



EFFECTIVE CHARACTERISTICS OF FIRE PROTECTION

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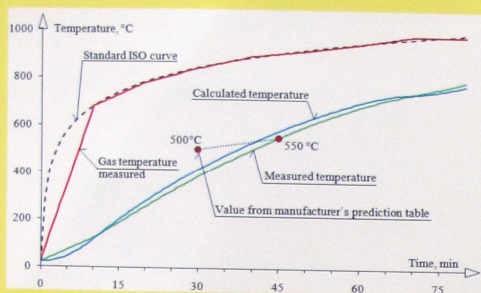
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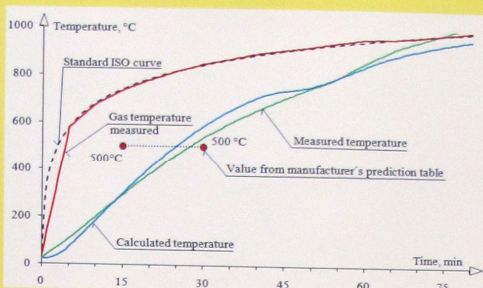
SUMMARY

For three types of fire protection, boards, sprayed coating and intumescent paint, were based on the fire tests calculated the effective characteristics documents a good conservative accuracy of the analytical prediction for commonly used fire protection materials using nominal values, see DIFISEK[®], www.difisek.eu, as well as tables used in prescriptive rules, see Design tables of products PROMAT, www.promatpraha.cz. The protection material.

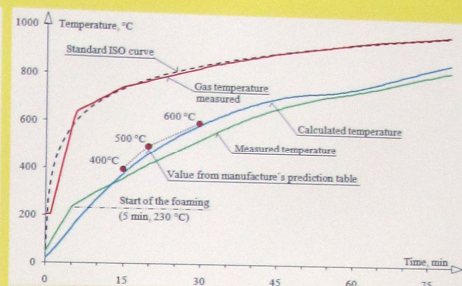
THE PREDICTION AND THE TESTS



Comparison of calculated temperature to measured one for PROMATEC[®]-H boards of thickness $d_p = 7,6$ mm

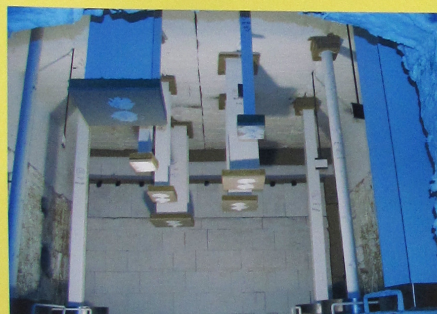


Comparison of the calculated temperature to measured one for sprayed coating TERFIX-P of thickness $d_p = 7$ mm

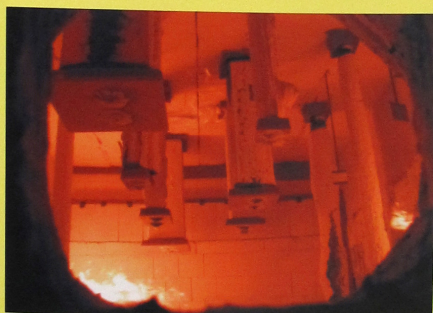


Comparison the calculated temperature to measured one for intumescent painting with dry thickness $d_{dry,thin} = 470$ μ m

FROM THE FIRE TESTS



Before the fire test of Promapaint SC, Pavus a.s., report No. Pr-06-2.019



During the fire test of Promapaint SC, Pavus a.s., report No. Pr-06-2.019



After the fire test of Promapaint SC, Pavus a.s., report No. Pr-06-2.019

EFFECTIVE PROPERTIES

Fire protection	Gas temperature β °C	Unit mass ρ kg/m ³	Thermal conductivity λ W m ⁻¹ K ⁻¹	Specific heat c J kg ⁻¹ K ⁻¹
PROMATEC [®] -H Thickness 8 mm	20	860	0,137	800
	200	860	0,137	825
	500	860	0,135	830
	1000	860	0,223	1369
TERFIX - P	20	440	0,073	924
	200	440	0,073	924
	500	440	0,076	929
	1000	440	0,343	1284
PROMAPAIN [®] -SC Initial thickness: $d_{p,initial} = 470$ μ m Effective thickness: $d_{p,eff} = 8$ mm	20	350	0,20	1100
	200	350	0,20	1100
	500	350	0,20	1100
	1000	350	0,20	1100

Effective properties of the investigated fire protection at elevated temperatures



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