

PcP

Engineering Safety

LHD[®] fire-protection solutions for transformer bunds

Engineer safe, fireproof transformer bunds with PcP LHD[®] fire protection gratings in galvanised steel or aluminium. The ultimate safety solution for transformer bunds has been designed and developed to meet the strictest safety.



LHD® fire-protection solutions for oil filled transformer station bunds

The main purpose of a transformer station is to secure a safe distribution of electrical power to the grid. Owing to the environment, a transformer station poses a great number of safety risks. Burning transformer oil that has been ignited due to a transformer rupture can be a large problem and the fire can cause huge damage to the surroundings; the environment, to the workers, and the entire power station. When considering the potential accidents, the design of the transformer station pit is critical as. To handle leaking oil, a transformer is often placed above a concrete pit (transformer pit) to capture all the leaking oil. For this purpose, the pit needs to be constructed to a size equivalent to the volume of oil from in the transformer station; in case of leaks and an allowance for rainfall water. Furthermore, the oil must be able to drain away from the surface as quickly as possible (600 litres oil per m² per minute).

Maximum safety and reliability

Substations are designed differently throughout Europe, despite the requirement and criteria being the same. Some utilise stones supported by open mesh flooring below, as this restricts oxygen. However, the capacity requirement is still the same and therefore the pit has to be designed larger to accommodate the 300mm of stone. Also, this does not permit any easy inspection or maintenance. Others use loose panels in the pit, which appear cheaper, ultimately incur additional costs as installation time is greatly increased. Also the gaps between these panels increase the oxygen level thus creating potential issues in the event of fire.



To ensure maximum safety, PcP has designed a cost-efficient solution requiring a little to no maintenance, a smaller pit and 100 % reliability regarding design criteria. PcP's LHD® Low Hole Density gratings are welded together to minimise the level of air flow combined with excellent drainage to ensure any flame extinguishment. In addition, PcP LHD® welded gratings are easy to replace. Each solution is carefully designed and customised to meet your safety requirements and design criteria.

Simple, safe and cost-effective

PcP's LHD® gratings include; beams, angle steel and bolts to secure easy mounting of the angle steel to the concrete. With a very high slip resistance of minimum R11 and high load capacity, the LHD® is designed to provide maximum safety for the workers on a transformer substation.



“Made in Denmark” and 100% recyclable

Designing safe solutions for transformer station bunds is one of our core competences where the LHD® fire protection grating is introduced to prevent fire on transformer stations. Since the late 1980s, PcP has been designing, developing and manufacturing safe fire-protection solutions for offshore, oil and gas applications. PcP's products and solutions including the LHD® are environmental friendly, durable and made of 100% recyclable material. Designed to extinguish the fire within 6 seconds, this is probably the safest solution in the market! Our task is to help you engineer the safest solution.

OPTIMO® Gratings LHD®

PcP's LHD® is a Low Hole Density punched grating designed with the exact number of holes (less than 5% airflow) in order to extinguish fire and to drain leaking oil at the same time. Type LHD® is applied where both slip resistance and flame-retardance are required and is often used as heat shielding on oil rigs or flooring on transformer substations. The LHD® is a safety grating tested and approved by the Swedish test institute RISE according to the ability to extinguish a fire and draining functionality. The perfect choice for both on and offshore oil platforms and transformer stations.



 **Very little maintenance**

 **Easy to install**

 **Easy to replace**

 **Maximum safety**

 **Excellent strength to weight ratio**

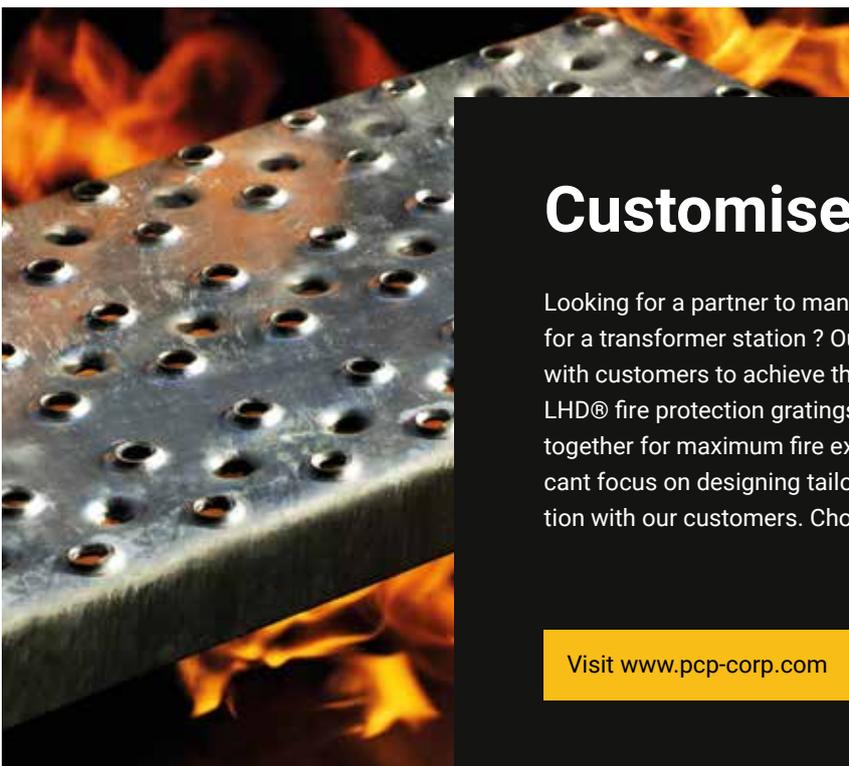
 **Workers safety**

 **Durability**

 **Environmental friendly**

 **Aluminium, steel and stainless**

 **Extinguishment of oil fires**



Customised solution?

Looking for a partner to manufacture a custom bund solution for a transformer station? Our specialists always work closely with customers to achieve the best possible solution. PcP offers LHD® fire protection gratings in aluminium and steel, welded together for maximum fire extinguishment. We always put significant focus on designing tailor made solutions in close collaboration with our customers. Choose PcP as your trusted partner.

Visit www.pcp-corp.com

Engineering Safety™

Safety is at the very heart of our products and through everything we do. Our ambition is to enable our customers no matter their industry to safely operate in their work environment, supported and surrounded by innovative PcP solutions.

DENMARK

Sverigesvej 2-4
DK-7480 vildbjerg
+45 97 13 12 00
info@pcp.dk

SWEDEN

Ruskvädersgatan 3 B
SE-418 34 Göteborg
+46 31 53 59 60
info@pcp.se

NORWAY

Kanalvegen 8
NO-4033 Stavanger
+47 51 95 00 50
salg@pcpnorge.no

GERMANY

Duisbergstraße 13
DE-58339 Breckerfeld
+49 2338 91 81-0
info@pcp-sicherheitsroste.com

BELGIUM

Zoning de Cornémont
Rue de La Légende 34
BE-4140 Sprimont
+32 4 360 94 50
pcp@skynet.be

NETHERLANDS

Havendijk 21
NL-4731 TA Oudenbosch
+31 0165 315300
info@pcpbv.nl

UNITED KINGDOM

Enterprise Drive, Four Ashes
UK-WV10 7DF Wolverhampton
+44 1902 791 792
sales@pcpgratings.co.uk