

## LIST OF CONTENTS

<b>PREFACE</b>	5
<b>FUNDAMENTAL BENCHMARK CASES</b>	
1 Benchmark studies for partially heated steel beams	9
2 Lateral torsional-buckling of class 4 steel plate girders under fire conditions: experimental and numerical comparison	21
3 Local buckling of class 4 sections at elevated temperature	34
4 Numerical and experimental analysis of RC beams exposed to different fire models	48
5 Numerical behaviour of steel columns under localized fire loading	60
6 Baseline study on the behaviour of cold-formed steel elements subjected to fire	73
7 Benchmark modelling for concrete filled structural hollow sections	86
8 Numerical and experimental analysis of RC columns exposed to fire	98
9 Temperature distribution in R/C cross-section subjected to heating and then freely cooled down by air	107
10 Numerical behaviour of T-stub joint component at ambient and elevated temperatures	123
<b>COMPLEX BENCHMARK CASES</b>	
11 Model benchmarking and the Growth Phase of Dalmarnock Fire Test One	134
12 FDS-CFD analysis of temperature development in an enclosure from a fire with a defined heat release rate	147
13 The comparison of the results of a full scale evacuation test to the calculation method of Hungarian regulations and to the Pathfinder software	157
14 Charring of timber	173
15 Old masonry vulnerability against fire action	180
<b>INDEX OF AUTHORS</b>	195
<b>ACTION MEMBERS</b>	196