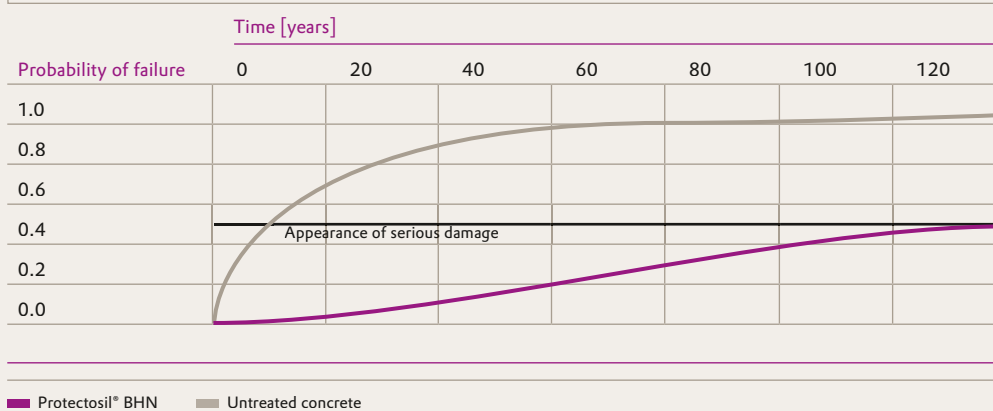


# Case Study: "Container Terminal Zeebrugge"

Protectosil® BHN can prolong structure service life by up to 107 years

Service life prediction for the Zeebrugge Quay Wall



The University of Leuven (Belgium) has monitored the results of the Protectosil® BHN protection on a quay wall in Zeebrugge (Belgium). Measurements of concrete properties and chloride profiles after 12 years were used to develop a service life prediction model based on a time-dependent reliability analysis. This is applicable to concrete deterioration based on various failure mechanisms.

The graph above shows the results of a comparison between a Protectosil® BHN treated and an untreated area. The predicted occurrence of damages is illustrated. The hydrophobation of the quay wall leads to significantly reduced maintenance costs and an extended service life of up to 107 years.\*

The standard Protectosil® hydrophobation is done by spraying the product onto the structure surface. For this purpose, for example, an airless spraygun for liquids can be used.



\*Schueremans et. al, Chloride penetration in RC-Structures in marine climate: Proc. Int. Workshop on durability of reinforced concrete, (2005 Qingdao, China) p. 169-179.