



FLAMEWOLF - Fire Protection for Hardening Oil Basins

Hardening of steel holds numerous risks of fire. The hardening process starts with the heating of metallic parts to temperatures of up to 900 °C. For hardening, the melting charge is dipped into a 70 °C warm oil bath to obtain the desired chemical and physical characteristics. Besides the new protection concept for machine fire protection, GreCon FLAMEWOLF, GreCon spark detection and extinguishing systems protect production processes in many industries. It detects dangerous ignition sources in time and automatically extinguishes them without interrupting production – and has done so successfully for more than 35 years.

THE RIGHT SOLUTION

- ✓ a fast, reliable spark extinguishing system which is especially adapted to your production
- ✓ the detection of sparks and glowing particles in the areas at risk
- ✓ protection without interrupting production

DANGERS AND RISKS

The hardening process in open oil basins holds a high risk of fire. With the high temperature of hot parts, the oil gas on the oil bath surface ignites. If the parts cannot be completely dipped due to process troubles, there is a risk of the fire spreading in the quenching chamber and to adjoining plant areas.

PROTECTION CONCEPT "GRECON FLAMEWOLF"

To prevent the risk of development and spreading of fire, GreCon developed an innovative extinguishing concept. Spreading of flames is prevented by a fine low-pressure water mist that works as follows:

- ✔ Limitation in space of flame development
- ✔ Immediate cooling effect
- ✔ Prevention of backfire
- ✔ Extinguishment of fire by deoxidation

	Low-pressure water mist extinguishment	Central foam extinguishment	Gas extinguishment
Function principle of extinguishment	Space limitation of flame spreading, deoxidation and extinguishment of the fire	Large-area covering by dense, aggressive foam	Opening of the gas bottle and replacement of oxygen
Availability of extinguishing medium	Unlimited, several successive extinguishments possible	Limited, one-time extinguishment	Limited, one-time extinguishment
Alerting staff	No	No	Pre-alarm and evacuation of staff necessary
Effects on production	Low amount of water in oil bath → Check of water content (crackle test, chemical analysis)	Exchange of the oil and cleaning of mechanical and electronic facilities → Loss of production	Spreading of flames to other production areas possible → Elimination of secondary damage
Costs	Low costs of acquisition, low running costs for the low-pressure water mist extinguishing system	High costs of acquisition, high running costs for each activation of the system caused by cleaning and exchange of the oil and replacement of the foam	High running costs for supply and replacement of the CO ₂ gas
Maintenance/service	By operator and supplier	By supplier	By supplier