# Loss Prevention and Safety Promotion in the Process Industries



Proceedings of the 8th International Symposium, Antwerp, Belgium, June 6-9, 1995

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#### **PREFACE**

Since the 7th symposium in Taormina, Sicily, Italy we have seen a reversal of the downward economic trend in the European process industry. At least for the time being, an end has come to the period of slumping profits and depression. Right now there is a brighter perspective for the future.

In Loss Prevention we see further evolution. This time we have placed 'Safety Management Systems' as the focal point of the programme. Our key-note lecturers will touch upon this central subject from one point of view or another. Particularly in an era of continuing cut-backs in staff, weaknesses in management arrangements are intolerable; indeed there have been a number of cases where such weakness caused an accident. The importance of this issue is highlighted by the fact that the European Process Safety Centre founded a working group to discuss this topic in particular. Meanwhile the group brought out a publication and this will be discussed during the EPSC presentation.

Memories are short. When the plant has been running smoothly for some time the assurance grows that nothing can go wrong and that incident-free processing is the normal state of affairs. Preventing losses effectively has the drawback that in times of scarcity in funding, management starts to argue about investments in safety. R&D also appears to be a very good gauge of this. In fact one can say there is a slow but steady downward trend in R&D.

To show that things still can go wrong sometimes, we selected from the collected abstracts a number of interesting accident case histories.

The committees now worked even harder on paper selection than in the past. As in Taormina, the number of submitted papers was almost 300. In Taormina we selected 85%, of which 30% for oral presentation and the rest as posters. This time we have been much more selective and on the basis of the abstracts we accepted less than half the submitted papers. Since the selection process was much more time-consuming we split the committee into 4 groups according to the four themes. The four groups were led by theme leaders.

Less than one half of the accepted papers (that is one-quarter of the submitted ones) will be presented orally and all these papers have been judged in a final stage of the full text instead of just on the basis of the abstract.

I hope the material collected in these proceedings will contribute to continue improving safety in the process industries and will stimulate further thinking.

H.J. Pasman Chairman Scientific Committee

#### **PREFACE**

This Symposium and these Proceedings reflect in many ways the present status of Loss Prevention. Research in this area is expanding steadily. As a result Loss Prevention is becoming more science-based and more professional. The scientific results are also being systematically integrated in industrial practice, both with respect to the technical aspects (e.g. design) and management. Regulation, together with the responsible care approach now followed by industry, provide additional stimuli for the further development of Loss Prevention. The many developments however make it more difficult to stay abreast of evolutions in the whole field. These Proceedings should hopefully be of use in this respect to both researchers and practitioners in industry.

Originally the symposia on "Loss Prevention in the Process Industries", established by the European Federation of Chemical Engineering, were mainly Western European activities. The present symposium has a much wider international basis, including substantial contributions from Eastern Europe and Asia. As a result of the intensive research, more specialized technical papers have been submitted for presentation at this symposium. Fortunately also a growing number of more applied papers has been received. Globally so many papers were submitted that only a small fraction could be accepted. We regret that also good papers had to be rejected because of the inevitable constraints in size of the symposium. We hope that the present Proceedings provide up-to-date information about the evolution in the various areas of Loss Prevention over the last few years.

J.J. Mewis Chairman Programme Committee

The 8th International Symposium on Loss Prevention and Safety Promotion in the Process Industries was organized by: The Technological Institute of the Royal Flemish Society of Engineers (TI-K VIV)

The K VIV is the professional organization of the academically trained Flemish engineers. It represents more than 11.000 members.

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