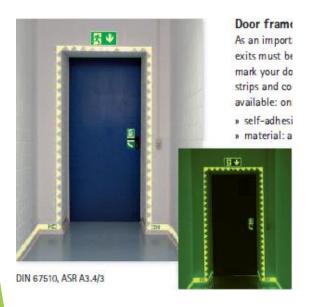












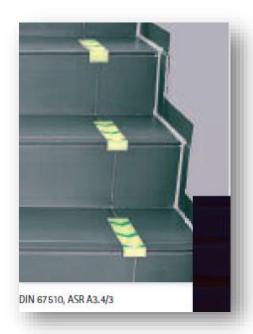




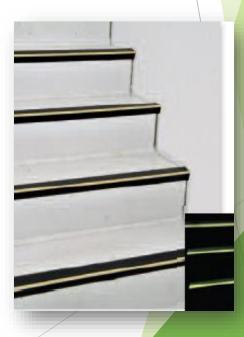














# BUMPER











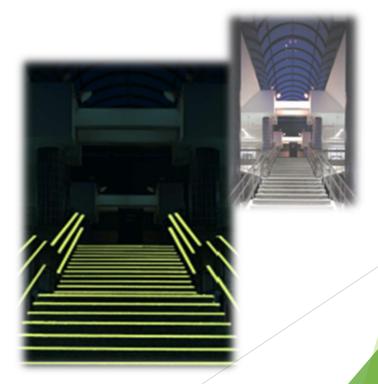
Luminance Quality	Lighting situation/Application area (best suitable for)	Luminance 10 min./60 min.	Decay time	Specifications DIN 67510
Permalight® standard	Bright areas with permanent lighting or daylight, e.g. office rooms with windows.	23/3 mcd/m²	340 min. = approx. 6 h	23/3 mcd/m²
Permalight® plus	Areas with constant lighting during operation time: in such office rooms dangerous spots can be recognized without difficulty.	55/8 mcd/m²	950 min. = approx. 16 h	50/7 mcd/m²
Permalight® power 150	Areas with damped or only temporary lighting. Required for all buildings that are subject to ASR3.4/3: hospitals, nursing homes, airports, department stores, large hotels, power plants, event locations. Industry: factory halls, warehouses, production areas, hallways, machinery rooms etc. (according to. ASR 7.3 min. 50 Lux constant lighting/4.000 K exitatory light during utilisation).	150/22 mcd/m²	2100 min. = approx. 35 h	140/20 mcd/m²
Permalight® power 300	For areas with poor lighting and specific requirements on safety. Special solutions in accordance with ASR, ships, tunnels, abroad, etc. For internal demands of the client.	300/45 mcd/m²	3380 min. = approx. 56 h	260/35 mcd/m²
Permalight® power 520	For special surroundings with very low lighting or only very short excitation intervals such as tunnels, underground crossing, subways, etc. For special solutions in cooperation with the client.	520/70 mcd/m²	5700 min. = approx. 95 h	520/70 mcd/m²
Permalight® spezial	Individual solutions for all special cases.	<ul><li>depending on requirement –</li><li>Ask our specialists!</li></ul>		

### **APPLICATION AREAS: METRO**



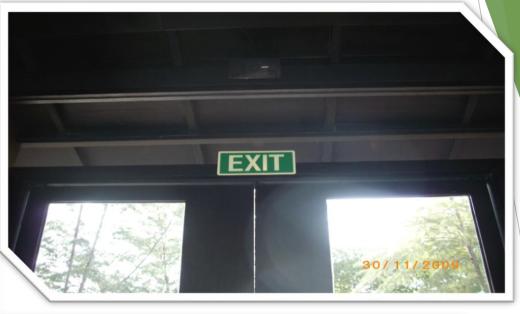






























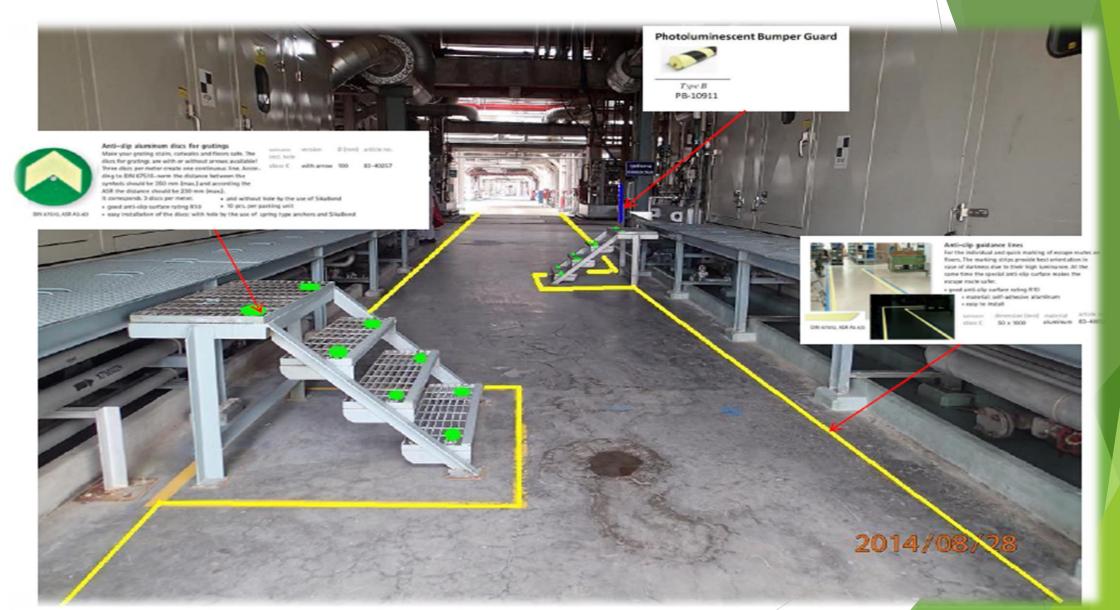
### REFERENCES โรงแยกก๊าซธรรมชาติ จ.ระยอง

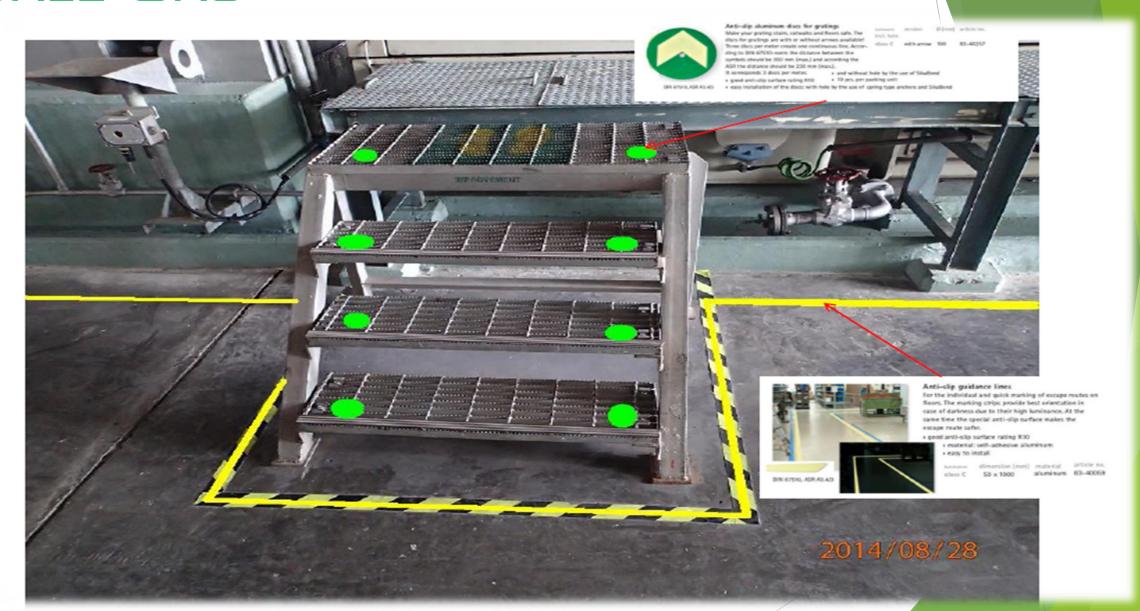


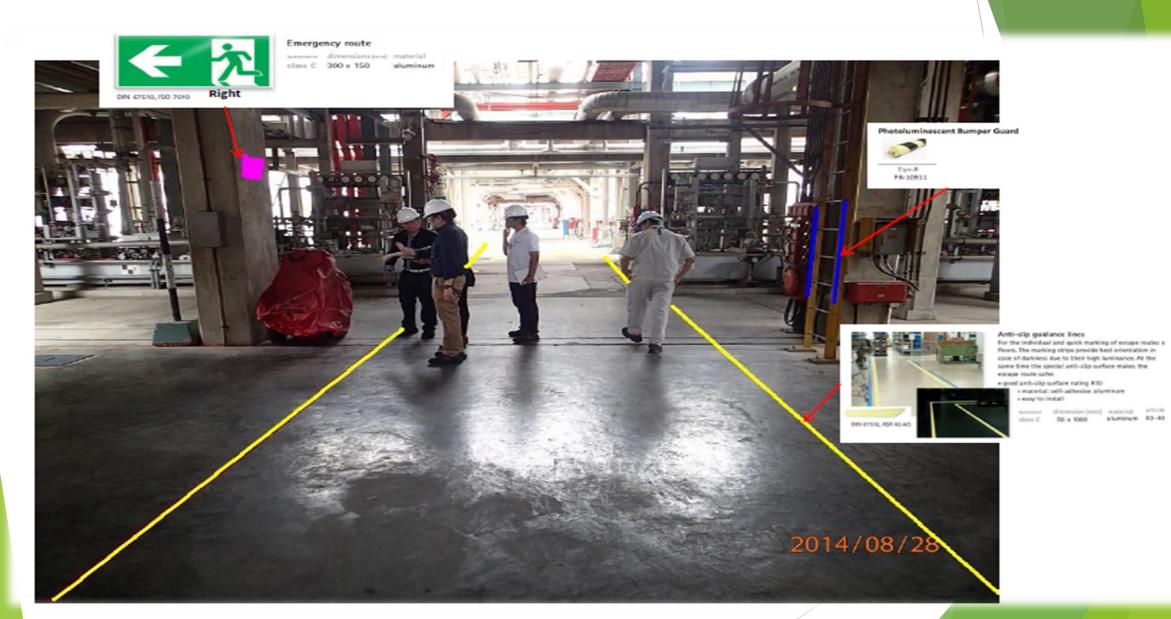




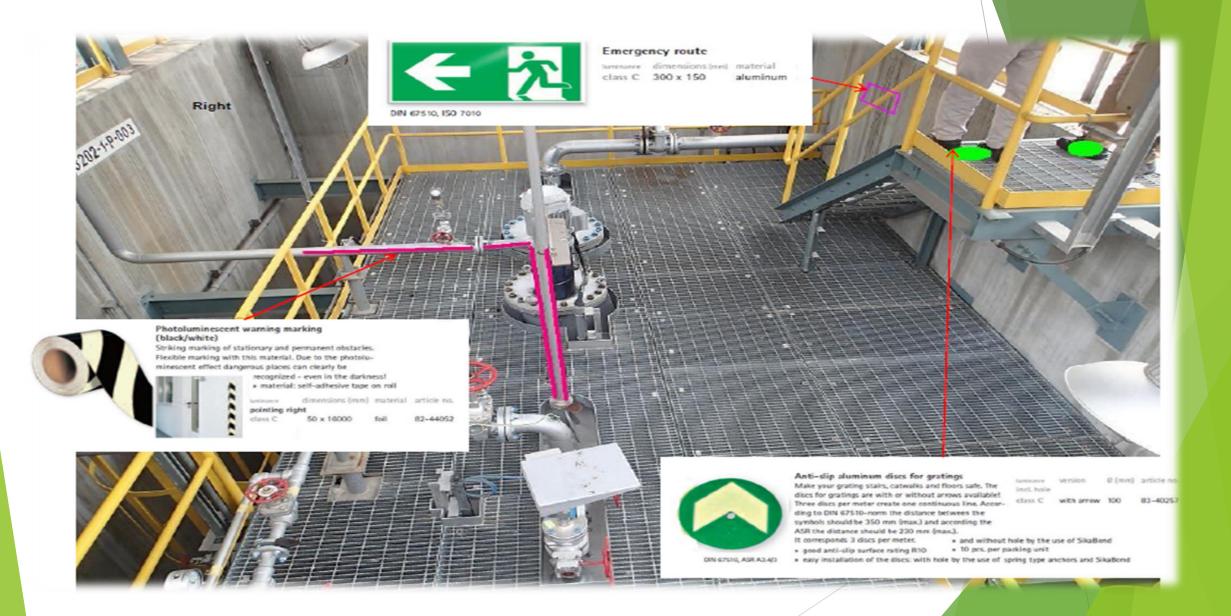
















DIMETOLO, ASR A3.413

#### Anti-slip dats

Photolaminescent anti-plip dots with high luminonce are well suited for the installation of a safety guidance system. Place at least 3 dats per meter. Available in two versions and sizes: with or without answ, in Ø 60 mm and Ø 100 mm. We recommend our 3M Edge sealing compound and 3M Scotch Weld primer for a perfect

- a good anti-silp surface rating R10
- · material: self-adhesive polycarbonate
- . 10 pts. per packing self

-	200000	to formed	
class C	with arrow	100	83-4011



Striking marking of stationary and permanent obstacles. Flexible marking with this material. Due to the photoluminescent effect dangerous places can clearly be

> recognized - even in the darkness! » material: self-adhesive tape on roll

dimensions (mm) material article no.

pointing right

class C 50 x 16000 82-44052







#### Guidance line on rolls

Photoluminescent guidance lines for the striking marking of dangerous places and obstacles such as doors, machinery and much more.

- \* tape 25 m in 3 different widths
- » self-adhesive tape with excellent adhesion
- » easy installation on all clean surfaces

Ismirance dimension (mm) material article no.



### Before



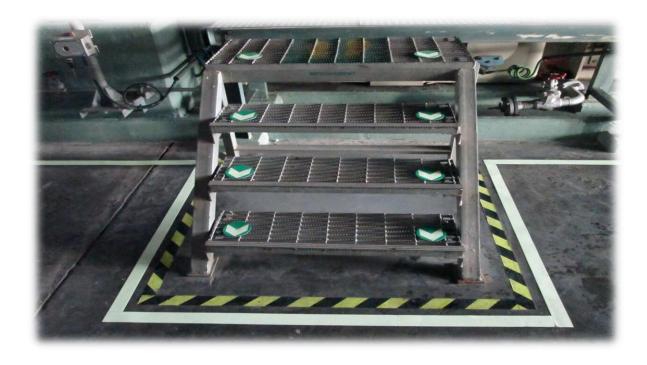


### Before





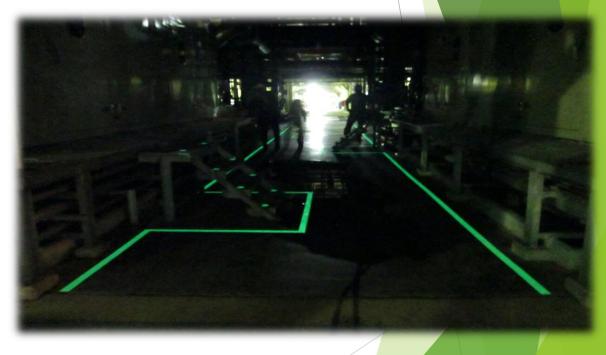
### **Before**





### Before





### Before





**Before** 





### **Before**





### **Before**





**Before** 





## ป้ายเรื่องแสง และแถบเรื่องแสง

# CPF โรงงานอาหารสำเร็จรูป หนองจอก

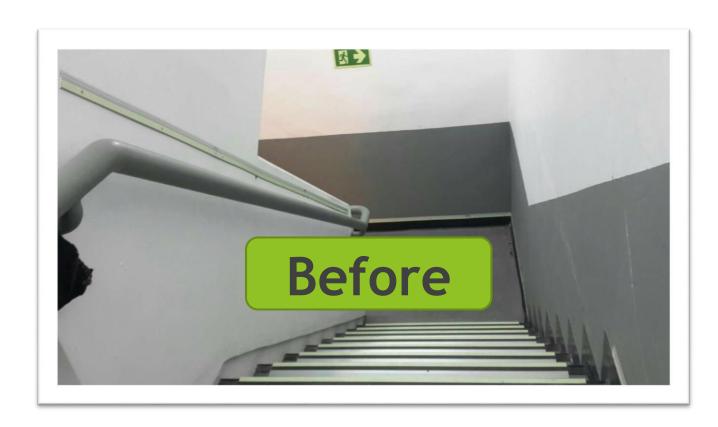


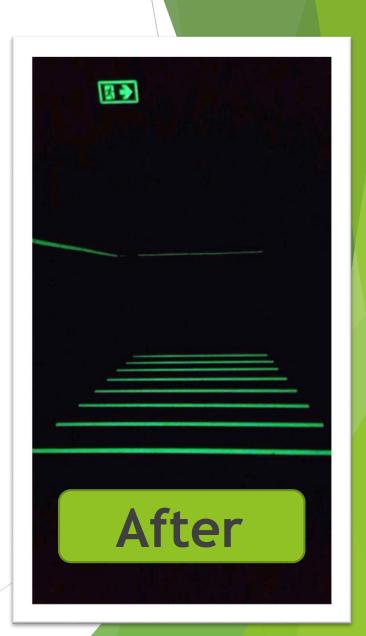




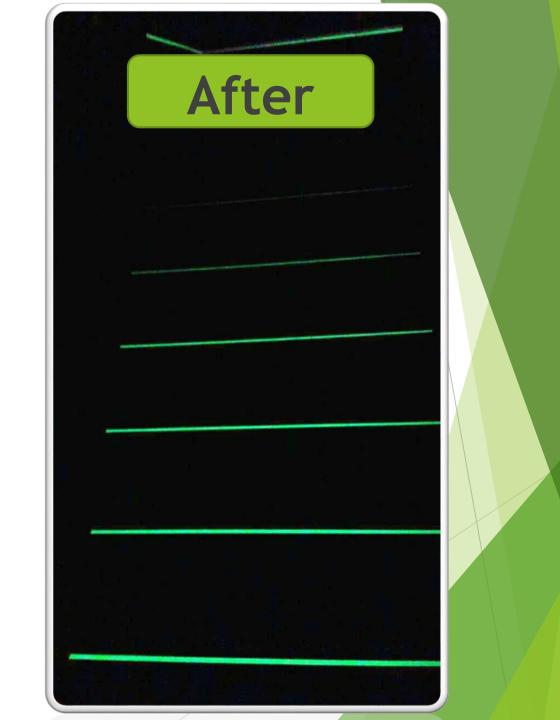
### ตัวอย่าง ป้ายเรื่องแสง และแถบบันได

# เส้นทางอพยพ







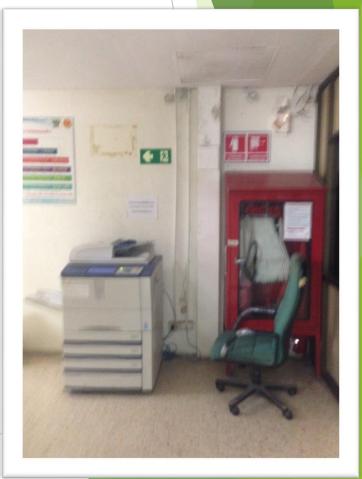












#### REFERENCE CP RETAILINK



ส่วน โรงคั่วกาแฟ

### ซีพี รีเทลลิงค์ จำกัด



### โรงคั่วกาแฟ CP RETAILINK







cp retailink

### โรงคั่วกาแฟ CP RETAILINK



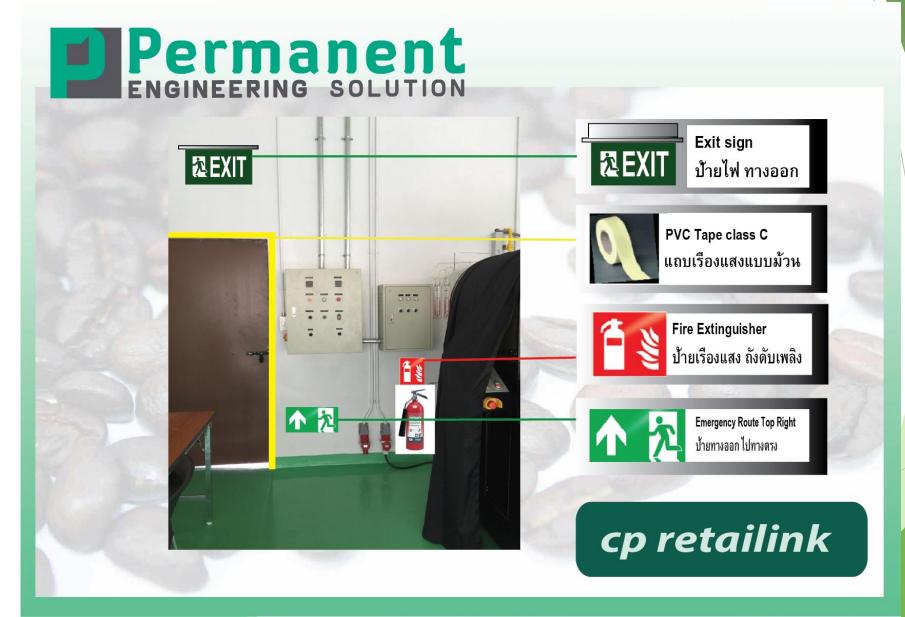


cp retailink

### โรงคัวกาแฟ CP RETAILINK



### โรงคั่วกาแฟ CP RETAILINK



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cp retailink

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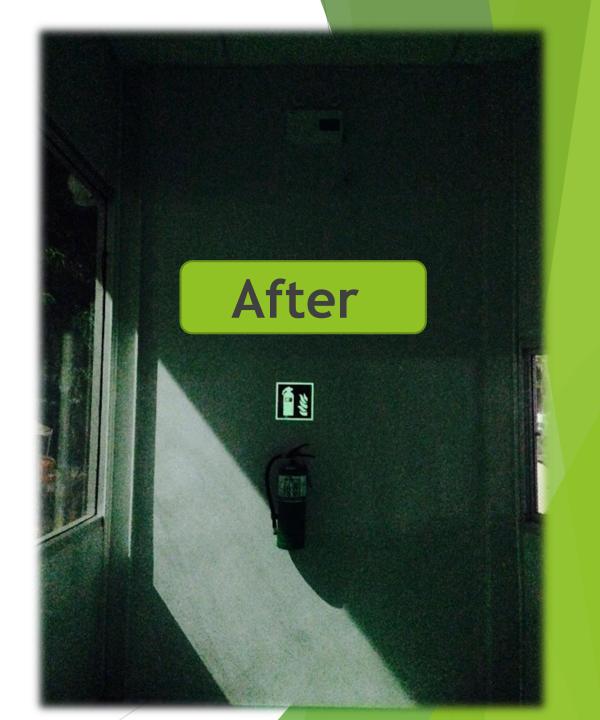




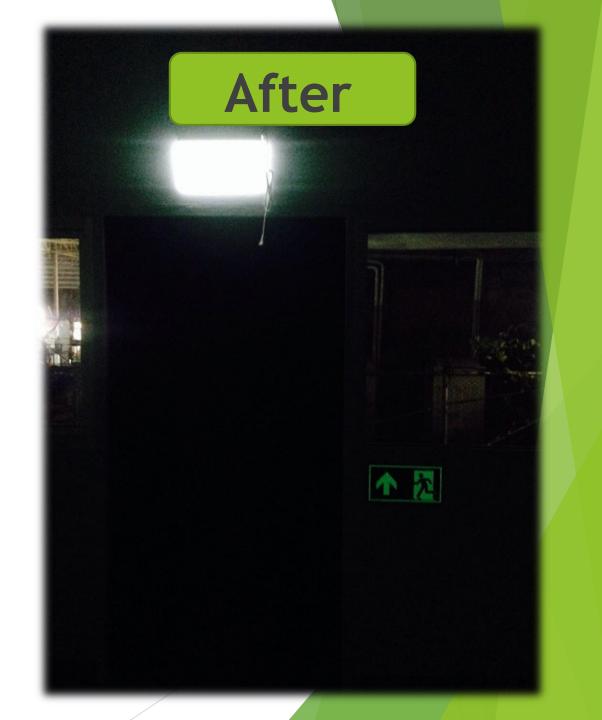


cp retailink





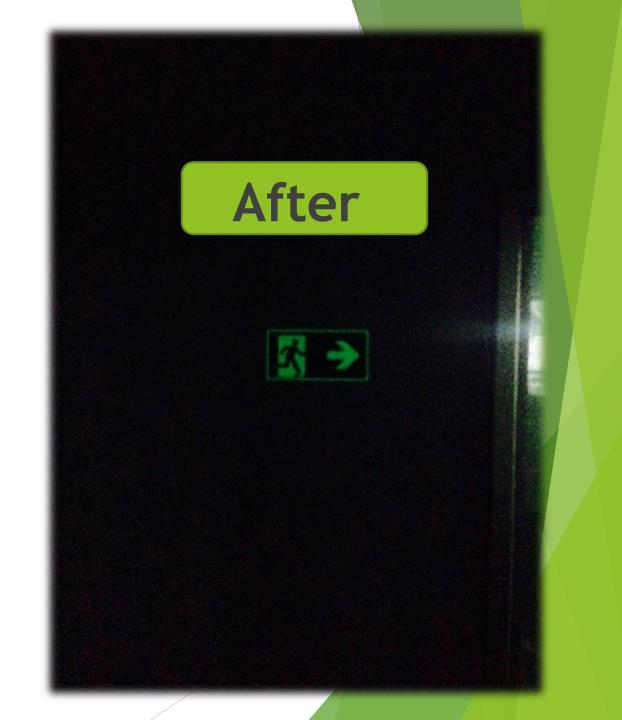




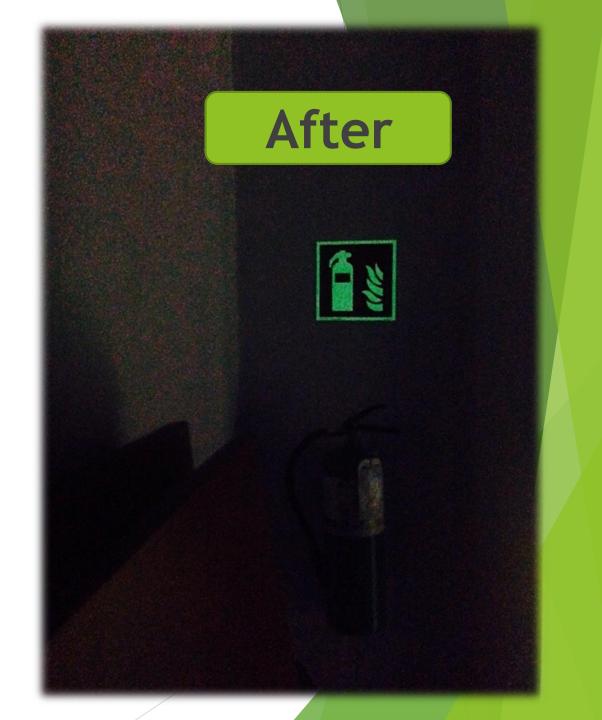
















### จุดอื่นๆ ในโรงคั่วกาแฟ



