



ZINGA®

PP

POWER PLANTS

REFERENCES

UKRAINE

## ZINGA® ON POWER PLANTS

Major failures have occurred in power plants due to single-phase or wet-steam erosion-corrosion, resulting in injuries or loss of life as well as extensive plant downtime. Both nuclear and fossil power plants as well as petrochemical plants are susceptible to erosion-corrosion.

In power plants, corrosion processes are strongly affected by operational measured variables such as environment medium, construction, material and/or mechanical load. The substantial material strains by the operating pressure, the mass flow, the temperature of the cooling water, the special requirements of water chemistry (conductivity) represent a special hazard regarding corrosive material changes in this range.

Important influence factors which can favour corrosion processes at safety-relevant components are the operating conditions existing in Light Water Reactor plants such as water chemistry, assigned materials, mechanical and thermal loads, neutron irradiation, operational state (full power or outage) and geometrical factors. In particular in the first years of nuclear energy production, corrosion damages in the nuclear power plants led to undesired consequences.

ZINGA can be used on all structural steel parts of the power plants, as it provides durable corrosion protection to steel in industrial environments.

### REFERENCES

- AUSTRALIA - Alcoa LTD
- AUSTRIA - Gugler Waterturbines
- BELGIUM - Tractebel Power Station
- CZECH REPUBLIC - Krasikov Transformer Station, Temelin Nuclear Power Plant
- UKRAINE - Kiev Energo Power Plant, Zuyevskaya Thermal Power Plant, Chernobyl Nuclear Power Station
- SOUTH AFRICA - Port Elisabeth Electricity Department

### RUNCORN WTE PLANT (UNITED KINGDOM)

In 2011, the construction of a new Waste-to-Energy facility was started. This project 'Runcorn II', was finished in 2015.

The facility is located in Manchester, UK where it will offer a solution for the large amount of municipal waste by using this waste to produce up to 80 MW of electricity and 54 MW of heat.

The large steel beams at the top of the building, which are too big to be hot dip galvanised, were treated with ZINGA.

This is the first major project in the UK where a combination of hot-dip galvanised and film-galvanised steelwork has been assembled into a single structure.



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