WP6 Thought for Eurocodes Upgrade

Proposals for improvement, based on local/European projects

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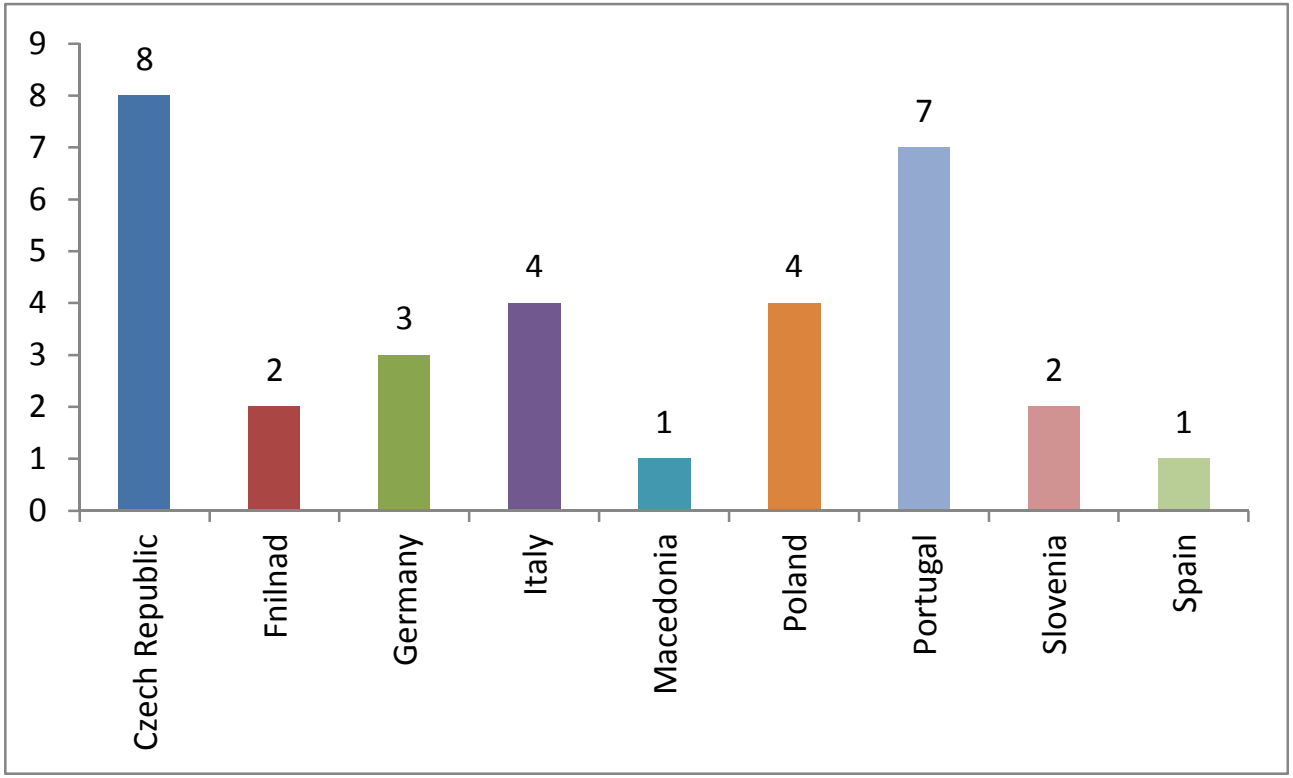
Structural Eurocodes

Fire design

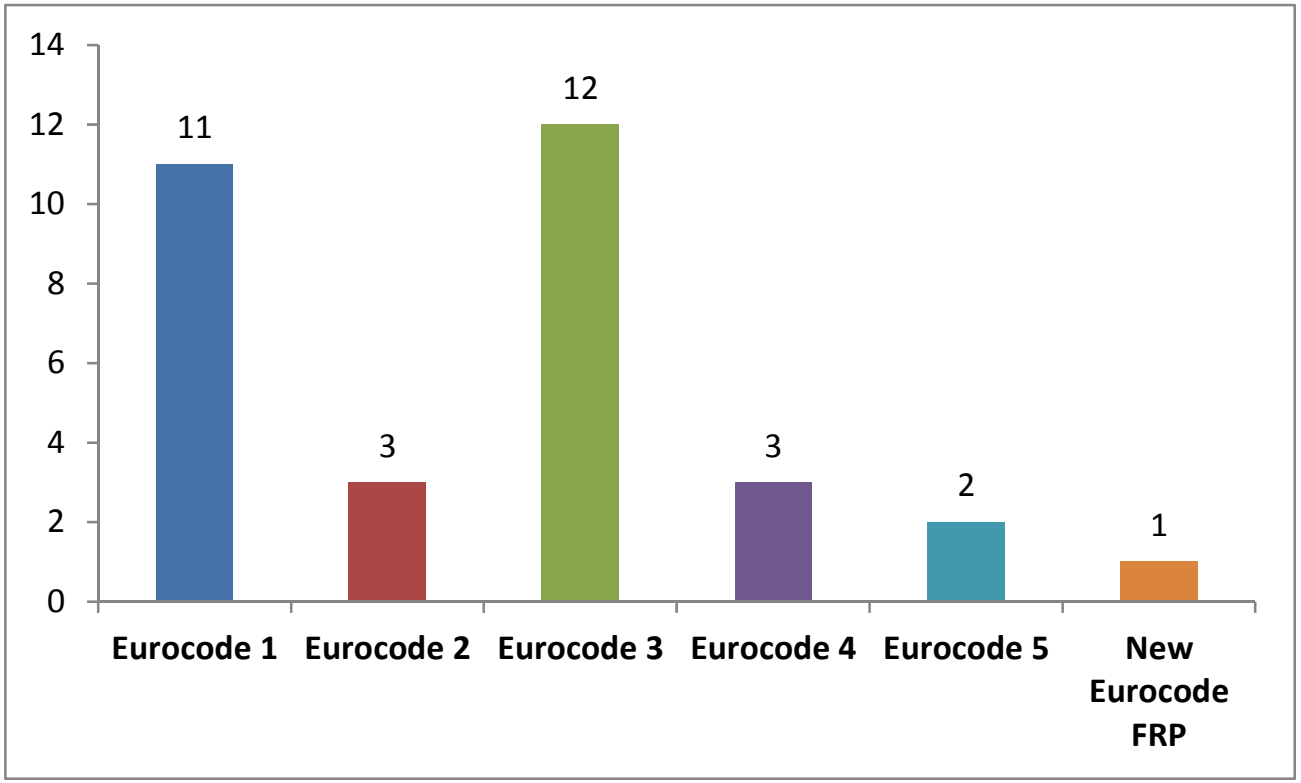
EN 1990	Basis of structural design – 0 proposals
EN 1991-1-2	Actions on structures exposed to fire – 11 proposals
EN 1992-1-2	Design of concrete structures – 3 proposals
EN 1993-1-2	Design of steel structures – Structural fire design – 12 proposals
EN 1994-1-2	Design of composite steel and concrete struct – Struct fire design – 3 proposals
EN 1995-1-2	Design of timber structures – Structural fire design – 2 proposals
EN 1996-1-2	Design of masonry structures – Structural fire design – 0 proposals
EN 1999-1-2	Design of aluminium structures – Structural fire design – 1 proposals

Proposals for improvement, based on local/European projects

31 Proposals received
9 Countries



31 Proposals received
6 Eurocodes



12 Proposals received
EN 1991-1-2

Country	**Authors**	**Proposal**
Italy	Emidio Nigro, Giuseppe Cefarelli, **Iolanda Del Prete**, Ana Ferraro, Domenico Sannino	EN 1991-1-2: Selection of design fire scenarios through the Fire Risk Assessment (FRA) in FSE Approach
Italy	**Emidio Nigro**, Ana Ferraro, Giuseppe Cefarelli	EN 1991-1-2: Design fire scenarios for open car parks
Finland	**Markku Heinisuo**, Jyri Outinen	EN 1991-1-2: Car fires in car parks
Germany	**Christoph Klinzmann**	EN 1991-1-2: Improved safety concept for fire safety design
Germany	**Jochen Zehfuss**	EN 1991-1-2: Improved rules for design fires
Czech Republic	Kamila Horová, František Wald	EN 1991-1-2: Definition of use of parametric time-temperature curve
Czech Republic	Kamila Horová, Guillermo Rein, Jamie Stern-Gottfried, Angus Law, František Wald	EN 1991-1-2: Add design fire model of travelling fire into advanced design fire models
Czech Republic	Kamila Horová, František Wald	EN 1991-1-2: Fire load densities for different occupancies
Czech Republic	Kamila Horová, František Wald	EN 1991-1-2: The maximum rate of heat release for different occupancies
Slovenia	Jerneja Kolšek, Robert Pečenko, **Tomaž Hozjan**	EN 1991-1-2: Parametric temperature-time curves (parameter Γ)
Slovenia	Jerneja Kolšek, Robert Pečenko, **Tomaž Hozjan**	EN 1991-1-2: Parametric temperature-time curves (parameter Γ in decay phase)

3 Proposals received
EN 1992-1-2

Country	**Authors**	**Proposal**
Poland	**Robert Kowalski**	EN 1992-1-2: Calculation of cross-section load bearing capacity of flexural RC members subjected to fire
Czech Republic	**Jan Bednář**, František Wald	EN 1992-1-2: Material properties of steel fibre-concrete at elevated temperature
Macedonia	**Meri Cvetkovska**	Simplified method for defining fire resistance of centrically and eccentrically loaded RC columns by using fire resistance curves and neural networks prognostic model

11 Proposals received
EN 1993-1-2

Country	**Authors**	**Proposal**
Portugal	Joao Paulo Rodriguez, **António Correia**	EN 1993-1-2: Simplified calculation method for temperature evaluation of steel columns embedded on walls
Portugal	Joao Paulo Rodriguez, **António Correia**	EN 1993-1-2: Interaction Diagrams Axial Force-Bending Moment for steel sections embedded in walls
Portugal	Paulo Vila Real, **Carlos Couto**, Nuno Lopes	EN 1993-1-2: Buckling lengths of columns of unbraced frames under fire conditions
Spain	Frederic Marimon, Ana Lacasta, Miquel Ferrer and Miquel Casafont, **Ignacio Gonzalez**	EN 1993-1-2: Section factor Am/V in columns with asymmetric heating
Finland	**Markku Heinisuo**	EN 1993-1-2: Shear resistance of plate in non-uniform elevated temperature
Portugal	**Paulo Vila Real**, Nuno Lopes	EN 1993-1-2: Lateral-torsional buckling resistance moment in case of fire
Portugal	**Nuno Lopes**, Paulo Vila Real	EN 1993-1-2: Stainless steel members subjected to combined bending and axial compression in case of fire
Portugal	**Nuno Lopes**, Paulo Vila Real	EN 1993-1-2: Flexural buckling resistance of stainless steel columns in case of fire
Portugal	**Paulo Vila Real**, Nuno Lopes	EN 1993-1-2: Lateral-torsional buckling resistance moment of stainless steel beams in case of fire
Poland	Leslaw Kwasniewski, **Piotr Smardz**	EN 1993-1-2: Temperature distribution in steel beams
Poland	Jiří Jirků, František Wald	EN 1993-1-2: Emissivity of zinc coated members if fire design
Czech Republic	Tomáš Jána, František Wald	EN 1993-1-2: Temperature of fire protected connection in unprotected steel structure at fire

3 Proposals received
EN 1994-1-2

Country	**Authors**	**Proposal**
Italy	Emidio Nigro, Giuseppe Cefarelli, Iolanda Del Prete, **Domenico Sannino**	EN 1994-1-2: Simplified method for partially encased composite beams
Germany	Peter Schaumann, **Waldemar Weisheim**	EN 1994-1-2: Structural behaviour of composite columns (simple calculation model)
Poland	Leslaw Kwasniewski, **Piotr Smardz**	EN 1994-1-2: Temperature distribution in steel beams

2 Proposals received
EN 1995-1-2

Country	**Authors**	**Proposal**
Czech Republic	Petr Kuklík, Magdaléna Dufková, Václav Rada	EN 1995-1-2: time of start of charring of protected members , time of the fire resistance of the unprotected connection for parametric fire exposure
Czech Republic	Petr Kuklík, Magdaléna Dufková, Václav Rada	Charring rate for load-bearing floor joists and wall studs in assemblies whose cavities are completely filled with insulation

1 Proposals received
New Eurocode on FRP

Country	**Authors**	**Proposal**
Italy	Emidio Nigro, **Antonio Bilotta**, Giuseppe Cefarelli	New Eurocode on structures that incorporate FRP: Flexural resistance of FRP reinforced concrete slabs and beams in fire

Thank you for your attention

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