

POSTERS

TOPIC 1

- 1. Mathematical modelling of BLEVE accidents**
R. Bubbico and B. Mazzarotta, Università di Roma "La Sapienza", Dip. Di Ingegneria Chimica, Roma, IT
- 2. ROGA - A new method for risk-based hazard analysis to fulfill the requirements of the Seveso II guideline**
F.-J. Bock, TÜV Rheinland Industries Services GmbH, Köln, DE
K. Haferkamp, Köln, DE
- 3. Carry out dispersion calculations, influence of plant design (safety distances, ex-zone extensions, safe locations)**
Ü. Can, Linde AG, Pullach, DE
- 4. Implications of an industrial heritage on land use planning**
J. Fearnley, Aker Solutions, Stockton on Tees, GB
- 5. An experimental investigation into the possibility of vegetation causing flame accelerations in vapour cloud explosions**
K. van Wingerden and B. Wilkins, GexCon AS, Bergen, NO
P. Hoorelbeke, Total Petrochemicals, Brussel, BE
- 6. Hybrid approach for risk identification in research milieu**
A. Ouedraogo, A. Groso and T. Meyer, Ecole Polytechnique Fédérale de Lausanne, Lausanne, CH
- 7. Expert judgment through judgment of experts: providing an examination structure for ATEX experts in the Netherlands**
N.H.A. Versloot and G.A. Jansen, Stichting ATEX, Middelharnis, NL
- 8. Development of a worst case scenario**
M. Nakagawa and Y. Mizuta, Mitsubishi Chemical Group Science and Technology Research Center, Yokohama, JP
- 9. GHS implementation problems for small and medium establishments (SME) in the European Union**
T. Piotrowski and B. Hanczyk, Institute of Industrial Organic Chemistry, Warsaw, PL
- 10. Rapid risk screening of lower tier Seveso plants**
L. Vandebroek, M. Daenen and P. Joosten, M-tech, Hasselt, BE
J. Berghmans, Katholieke Universiteit Leuven, Leuven, BE
- 11. Hazard identification - a practical example**
F. Tranter, Abbott, North Chicago, US
O. Lazzaro and I. Miranda, Abbott, Campoverde, IT
- 12. Development of intelligent operation support system having dynamic fault propagation analysis in abnormalities**
Y. Munesawa, H. Minowa and K. Suzuki, Okayama University, Okayama, JP
- 13. The factor analysis of expanded events in the accidents on poisonous and/or deleterious substances in the manufacturing industries**
K. Hasegawa, Chiba Institute of Science, Chiba, JP
Y. Iizuka, PHA Consulting Co. Ltd., Kanagawa, JP
- 14. Terrain effects in dense gas dispersion studies**
J.A. Melheim, I.E. Storvik, O.J. Taraldset and M. Ichard, GexCon AS, Bergen, NO
- 15. The behaviour of vertical jet fires**
A. Palacios, M. Gómez-Mares and J. Casal, Universitat Politècnica de Catalunya, CERTEC, Barcelona, ES

TOPIC 2

- 16. Reference model for safety conscious production management in chemical processes**
Y. Shimada and M. Kumasaki, Japan National Institute of Occupational Safety and Health, Tokyo, JP

T. Kitajima, Tokyo University of Agriculture and Technology, Tokyo, JP
K. Takeda, Shizuoka University, Shizuoka, JP
T. Fuchino, Tokyo Institute of Technology

17. **Fuzzy systems for the estimation of operators response time in critical situations**
M. Konstandinidou and Z. Nivolianitou, National Center for Scientific Research "Demokritos", Athens, GR
C. Kiranoudis and N. Markatos, National Technical University of Athens, Athens, GR

TOPIC 3

18. **Measuring structural unsafety in the Dutch building industry**
K. Terwel, Delft University of Technology, Delft, NL
P. Waarts, TNO Bouw en Ondergrond, NL

TOPIC 4

19. **Integrating process operation, design and safety by multiobjective optimization**
E.M Al-Mutairi, King Fahd University of Petroleum & Minerals, Dhahran, SA
J.A. Suardin and M.S. Mannan, Mary Kay O'Connor Process Safety Center, Texas A&M University, Texas, US
M.M. El-Halwagi, Artie McFerrin Dept. of Chemical Engineering, Texas A&M University, Texas, US
20. **Transfer of powders into flammable solvents overview of explosion hazards and preventive measures**
F. Dietrich, Dietrich Engineering Consultants SA, Ecublens/Lausanne, CH
21. **Analysis of peroxides decomposition by screening calorimetry**
G. Maschio and V. Casson, Università di Padova, DIPIC, Padova, IT
D.G. Lister, Università di Messina, Messina, IT
22. **Explosion and afterburning of display pyrotechnics in storage container**
E. Salzano, A. Basco and F. Cammarota, Istituto di Ricerche sulla Combustione, CNR, Napoli, IT
23. **Comparison of material parameters of polyethylene grades and the test performance behaviour of packagings for the transport of dangerous goods**
M. Weltschev, BAM, Berlin, DE
F. Deuerler, Bergische Universität Wuppertal, Wuppertal, DE
24. **Development of a new QSPR based tool to predict explosibility properties of chemical substances within the framework of REACH and GHS**
G. Fayet, Ecole Nationale Supérieure de Chimie de Paris (ENSCP), Paris and Institut National de l'Environnement Industriel et des Risques (INERIS), Verneuil-en-Halatte, FR
P. Rotureau, Ecole Nationale Supérieure de Chimie de Paris (ENSCP), Paris, FR
L. Joubert and C. Adamo, Institut National de l'Environnement Industriel et des Risques (INERIS), Verneuil-en-Halatte, FR
25. **Estimation of pollution by fire extinguishing water**
D. Calogine and S. Duplantier, INERIS, Accidental Risks Division, Verneuil-en-Halatte, FR
26. **Examples for the influence of non-intrinsic properties on the classification of physical hazards according to the UN-GHS**
C. Wilrich and K.-D. Wehrstedt, BAM - Federal Institute for Materials Research and Testing, Berlin, DE
27. **Chemical thermal stability assessment using the chetah thermodynamic prediction software**
M. Dellavedova, L. Gigante, A. Lunghi, C. Pasturezzi and P. Cardillo, Stazione Sperimentale per i Combustibili, San Donato Milanese, IT
D.J. Frurip, The Dow Chemical Company, Midland, MI, US
28. **CG80: a new cell with pressure measurement for the DSC**
O. Holzschuh, C. Gwerder and P. Reuse, Swiss Safety Institute, Basel, CH
29. **Transients reducing the breakdown voltage and leading to incendive pre-discharges**
T. Langer, F. Lienesch and D. Markus, Pysikalisch Technische Bundesanstalt, Braunschweig, DE
U. Maas, Institute of Technical Thermodynamics, University of Karlsruhe, DE
30. **Improvement of the design of flameproof enclosures using porous structures**
J. Hornig, D. Markus and M. Thedens, Pysikalisch Technische Bundesanstalt, Braunschweig, DE
31. **Study of the explosive decomposition of tetrafluorethylene in partially heated pipes**
F. Ferrero, M. Beckmann-Kluge and H. Krause, BAM, Berlin, DE

32. **Assessment of high integrity instrumented protective arrangements**
A.G. King, ABB Engineering Services, Billingham, GB
33. **Biodiesel: a case study of the impact of new rules regarding the classification and labelling of physical and chemical properties of chemicals**
A. Janes, G. Marlair and P. Rotureau, Institut National de l'Environnement Industriel et des Risques (INERIS), Verneuil-en-Halatte, FR
34. **The role of material safety data sheets in dust explosion prevention and mitigation**
*P. Amyotte, R. Domaratzki and M. Lindsay, Dalhousie University, Halifax, CA
F. Khan, Memorial University, St. John's, CA*
35. **Characterization of ignition behavior of silane release into air**
*H.-Y. Tsai, S.-W. Wang, S.-Y. Wu and J.-R. Chen, National Kaohsiung First University of Science & Technology, Kaohsiung, TW
E.Y. Ngai, Chemically Speaking LLC, Whitehouse Station, US*
36. **Application of flammability diagram for designing hydrocarbon air/oxygen oxidation processes**
J.-R. Chen and H.-Y. Tsai, National Kaohsiung First University of Science & Technology, Kaohsiung, TW
37. **Risk evaluation method for intense mixture reaction using calorimeter**
Y. Iwata, W.-S. Lim and H. Koseki, National Research Institute of Fire and Disaster, Tokyo, JP
38. **The lower flammability limit of methane in air at elevated pressures and temperatures: a theoretical and numerical study**
F. van den Schoor and E. Van den Bulck, Katholieke Universiteit Leuven, Leuven, BE
39. **Inherent safety based corrective actions in accident prevention**
*K. Kidam and M.H. Hassim, Helsinki University of Technology, TKK Espoo, FI and Universiti teknologi Malaysia, Johor, MY
M. Hurme, Helsinki University of Technology, TKK Espoo, FI*
40. **The fire bell: a new test to measure fire ignition and propagation in a reduced oxygen environment**
*I. Bolzonella, H. Pittet, M. Verdelet and S. Girgis, Givaudan Suisse SA, Vernier, CH
A. Bisel, Swiss (Institute of Safety and Security), Basel, CH*
41. **Explosion protection concepts for storage, transport and grinding of coal**
J.-P. Fritze, Dekra Exam GmbH, Bochum, DE
42. **Recent advances in software for modelling the risks associated with gas explosions in congested spaces using the multi energy method**
N. Cavanagh, DNV Software, London, GB
43. **Demonstration of the inherently safe design characteristics of an intensified heat-exchanger reactor**
N. Di Miceli Raimondi, N. Olivier-Maget, S. Elgue, N. Gabas, M. Cabassud and C. Gourdon, Université de Toulouse, Toulouse, FR
44. **The influence of vessel size on the auto ignition temperature of combustible gas-air mixtures**
*F. Norman and F. Verplaetsen, Adinex NV, Noorderwijk, BE
J. Berghmans, Katholieke Universiteit Leuven, Leuven, BE*
45. **Assessment of the evaporation correlations performance**
F. Antoine, INERIS, Verneuil-en-Halatte, FR

46. The course of explosions of CH₄/O₂/N₂ mixtures measured in a 20 l sphere
H.-P. Schildberg, BASF SE, Ludwigshafen, DE
K. Holtappels, BAM Federal Institute for Materials Research and Testing, Berlin, DE
47. Explosion of chemically unstable gases in large vessels at elevated initial conditions
M. Gula and J. Steinbach, Technische Universität Berlin, Berlin, DE
K. Holtappels, A. Acikalin and D. Grasse, BAM Federal Institute for Materials Research and Testing, Berlin, DE
H.-P. Schildberg, BASF SE, Ludwigshafen, DE
48. Evaluation of fixed point H₂S gas detectors intended for use in industrial safety applications
S. Bouchet, S. Kasprzycki, N. Lépine and J.-C. Morin, INERIS, Verneuil-en-Halatte, FR
49. Thermal analysis for observation of materials degradation from fire safety aspects
Z. Korenová, L. Gasparovic, J. Haydary, J. Markos and L. Jelemensky, Slovak University of Technology, Bratislava, SK
50. Influence of flow rate and pressure on the upper explosion limit of ethene - air mixtures
B. Fabiano, D. Cermelli and R. Pastorino, University of Genoa, DICheP, Genoa, IT
V. van den Hoogenband and E. van den Hengel, TNO Defence, Security and Safety, Rijswijk, NL
51. Release and dispersion of LNG in complex environments
M. Derudi, V. Busini, M. Pontiggia, F. Di Vito and R. Rota, Politecnico di Milano, Milano, IT
S. Ditali and R. Fiore, Saipem SpA - B.U. Onshore, San Donato Milanese, IT
G. Uguccioni, D'Appolonia S.p.A., San Donato Milanese, IT
52. Thermal instability of solid/solid hybrid dusts mixtures
D. Bideau, CEA, DEN, DTEC/SDTC, Bagnols-sur-cèze and Nancy-Université, Nancy, FR
O. Dufaud, L. Perrin and J.P. Corriou, Nancy-Université, CNRS, Nancy, FR
F. LeGuyadec and X. Génin, CEA, DEN, DTEC/SDTC, Bagnols-sur-cèze, FR
53. Development of safety procedures for the scale-up of hazardous chemical processes
S. Copelli, M. Derudi and R. Rota, Politecnico di Milano, Milano, IT
54. Determination of TMR_d by differential isoconversional kinetic analysis of DSC data - Investigation of thermal behavior of 3-methyl-4-nitrophenol
B. Roduit, AKTS AG Advanced Kinetics & Technology Solutions, Sierre, CH
F. Mascarello and M. Schwaninger, DSM Nutritional Products Ltd., Sisseln, CH
J. Wiss, Novartis Pharma AG, Basel, CH
M. Luginbühl and C. Williams, Syngenta Crop Protection Munchwilten A
55. Explosion behavior of oxy-fuel mixtures for CO₂ enrichment
A. Di Benedetto, V. Di Sarli, E. Salzano and F. Cammarota, Istituto di Ricerche sulla Combustione, Napoli, IT
G. Russo, Università di Napoli Federico II, Napoli, IT
56. Quick scan inherent safety - a web-based tool
M. Jongen, TNO Quality of Life, Hoofddorp, NL
A.-F. Veenstra, Tebodin, Bergen op Zoom, NL
M. Heijne, Tebodin, Velsen, NL
D. Schaap, Orbital Technologies, Schiedam, NL
57. Thermal decomposition of hydrogen peroxide in the presence of phosphotungstic acid
L. Saenz, V.H. Carreto Vazquez, W.J. Rogers and M.S. Mannan, Mary Kay O'Connor Process Safety Center, Texas A&M University, College Station, TX, US
M. Papadaki, University of Leeds, SPEME, Leeds, GB and University of Ioannina, Agrinio, GR
58. Development of CFD-DECOM for the prediction of gaseous and dense phase CO₂ decompression behavior
J.X. Wen, H.E. Jie, B.P. Xu and V.H.Y. Tam, Kingston University, Centre for Fire and Explosion Studies, London, GB