Abstract


The objective of the research "natural fire safety concept" is to establish a more realistic and more credible approach to analysis of structural safety in case of fire that takes account of active fire-fighting measures and real fire characteristics. The European research sponsored by the ECSC started in June 1994 and ended in June 1998. It has been undertaken by 11 European partners and is coordinated by ProfilArbed Research.

This new approach should lead to both financial benefits and better safety guidance. Hence examples of its use should become more numerous. Less money will be spent in attempts to guarantee resistance of structures subjected, for instance, to two hours of a less realistic ISO (or ASTM) fire. Instead it will be evident that it is much better to identify the active fire-fighting measures that provide protection for people, such as detection, alarms, automatic alarm transmission to fire-fighters, smoke exhaust systems and sprinklers.

If the safety of people is ensured in an optimal way, the structure itself can also benefit from those measures that aim to save occupants. Hence the further costs needed to guarantee its stability in case of fire are strongly reduced and, in some cases, even reduced to zero. All the working steps of the new approach have been submitted to an advisory committee comprising the national fire authorities of eight European countries.

Additional information

Authors: SLEICH J-B, ProfilARBED, Esch-sur Alzette (LU); CAJOT L-G, ProfilARBED, Esch-sur Alzette (LU); PIERRE M, ProfilARBED, Esch-sur Alzette (LU); JOYEUX D, CTICM, Saint-Remy-les-Chevreuse (FR); AURTENETXE G, Labein, Bilbao (ES); UNANUA J, Labein, Bilbao (ES); PUSTORINO S, Strutura Engineering, Livorno (IT); HEISE F-J, SAES, Düsseldorf (DE); SALOMON R, SAES, Düsseldorf (DE); TWILT L, TNO, Delft (NL); VAN OERLE J, TNO, Delft (NL)


Last updated on 2002-07-16
Retrieved on 2019-09-01


© European Union, 2019