Introduction

Corrosion under insulation (also referred to as corrosion under fireproofing) can occur if a passive fire protection of a steel structure is not correctly installed or maintained. This Energy Industry Data Sheet serves to provide information on the critical aspects of the application and maintenance of Promat FENDOLITE® MII in order to avoid corrosion under insulation.

System design and application

Promat FENDOLITE® MII must always be applied by a Promat Recognised Applicator. Promat Recognised Applicators have received training on the correct application.

Critical element in the design of a fire protection system is to avoid water accumulation behind the fireproofing material. The applied system should therefore

- Contain water shedding details: inclined instead of horizontal top surfaces, to avoid water accumulation.
- Contain joints wherever necessary (e.g. at expansion joints in the steel structure and at terminations of the Promat FENDOLITE® MII to the steel); these joints must be correctly executed and sealed with a mastic sealant in accordance with EIDS 040.
- If steel strips are used to create a termination of the spray (e.g. at the flange tips of the top of a beam), those strips shall be sufficiently thick and protected against weather influence that they don't deform. If they deform, a gap will open between the strip and Promat FENDOLITE® MII and water ingress may occur.
- Where there is any doubt about the possibility to achieve sufficient water shedding, or cyclic expansion movement of the substrate is expected (e.g. storage vessels), it is recommended to apply a suitable top coat.

Maintenance

Correct inspections and maintenance shall be done in accordance with EIDS 029. This will keep the system in shape and avoid water ingress during the service life. If a topcoat is applied, it shall be inspected and maintained in accordance with manufacturer's instructions.

Service life

Corrosion under insulation is not a consequence of the presence of a fireproofing system, but of incorrect application or maintenance. If correctly applied and maintained, the Promat FENDOLITE® MII fire protection system does not negatively affect the service life of a steel structure. Promat FENDOLITE® MII is applied since the 1980's and correctly installed and maintained systems have shown to be in good condition after decades.

The information given in this Application Procedure is based on practical experience, independent and other tests and represents, in Promat's opinion, the best technical advice available. Since the products are applied under circumstances beyond our control, Promat can accept no direct or consequential liability, whether in contract or in tort, for the interpretation of such recommendations and reserves the right to modify the recommendations as necessary. Should it be unclear as to the meaning of any of the instructions given above, or if further information is required, please consult Promat.