

**EUROPEAN HOTEL FIRE SAFETY:
An Analysis of the Implementation and Impact of
the 1986 EC Recommendations on Fire Safety in
Existing Hotels**

A Report by

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Executive Summary

History

- 1986 EC Fire Safety Recommendations (the *1986 Recommendations*) issued
- 1992 Confederation of Fire Protection Associations of Europe review - Report issued in 1994 identified significant deficiencies
- 1992 EC Package Travel Directive issued
- 1996 CETEN - APAVE study of compliance with Recommendations commissioned

Background

The EC Recommendations implicitly exclude many smaller hotels, self-catering apartments and villas and thus do not cover a significant proportion, possibly the majority, of accommodation now used by tourists.

The basis of the CETEN - APAVE study is fundamentally flawed. It undertook no inspections but relied solely on replies to postal questionnaires. The total lack of response from Spanish hoteliers, who accommodate 40% of all those taking package tours (and 20% of all visitors to the EU) illustrates this problem. The questionnaire also failed to address such issues as properties with single staircases, unsegregated corridors and fire safety management.

Inspections by leading UK tour operators and their fire safety advisers have revealed a high level of non-compliance with the Recommendations. This review, which has been undertaken by an independent fire safety expert, has examined the present situation with a view to determining what impact the Recommendations have had.

Objective

To examine the present state of hotel fire safety in the EU (in particular reference to the primary holiday destinations) in order to determine whether the *1986 Recommendations* have been effective in providing minimum hotel fire safety standards throughout the European Union.

Method

Inspection reports on over 6000 accommodation units were provided by major UK tour operators. These findings were verified by sampling in seven

resort areas, discussions with inspectors and analysis of risk rating approaches and detailed reviews of 900 property reports. 129 properties were visited (33 in the UK and 96 in Austria, Spain and Greece).

A three category risk grading system (based on conventional risk assessment standards) was devised and applied to all properties which had been inspected. In addition, a fourth category for 'rejected hotels' was added during the course of the project.

Findings

Although it has been claimed that the *1986 Recommendations* have been written in to national legislation within all EU countries this has not been done in a consistent way. There are significant variations from the standards set down in the Recommendations.

The failure of eight Member states to make their own implementations of the *1986 Recommendations* apply to existing hotels has negated much of the intent of the drafters of the Recommendations.

Some clear signs of improved standards were observed - particularly in Spain and Portugal.

Lack of management commitment and in particular, poor levels of staff training is a major issue.

The author is forced to conclude that the *1986 Recommendations* have not been effective in providing a uniform minimum level of fire safety in hotels in Europe.

There is no evidence to show that the 1989 Framework and Workplace Directives have had any impact on the levels of fire safety provided in hotels.

Conclusions and Recommendations

Despite considerable efforts by tour operators over many years, significant deficiencies remain in fire safety standards in EU hotels and other units of holiday accommodation.

The *1986 Recommendations* no longer provide a valid set of minimum standards relevant to hotel accommodation and anomalies now exist throughout the Community in respect to the application of the *1986 Recommendations* and other fire safety related Directives.

The Commission should urgently and officially recognise the problems that now exist and:

1. Review the *1986 Recommendations* and their application;
2. Consider the duties imposed by the 1989 Framework Directive and 1989 Workplace Directive and review how they have been applied to hotels in all Member states.
3. Based on the above, the Commission should introduce a new Directive covering minimum standards of fire protection and fire safety for all types of accommodation used by tourists and travellers. A standardised tariff of penalties for non-compliance should be made mandatory in all member states. The Directive should include technical requirements in respect of: management, training and information for guests in addition to updating the general technical elements of the *1986 Recommendations*.
4. The Commission should immediately encourage member states to actively promote fire safety to all owners and managers of multi-occupancy buildings with special reference to hotels and apartments.

A. Introduction

A.1 EU Recommendations of 1986.

The 1986 Recommendations on hotel fire safety issued by the Council of the European Communities (*EEC 666/86: Fire Safety in Existing Hotels* (the *1986 Recommendations*) was intended to:

*‘define a minimum standard of fire safety for all hotels’ on the grounds that significant numbers of citizens of EU countries were travelling beyond their home country and were therefore entitled ‘to adequate protection in the host country and to be informed of the nature and extent of that protection’.*¹

The Recommendations (reproduced in full in G.3 of this Report) were not widely promoted and although all national EU governments indicated a willingness to implement them it was noted at the time the Recommendations were issued that fire safety was normally a power reserved by the principal of subsidiarity for national governments.

A.2 Action by National Fire Safety Groups

Little further activity took place at a European level until 1992 when the Confederation of Fire Protection Associations - Europe² (CFPA-Europe) set up a working party to review levels of fire safety in hotels and produce a consensus guide to how better protection could be provided. The report of this working party, chaired by the author of this work, was published in February 1994 under the title *Fire Safety in Hotels: Recommendations for Europe*³. The report was published in English, French, Spanish and Catalan.

A conference to launch the report was, with the sponsorship of the European Commission held at the EC’s Luxembourg Conference Centre on 1-2 March 1994 and a wide range of delegates and speakers (including representatives of the Commission) attended. The conference concluded that, while the Recommendations were technically sound and appropriate in principle, the fact that they were effectively voluntary meant that there were still significant deficiencies in the levels of safety of hotels in some countries. A speaker from the UK’s Consumer Association, for example, pointed out that in 1989 (ie three years after the publication of the Recommendations) 8 out of 11 hotels inspected in Greece and Spain were not provided with adequate fire safety measures⁴.

All parties who spoke at the conference (with the exception of the UK Home Office) accepted the need for the Recommendations to become mandatory ie to be converted into a Directive.

A.3 Action by British Tour Operators

In 1992 a new European Directive governing Package Holidays and Package Tours placed new responsibilities on tour operators. Among these was a clear responsibility for the safety of those clients for whom a tour operator had procured a hotel rooms. In the UK, the larger tour operators had themselves already begun to take significant steps to enhance the levels of protection provided for their customers in the early 1980s and by 1989 all were employing specialist staff or consultants to audit levels of safety (including fire safety) in the hotels with which they were contracting.

This activity was deemed necessary, not only to avoid civil and criminal litigation (and to comply with legal obligations imposed by the Package Holiday Directive), but also as a result of increasing moves to provide better quality travel and holiday arrangements. Through the International Federation of Tour Operators guidance on training in carrying out such inspections was published and the delegates of the CFPA Europe Luxembourg conference were forced to revise at least some of their views that the problems with improving hotel fire safety lay solely at the door of the tour operators.

There appears to have been little further progress in building on the consensus views that were expressed at the 1994 conference and part of the reason for this lay over defining whether a Directive was needed and indeed, even whether the *1986 Recommendations* had been fully implemented in individual member states. CFPA- Europe and other parties such as BEUC (European Association of Consumer Groups) continued to press the EC for further action and several meetings were held with officials of various Directorates-General.

The subject was raised in the European Parliament on at least four occasions between 1994 and 1996. At the same time other groups including the UK Chief and Assistant Chief Fire Officers Association had noted that a lack of progress in matters of fire safety in Europe might be connected to the way accountability for fire safety was spread across more than one of the EC's Directorates-General.⁵

A.4 The CETEN-APAVE Study

In 1995 the EC decided to undertake a study of the impact and effectiveness of the Recommendations and in 1996 awarded a contract to the French Company CETEN-APAVE.

The officially-stated objectives of the study⁶ were:

- To describe the transposition of the 1986 Recommended Fire Safety Standards for Hotels (EEC/666/86) into local domestic law throughout the EU member states;
- To assess compliance with the legal rules concerning safety installations

(fire safety signs, smoke detectors, alarm systems, emergency lighting)

- To analyse conditions in which the installations are maintained;
- To analyse the nature of regular inspections of the installations and associated procedures.

While the announcement of the study was well-received by the all groups who had been campaigning for action in this area there was some degree of surprise and concern expressed at the terms of the contract and, in particular, the fact that the survey was to be carried out entirely by postal questionnaires. The terms of the contract expressly stated that:

‘under no circumstances was the successful contractor expected to visit hotels’.

CFPA Europe which had itself bid for an earlier tender expressed itself perplexed by this decision and stated that it was:

‘concerned that such an important undertaking was to be carried out entirely by postal questionnaires’.

Setting aside these concerns, it is worth examining the data on which the report’s conclusions are based:

- The questionnaires did not cover essential fire safety features, for example, they did not ask about single staircases, unprotected staircases, unsegregated corridors. (These are features which are accounted as key factors in the *1986 Recommendations*).
- There was no little coverage of fire safety management issues;
- On limited mention of record keeping;
- No questions regarding the exit sign compliance with European standards;
- No questions concerning potentially unsatisfactory and unsafe escape devices such as canvas chutes, rope ladders etc.);
- The survey did not include any reference to the fastest growing sector in the holiday industry, the self-catering or apartment-hotel, nor to villa complexes.

Perhaps the most serious criticism of the 1996 project is that its conclusions are based on a very small sample. Some 20,000 questionnaires, in nine languages were sent out to hotels in 15 community states. 1213 questionnaires were returned (6% of the total). The submission of questionnaires, by country, is shown in Table 1 which also shows comparable figures on tourist arrivals.

	Questionnaires Returned		Tourist Arrivals - EU (in millions)	
	No	%	No	%
Austria	Nil	Nil	176	6.6
Belgium	62	5.1	47	1.8
Denmark	Nil	Nil	20	1.8
Finland	Nil	Nil	10	0.4
France	763	62.99	71.4	26.8
Germany	Nil	Nil	17.0	6.4
Greece	63	5.2	11.5	4.3
Holland	23	1.9	9.8	3.7
Ireland	12	1.0	6.5	2.4
Italy	34	2.8	35.8	13.4
Luxembourg	Nil	Nil	N/A	N/A
Portugal	118	9.7	11.6	4.4
Spain	Nil	Nil	52.0	19.5
Sweden	Nil	Nil	N/A	N/A
UK	138	11.4	25.7	9.6
Totals	1213		26666	

Sources: CETEN-APAVE Report; World Tourism Organisation

Table 1: Results of 1996 Survey compared with Tourist Arrivals

The 1996 Report's conclusions can be summarised as follows:

- In most cases the *1986 Recommendations* have been written into national regulations verbatim;
- In most instances the minimum criteria has been met;
- In half the member states existing hotels (ie those built before 1986 or the date the Recommendations were written into national or provincial law) have been unaffected by the Recommendations;
- 75% of the hotels which responded were aware of the Recommendations;
- 60% of hoteliers responding had carried out work to improve safety and 20% of this group had spent more than FF 50,000 (around Ecu 7700) at the time the survey was undertaken);
- Of the fire protection improvements undertaken in the hotels responding, more than half had been done to comply with regulatory requirements;
- Most other work coincided with the construction of extensions or other hotel improvement;
- 70% of responding hotels claimed to have automatic fire detection systems which were maintained by outside contractors;
- There was confusion over the differences between equipment maintenance and outside inspections;
- There were clear weaknesses in respect of the way legislation was enforced, not only in respect of legal powers but also in the frequency, objectives of the inspections and the way these were to be carried out.

Taking the study's methodology in account, and, in particular, the absence of responses from Germany and Spain, the study represents an extremely superficial analysis of the impact of the *1986 Recommendations* and, indeed, fire safety standards in European hotels.

In addition, it is probable that the nature of the questionnaire made it more likely that it would be completed by hoteliers who were confident that their fire precautions were adequate. Thus the results obtained from the questionnaires would be heavily biased towards those with higher standards of fire safety. It is not unreasonable to assume that those who completed the questionnaires would do so because they were proud of what they have achieved and wished this to be recognised. Nor is it unreasonable to suggest that hotel managers who considered that their approach to fire safety was less than adequate would not be strongly motivated to complete a questionnaire which might disclose such inadequacies.

This 'self-selection' on the part of respondents would lead to a bias in the results of even this very small sample. (The author is particularly skeptical of the figure of the 75% of managers who claimed to be aware of the *1986 Recommendations*).

Doubt is also expressed at the suggestion that 70% of the hotels surveyed 'were fitted with automatic fire detection systems maintained by outside contractors'. While the author has no reason to question the accurateness of the figure in its context he would suggest that anyone any experience of hotel fire safety in, for example, smaller hotels in France, Austria or Italy would consider that the suggestion that more than 50% of hotels in those countries were fitted with automatic detection systems is highly improbable.

If all of these concerns together are sufficient to generate 'reasonable doubt' as to the validity of the survey and its findings, then the number of valid surveys must be fairly small, perhaps at most 1000 and the data extrapolated from this tiny number of possibly valid questionnaires is at best, statistically insignificant and at worst totally flawed.

It is suggested for the above reasons that the value of the report, as a survey of the likely or probable compliance with the *1986 Recommendations*, is suspect and of little value in defining the actual status of fire safety provision in European hotels. It also has to be accepted that the Recommendations are now almost 15 years old and ignore significant changes in the patterns of the supply of tourist accommodation

A.5 Application of the 1986 Recommendations

The CETEN-APAVE report* summarised the position regarding the transposition of the *1986 Recommendations* into national law and commented that '*the most common problem was a lack of retrospection*', that is, that eight countries have not amended their national laws to require the minimum standards of the *1986 Recommendations* in existing hotels.

The report comments as follows:

*No official translation into English of this report appears to be available. The quotes in this section are taken directly from a paper submitted to the UK Fire Protection Association by Mr G Whitworth.

The report comments as follows:

‘Germany - there is no retrospection on existing hotels and there is a clear statement that hotels in the former East Germany have not reached the standards of West Germany.

Austria - there is no retrospection on existing hotels and there is a statement that several paragraphs of the EU recommendations have not been adapted into national legislation.

Denmark - there is no retrospection on existing hotels.

Spain - there is no retrospection on existing hotels and the national legislation states that existing buildings are only subject to new legislation when modifications are carried out or extensions are built.

Finland - there is no retrospection on existing hotels although the position with Finland as a new entrant to the EU is being reviewed.

France - there is no retrospection in respect of Group 1 hotels.

Luxembourg - there is no retrospection on existing hotels. This is puzzling as the 1986 Recommendations are apparently treated in Luxembourg as a Directive.

Sweden - there is no retrospection on existing hotels.’

CETEN-APAVE concluded :

‘ - On the one hand...the elements cited in the (1986 Recommendations) have almost always been covered by national stipulations and therefore it may be considered that the minimum criteria have been met...’

‘ - On the other hand, seeing as no reasonably complete regulations existed previously, the (1986 Recommendations) have had a fairly important effect since, in the vast majority of cases, it was more or less written into national legislation verbatim.’

Commenting on the Report in 1997, Mr Gary Whitworth, an experienced international fire safety consultant specialising in hotel fire safety (and a former UK Chief Fire Officer and former UK nominee to the Channel Tunnel Safety Commission) said:

‘The feature (of the Report) that was least successful, was that concerning existing hotels for which half the countries in the Community have not said that these (1986 Recommendations) should have any retrospective effect.’

Mr Whitworth continued, reviewing the areas where the report was deficient, specifically mentioning:

‘The absence of any retrospection for half the countries in the European Community, and the difficulties others have in applying them. Also the difficulty of introducing (European) Community standards into countries

where there (are) multiple (layers of) legislation, and where legislation is different in each Province or Region.'

Considering that the *1986 Recommendations* bear the title '*Council Recommendation of 22 December 1986 - on fire safety in existing hotels*' it is hard for the author of this report to understand how CETEN-APAVE reached the conclusions it did - surely the whole point of the Recommendations is that they were intended to apply to all existing hotels.

The issue of retrospection has often been used as an argument against additional legislation (both at a local, national and Community level) but it should be remembered that the UK successfully introduced its primary legislation on hotel fire safety in 1971⁸ and this was imposed on both new and existing hotels. The implementation of these regulations was phased in over a period of five years.

A.6 Incidence of Hotel Fires in Europe

One serious obstacle to assessing the extent of the problem caused by fires in Europe is the lack of any serious study of the problem. No European fire statistics exist and while there are national statistics these are of variable content and quality.

It is generally acknowledged in the fire community⁹ that the statistics produced by the UK's Home Office are among the most comprehensive and reliable in the world - this is because the UK is one of the few countries to enforce a compulsory, national, reporting system with all fire brigade call-outs generating a formal report which is ultimately incorporated in detailed annual statistics.

In the UK, there are some 2000 fires each year in 'hotels, boarding houses, hostels and holiday camps'. In 1998 (the last year for which figures are presently available) there were 1042 hotel and boarding house fires and 1309 hostel and holiday camp fires. It would not be unreasonable to assume that a similar ratio of fires to population is likely throughout Europe. Given an EU population of around 365 million, then it is possible that there may be around 6600 hotel fires each year in the Member States.

During the course of the research for this project it was discovered that the UK Federation of Tour Operators (FTO) has maintained an occurrence reporting system for fires and other untoward incidents. In the reports produced by this system between 1 January 1999 and 30 July 2000 the following fires were reported:

Year	1999	to 7/2000
Austria	2	0
France	4	3
Greece	14	7

Italy	1	1
Portugal	8	7
Spain	42	37
EU Total	71	55
Andorra	1	1
Antigua	0	1
Cuba	0	1
Cyprus	4	6
Dominican Rep	1	1
Goa	1	0
Israel	0	1
Jamaica	0	1
Kenya	1	0
Maldives	1	0
Malta	0	2
New Zealand	1	0
Sri Lanka	1	1
Thailand	0	1
Tunisia	1	3
Turkey	17	7
USA	1	1
Non EU Total	30	27
Grand Total	101	82

Table 2: FTO Reports of Fires 1999 - July 2000

A.7. The 1989 Directives

The Framework Directive (adopted in June 1989) was intended to introduce measures to encourage improvements in the health and safety of people at work. The Workplace Directive (adopted in November 1989) prescribed minimum health and safety requirements with which all workplaces were supposed to comply.

Both Directives placed the primary responsibility for ensuring health and safety in the workplace firmly on the employer and the most significant innovation was the requirement for the employer to be in possession of an assessment of the risks to health and safety at work. Risks of and from fire were specifically included in the Directive and it could have been reasonably anticipated that the enactment of the requirements into national law (as required) would have had a positive impact on the provision of fire safety measures in all workplaces - including hotels.

As will be seen later in this report this has not been the case.

B. Objectives of this Report

The sponsors of the report, the UK Federation of Tour Operators agreed with

the author that this report should:

‘Examine the present state of hotel fire safety in the EU (with particular reference to the primary holiday destinations) with a view to determining if the 1986 Recommendations have been effective in providing minimum hotel fire safety standards throughout the European Union.’

The statistics used in preparing this report also provide information on the situation in some non EU holiday destinations (Cyprus, Malta, and Turkey) and it is worth considering the impact of the need for better regulation of fire safety not only on these countries but also others that may be preparing to join the Community in the near future.

C. Method Statement and Validation of Results

The author considered a range of methods of developing the data necessary to inform the project and it was clear from the outset that a significant volume of data would be necessary if the results were to have the credibility which is lacking in the CETEN-APAVE report. It was also clear that it would not be a practical proposition (in either time or cost) to undertake the thousands of inspections which a conventional ‘survey and inspect’ approach to the problem might suggest. It was also important to ensure that the sample included a range of properties and grades, including both hotels and apartment hotels as well as other variations of type (for example, resort complexes).

Each of the four principle members of the UK FTO was contacted and asked to produce a matrix (a sample of which is attached in G.4) to try to determine the range of accommodation (by country, resort, type and grade) used by that company.

Examination of these matrices led the author to the conclusion that any one of the companies own records would provide the information needed to produce a statistically valid sample. Using the data derived from all four companies increased the probability of the sample being highly representative of the whole European holiday accommodation market.

It was therefore decided to focus on the internal data accumulated by the major UK tour operators. As stated earlier, all the larger companies had been undertaking their own safety inspections from the 1980s and by the time this study was begun, all had accumulated a great deal of primary data on individual hotels derived from detailed inspections undertaken by the operators’ own staff and specialist consultants.

Each tour operator was visited and the author was briefed on the methods used to survey and inspect hotels and the way in which the records were stored. Unrestricted access both to paper files and to computerised data was

permitted and following an extensive data mining operation 6119 property reports were identified covering 45 'resorts' or geographical groupings. (See below).

Prior to commencing an analysis of the reports and harmonising the categorisation systems used it was essential for the author to assure himself that the data to be used was wholly credible. It would not be unreasonable for the objective researcher to consider that any data, even primary data, originating from a commercial source such as a tour operator may be potentially biased. Some 'research reports' (even when undertaken by otherwise academically-credible institutions) emanating from pressure groups or trade associations are often discounted especially when they seem to prove what their sponsors want.

This is most unlikely in this particular case. Any commercial pressure implicit inside a tour company would almost certainly be the reverse of what examination of the data appears to suggest. Commercial expediency would, it must be assumed, tend to try to prove that the safety data collected from hotel inspections will reflect the view that there are few problems with the levels of safety in the hotels used by the company.

One of the things which the author's validation visits revealed was that frequently the results of an inspection or visit caused a considerable amount of extra work for the operator's field staff and on a number of occasions the view was expressed (in the author's hearing) that a particular tour company had lost significant commercial advantage because of strict adherence to its health and safety policies - for example, by withdrawing business from a very popular hotel on the grounds on non-compliance with safety standards.

This report therefore takes the initial view that as there can be no commercial benefit in misrepresenting or misinterpreting primary data other than to understate the scale and scope of any potential problems, the reports and data bases studied are inherently valid and the hypothesis adopted takes this assumption as its first presumption. This would not seem to be any more unreasonable than the assumptions generated by the CETEN-APAVE study where *all* the data were based on information provided solely by the owners or managers of the hotels surveyed. (For a view of the possible bias at work in respect of this data see A.4)

In addition, it is clear that an additional degree of confidence in the validity of the primary data accumulated by the tour operators derives from the fact that many of the inspections were undertaken by independent, qualified, professional fire, health and safety consultants. These consultants, most of whom have long experience derived from either the fire service or the health and safety field have no perceivable motivation to do less than a professional job on behalf of the tour operators.

Given the foregoing, it was agreed with the sponsors that:

- The author would have independent, unrestricted access to all the hotel fire safety data accumulated by the four larger members of the FTO (which represents over 70% of the UK package holiday market). Virtually all the accommodation used by these operators is also used by tour operators in other EU member states;
- To validate this data, the author would also be provided with the fullest information on the means by which the data was collated and information on properties collected, including the questionnaires used, the rating systems and the computer software employed;
- On completion of the analysis the author would undertake some on-site inspections to firstly validate the data collection methods employed by the tour operators and secondly to provide a method of checking any significant anomalies which might emerge;
- In order to avoid breaching commercial confidence or in any way causing problems for individual properties this report would look at fire safety on a resort by resort basis and all data disclosed would not refer directly to its source;
- To complete the research it was also agreed to provide data from some of the sponsor's smaller members, particularly in relation to hotels utilised in Northern European cities.

D. Analysis of Tour Operator's Data

Over the past 10 years, UK tour operators have accumulated a considerable body of data relating to the size, nature, method of construction and levels of fire safety within the hotels used by the company. Much of the data has been produced by independent specialist contractors who themselves have significant expertise in carrying out surveys and inspections of such premises. These contractors have also contributed to the development of risk assessment systems (both paper based and computerised) intended to provide more consistent and reliable methods of carrying out audits and inspections of the hotels utilised by tour operators

This study has therefore included a review of all the data gathering and risk assessment techniques utilised by each of the UK FTO members and an assessment and analysis of each approach. In order to refute possible criticism or claims that there are flaws in an individual company's approach it has been necessary to validate each separate approach to fire safety surveys.

Initially, data was sourced from the four largest UK tour operators and this produced a total of more than 6100 hotel reports. (See Table 3 which displays the data by resort and Table 4 which summarises the data by country as well as by EU/non EU).

One possible criticism of the way the data has been collected is the potential

for double counting of hotels - as data was assimilated mainly by resort it is almost inevitable that more than one inspection has been undertaken in respect of some properties. Taking a wider view it is suggested that this does not, of itself, create significant possibilities for misinterpretation or skewing of data. If more than one company or consultant has inspected the same hotel the presence of a second (or even third) safety report actually provides a degree of balance and effectively assists in ensuring that the results extracted are more meaningful and reliable. Even if, at its wildest possible extreme, more than half the property reports are duplicated, the total of the 'valid' inspections must represent at the very least 4000 different properties. This sample provided must be statistically more significant than that provided by the 1200 questionnaires in the CETEN-APAVE report. The sponsors themselves have estimated that the data examined and utilised in this piece of research work covers some 5000 different properties.

D.1 Grading Criteria Adopted

Because each tour operator has its own systems of recording and evaluating data it was essential that a single rating system be developed if meaningful comparisons were to be drawn. The rating system adopted in this report is intended to provide a simplified approach which is not dissimilar to the methods adopted by the four largest operators. At the time this report was being drafted the UK FTO members had agreed to adopt a uniform reporting and grading system. This approach will, in the future, facilitate the exchange of information.

The data obtained from each tour operator's own current grading system was analysed and regraded according to the classifications noted below. These are reflections of the standardised risk assessment approach - using 'high', 'medium' and 'low' categories to define needs for improvement. In addition, the fourth category represents the 'very high' or 'unacceptable' risk.

Grade 1 (High need)

The premises are considered to present an unacceptable level of hazard to the lives of staff and guests if a fire was to occur.

Examples of such deficiencies could be:

- Single unprotected staircase in a property of more than three floors above ground level;
- No electrical fire alarm system in a property with 30 or more bedrooms;
- Single open staircase in a property of more than two stories where there are uncomparted corridors in excess of 25m;
- Where there are locked, blocked or obstructed exits, stairways or other escape routes where the route cannot be immediately cleared;

- Hazards which create situations where a fire is likely or probable.

Hotels which are assessed as falling into this class are subject to immediate remedial action by the tour operators. This might be urgent action to remedy some serious ignition source or fire hazard (such as the repair or replacement of defective equipment), or ‘interim solutions’ such as not using guest rooms on high floors and/or a longer term ‘agreed solution’ such as installing an additional exit staircase or provision of compartment fire doors.

Grade 2 (Medium need)

These premises present a higher than normal level of hazard in the event of a fire. Examples could be:

- Uncompartmented corridors greater than 30m in length
- Poor staff training or inadequate maintenance of fire equipment;
- Defective fire safety equipment such as alarm systems, fire detection systems fire doors or emergency lighting

The sort of action taken here might be to agree a longer term programme of structural or procedural improvement combined with temporary measures such as the installation of self-contained smoke alarms in corridors pending the installation of a hard-wired electronic fire detection and alarm system.

Grade 3 (Normal need)

Such premises present no serious hazards and in the event of a fire all the occupants should be able to escape unaided in a reasonable time.

Examples of deviations from good practice which would be permitted and still place a hotel in this category would be:

- Absence of certain fire safety signs;
- Less than perfect maintenance of equipment or systems;
- Minor housekeeping issues

The manager of a hotel adjudged to fall into this category would be asked to remedy the minor faults discovered within a set time-frame.

Grade 4 (Unacceptable/very high risk)

Premises presenting an unacceptable level of safety or where the management have consistently declined to make improvements. This grade covers those hotels from which the operators have withdrawn their business.

FTO supplied evidence that its members had withdrawn from a number of hotels on safety grounds It has been suggested to the author that most, if not

all, of these hotels are still operating and are used by some non FTO members as well as a range of non UK-based operators (See E.3).

It is the author's opinion that any hotel falling into a category other than Grade 3 would be in technical contravention of national legislation if the *1986 Recommendations* have been satisfactorily written into law in the member state concerned.

It is not known how many EU-located hotels have been closed or otherwise sanctioned by local, regional or national governments for breach of fire safety rules. Anecdotal evidence from the UK supported by monitoring of the specialist fire press suggests that five or six hotels are prosecuted each year in the UK for breaches of the relevant legislation⁸.

Each UK Fire Authority (normally a county council or similar-sized body) has the power to close an hotel for contravention of fire safety regulations and to fine the manager and/or owner. In the case of a significant breach of the law a manager or owner, if convicted, can be imprisoned and although rare, this has happened.

It is perhaps worth noting that while visiting a Spanish resort as part of the research work for this report the author was told that a hotel, previously assessed by two different tour operators and their consultants as having serious fire protection deficiencies had been the subject of a warning from the local authorities to the effect that if certain deficiencies (previously identified by a number of tour operators) were not corrected during the winter of 2000/1 an 'opening certificate' would be denied the premises.

D.2 Quantative Analysis of Data

The project commenced with a review of the existing 'data mine' accumulated by the FTO members which participated in this project. Data, by resort, was extracted from the information stored by the four largest operators and an exercise to merge the analysis of the reports on the properties in each resort into the first three categories already described. Some combining of 'resorts' was necessary for the sake of producing meaningful figures. By combining resorts into country categories the project arrived at a range of figures which allow some initial conclusions to be drawn.

D.3 Qualitative Analysis

Following data mining and validation of the tour operators' inspection and assessment systems it became clear to the author that there are major inconsistencies within EU countries from the standards set down in the *1986 Recommendations*. Whilst fuller conclusions are developed later in the report it is clear that primary variations (ie. single staircases, unenclosed staircases, lack of corridor compartmentation, no alarm system) from minimum standards are common and appear to be of little import either to local authorities or the owners of the hotels.

The author found the methodology employed by the tour operators and their consultants is appropriate for the purpose and the questionnaires and computer software utilised produced a fair and consistent quality of data. The forms used for these inspections and risk assessment systems are now quite sophisticated and as useful and informative as the inspection procedures used by insurers, fire brigades or government agencies.

The author reviewed in detail more than 900 examples of the full reports which accompany recommendations for improvements and expresses concern with the poor responses which are frequently exhibited by those responsible for the premises. At an anecdotal rather than quantitative or statistical level it is suggested that it is worthwhile noting the following comments:

'Only the UK tour operators are asking for these improvements';
Manager, 5 star hotel, Crete.

'I cannot afford to undertake the work because of the poor rates now being paid for rooms'; Owner, 3 star hotel Austria.

'I will only do what my lawyer tells me and he says I don't need to do any of the things you are asking for' Owner, 2 star apartment block, Spain

'We don't do staff training because of the high turnover of staff'.
Manager, 3 star hotel, Spain.

'I can't leave the fire exit door unlocked because if I do people will come in from outside and steal from the guest rooms';
Manager, 3 star hotel, Spain.

D.4 Analysis of management standards

One feature which is universal to all the resorts visited - and indeed is a

common thread throughout the tour operators' reports is that poor or ineffective management can make a huge difference to the levels of safety provided in a hotel. Good, interested and proactive management approaches can actually result in a significant improvement in the safety grading accorded a unit and good management can compensate for otherwise sub-standard structural features or inadequacies of fire safety equipment. Equally, the converse is true. Poor, uninterested or generally uninformed management can make the level of fire safety accorded a hotel worse.

It is significant that poor management of fire safety both in terms of the prevention of fire and in the action to be taken by staff in the event of fire feature strongly in recent fires reported in Annex H1.

Two cases are worthy of particular note. In both instances fires took place in apparently well protected hotels both of which had been previously assessed by independent fire consultants as providing satisfactory levels of fire safety. In both cases fires occurred and were detected by automatic smoke sensors activating detection systems. However the staff on duty at the time (both fires occurred during the night or in the early morning) decided not to sound the alarms reportedly 'in case this panicked the guests' or because the correct procedure was misunderstood.

In the case of the first fire, the alarms were sounded for around ten seconds and it was assumed by those guests who heard the bells that there was a false alarm. (This was verified by questioning a number of guests who had been asleep on the sixth floor.) Unfortunately smoke from a relatively minor fire on the ground floor of the hotel travelled up the outside of the building and entered the sixth floor. This smoke, coupled with the apparent false alarm and a lack of information or staff intervention resulted in something approaching panic and the guests on that floor evacuated the building by emergency escape stairs.

The nature of the exit security devices resulted in broken glass on the corridor and stairs causing minor injury to bare feet. In addition, some guests who completely misread the circumstances (possibly as a result of the lack of information) overreacted to the situation and caused a damage to a number of doors of rooms which had already been evacuated.

In the other incident a similar situation occurred when a fire took place in a linen store situated on an upper floor. Staff reluctance to sound the alarm resulted in confusion and delay and, during the evacuation which followed guests found themselves in smoke-filled corridors. A number of guests suffered minor injuries while climbing over balconies and one woman broke a leg jumping from a balcony.

These incidents are recounted in some detail to serve as examples of what can go wrong even when a property is provided with fire safety equipment in

accordance with the *1986 Recommendations*. It is clear that the only sure way of protecting the lives of guests and staff is to ensure that physical fire safety measures are matched by proper management, well-established and properly understood procedures, good staff training and responsible intervention in the event of a fire.

It is one of the conclusions of this report that such standards are still infrequently encountered. It should also be noted that, in the professional opinion and experience of the author, larger, chain operated hotels can sometimes be just as deficient in this area as smaller or family owned units. (On an anecdotal level, the Park Lane Hilton, the UK flagship of that chain was itself prosecuted for serious breaches of UK fire safety legislation in 1990.)

Management activity, planning and proper staff training can make a huge difference to the levels of fire safety enjoyed by guests - even if the in-built levels of fire protection are less than ideal. A good example of this is was observed in an older, two star property where a very competent and committed manager has, by proper attention to detail, high levels of staff training and proper planning, managed to reduce the level of hazard in her hotel so that its fire risk assessment could be regraded from 'moderate' to 'normal'.

It is strongly recommended that requirements for proper planning, management and training be incorporated in any forthcoming Directive.

D.5 Essential Fire Safety Criteria

The *1986 Recommendations* summarise the essential features which serve to render a hotel fire safe. These are:

- Control of ignition sources;
- Provision of compartmentation to prevent passage of smoke; throughout the premises;
- Provision of alternative means of escape for guests and staff;
- Means of giving warning of fire;
- Means of detecting fire
- Means by which the occupants can fight a fire
- Provision of facilities to assist the public fire fighting authority
- Management of fire safety issues including training.

It is clear from work previously undertaken by the author in the period 1990 - 1995 that a great deal of improvement has been accomplished since then to upgrade the standards of fire safety in many hotels throughout Europe. Much of this work has originated as a result of pressure from a range of sources.

These have included:

- National regulations as prompted by the EC Recommendations;
- Work initiated and supported by tour operators;
- The influence of chain hotels;
- Consumer organisation pressure - including media campaigns;
- Insurance influence and campaigns by organisations like CFPA Europe.

It is also clear that there is no consistent pattern or convenient model to help predict levels of fire safety. In 1990 when the author first started to look seriously at this problem it seemed safe to assume that levels of fire safety were better in the north of Europe than the south and generally speaking better in the west than the east. It also appeared probable that big hotels provided better fire safety management than little hotels. These assumptions are no longer sustainable and it is encouraging to see just how much has been achieved in countries like Spain, Portugal and Greece.

In Spain, for example, the general levels of fire protection provided have been greatly improved in the past 10 years. Fire detection systems which were once a rarity are now the norm in virtually all hotels of more than two storeys and some fire compartmentation can now be expected in most hotels built in the last 10 years. The level of awareness of hotel managers is also much improved and much of the credit for this can be claimed not only by the local authorities and fire brigades but also by CEPREVEN (the Spanish fire protection association) who have undertaken a great deal of educational work in this area. The UK tour operators have also done much including running seminars for managers.

One example of just how far we have come in this area took place on one of the validation visits where he met the Director of a company which owns a number of apartment hotels. This lady was being questioned by a fire expert working for a tour operator with respect to the fire safety measures to be provided in an apartment hotel. She mentioned the proposed construction of a second, similar block and then asked for advice on how proper fire safety measures could be incorporated into the design of the building and even offered a set of drawings to the tour operator's health and safety manager who was present for the inspection. This recognition by an owner of the value of safety precautions is most encouraging - if all too rare.

However the downside of all of this activity is the inconsistency implicit in inconsistent regional and national approaches. In the absence of any universally-enforced standards (something that the author suggests is the most compelling reason for European legislation) the holidaymaker, tourist or business traveller has no other weapon than his or her own eyes and ears if he or she wishes to verify the standards of fire safety provision. This dilemma can be exacerbated when in the same resort, hotels of the same star rating owned by the same company can present very different standards of fire safety.

One particular example of how difficult it is for the traveller to be assured of proper fire safety provision was experienced in a resort town in the Austrian Tirol. The author, accompanying a fire safety expert working for a tour operator, saw two very different, family run hotels located only 300m apart.

One was equipped with a full fire detection system, enclosed staircases with full compartmentation (with doors on magnetic releases), at least three alternative exits from all bedroom floors and excellent signs, information notices and plans. There was even a smoke hood for staff emergency purposes on each floor. The family running the hotel had obviously invested a great deal of time and money in their property and all the staff questioned had a proper understanding of fire safety procedures and had been trained at the beginning of the season.

The author was particularly impressed when discussing the matter with a member of the owning family to be told that she regarded the safety of her guests as just as important as their comfort or entertainment.

The other property had a single staircase which was only partially enclosed (and the doors were wedged open). There was no detection or alarm system and no alternative means of escape other than over balconies. On being questioned the owner said:

‘Why should I do more than I have to ? I already spend too much money to comply with foolish regulations. I will not do any more unless my lawyer tells me I have to’.

When asked about staff training he replied:

‘No I don’t provide (fire) training for my staff. It would be foolish to do so. The guests will get out by themselves. Anything my staff do will only cause a panic.’

When faced by such variations in standards the author can only conclude that European legislation is essential to impose minimum life safety standards.

E. Validation Visits

E.1 Tour Operator Inspections

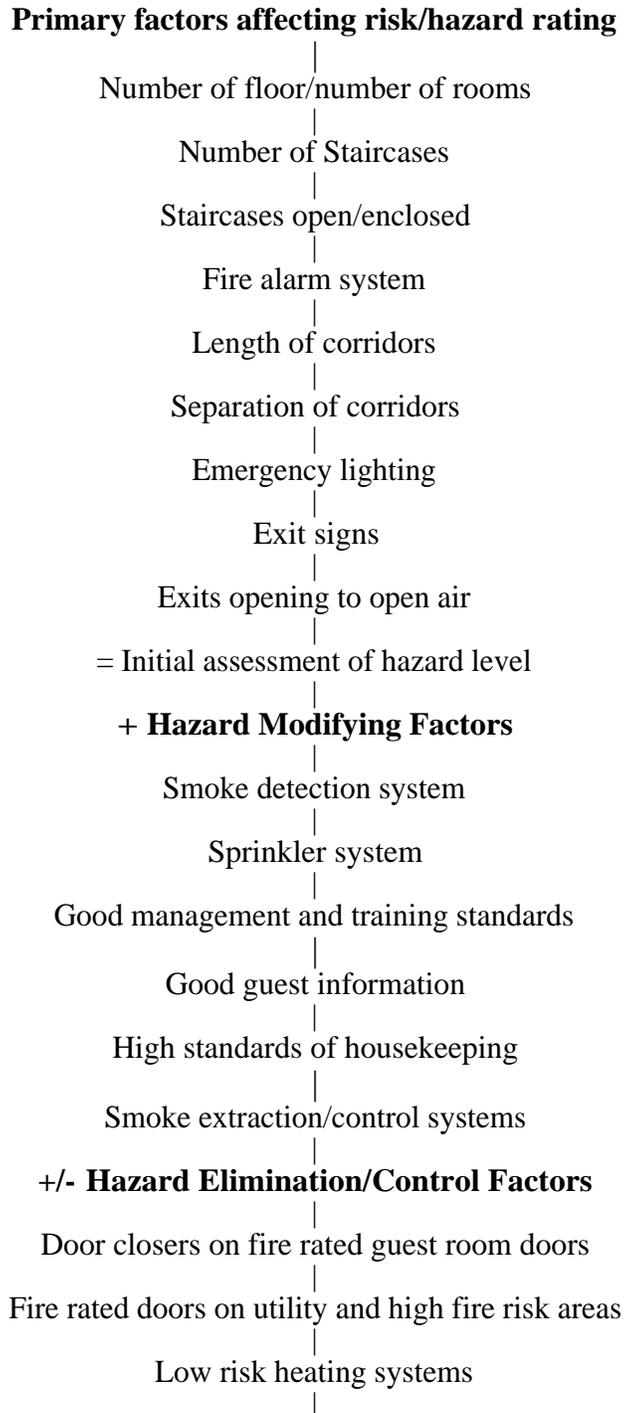
During August 2000 the author undertook visits to 7 resorts and surveyed 96 hotels or apartment hotels. At the same time he audited the inspection process used by tour operators and the independent fire consultants used by these companies.

The information gathered during the visits showed that the inspection and

audit procedures were entirely consistent with the claims made for them. More detail on these is given in D.3.

The procedures operated by all four major companies are similar and consist of a 'decision tree' generally similar to the simplified version shown in Table 6.

Table 6: Simplified Rating System Hazard Tree



Condition of electrical wiring installation
|
= **Final assessment of hazard rating**

E.2 Utilisation of Results

The most useful time to undertake a review of hotel fire safety is prior to construction or major refurbishment and, as already has been mentioned, there is a much greater awareness of the benefits of taking specialist advice at an early stage. All the tour operators the author spoke were willing to provide free advice to developers and, in the case of the larger hotel companies (particularly in Spain), this approach seems now to be the norm.

When a tour operator is considering contracting a new property (or an existing property new to that company) a well-established set of guidelines are utilised. If defects or problems with fire safety are perceived then the property owner is provided with a clear set of recommendations (in writing) which, when implemented, will eliminate the hazards described. This report, normally produced by an external consultant will then detail the actual provision of the features set out in Table 6. Where there are deficiencies, these are noted together with the most cost-effective remedial action.

This report then forms the basis for a letter of agreement between the tour operator and the hotel. This procedure is formalised to the extent that the owner or manager is asked to sign an agreement to undertake the work within a defined time scale. A meeting is arranged at which a member of the tour operator's staff (who has been specially trained in health and safety matters) presents the report. In some cases, for example if a new external staircase is required, the deadline may be the beginning of the following season. In other cases, for example, where an escape route is blocked it will be by the end of that day. It was clear to the author that, with few exceptions, the hotel managers he met understood the procedures and while, in some cases, they felt the money could be better invested in other facilities, most were willing to collaborate.

In some cases, where there is a need for urgent action to reduce the levels of a specific hazard, interim measures are agreed. This could be restricting the use of certain rooms, providing temporary fire protection or requiring a night time patrol of bedroom floors.

E.3 Action when a property is deemed unsafe

The author found that the tour operators were willing to take appropriate action when an unsafe condition was discovered. In a number of cases the companies have had to relocate tourists to other hotels at short notice. One situation, observed on one of the validation visits was created by a serious combination of unsafe conditions (four storey block, single open staircase, uncompartmented corridors exceeding 25m in length, non-functioning emergency lighting, no fire alarm or detection; inadequate fire exit signs, no

fire instructions for guests and an unstaffed reception area for 18 out of 24 hours. The situation was exacerbated by the presence of a very high hazard retail/fast food occupancy on the ground floor which had a communicating door into the area at the bottom of the single staircase.

Immediate measures to reduce the hazard levels and to improve the levels of fire safety were asked for and the manager was told that if these were not put in place within 48 hours the tour operator would remove all its customers.

The author asked the UK FTO about past experience of similar situations and during the period 1 January 1999 - August 2000, FTO members claimed to have withdrawn from more than 67 properties in the EU and 37 outside the EU for reasons of safety.

E.4 General Comments about Resorts Visited

(a) Spain: Costa Dorada

In the five years since the author last visited this area there have been significant improvements in the levels of fire safety provided in three and four star hotels. There is still a long way to go in respect of the one and two star - rated hotels and apartments and during the validation visit the author was involved in a discussion with a manager who was strongly resisting a tour operator's requests to provide even even the most basic fire safety measures. This particular unit was of special interest because it was almost identical to another unit nearby owned by the same company. The other unit was provided with fire safety equipment and facilities in excess of the minimum demanded by the *1986 Recommendations*. The block being inspected had nothing except some poorly sited exit signs (some of which were inappropriate) and portable fire extinguishers.

The difference between the two blocks was that the one with the poor standards had previously been wholly contracted to non-UK tour operators. The problems that were observed in properties of this type can be summarised as follows:

- Management and staff training - particularly in respect of managing a fire evacuation;
- Locking, chaining and gating fire exits and staircases;
- Storage of gas cylinder on exit routes (very common in apartment blocks)
- Malicious damage of fire and safety equipment by guests;
- Inconsistent signs (mixing European Standard (EN) and older signs)

Since the visit, the author understands that a range of actions have been taken to eliminate many of the problems noted and that agreements have been reached with hotel managements to undertake additional work over the

winter.

(b) Spain, Ibiza

One of the more interesting observations arising from the validation visits is that it is possible to find very different standards of fire safety in units in the same street. Some of the older hotels on this island have been satisfactorily upgraded in accordance with the various decrees of the Balearic Islands Autonomous Community, others, reportedly on the basis of size have not. (The author was later told by a hotel manager that the local authority demanded a much lower standard of fire safety compliance in hotels or apartment hotels with 29 or fewer rooms).

One very large hotel (commented on in D.1) was deemed to constitute a higher than acceptable risk to guests and the author was able to see the appropriate procedures put into operation to ensure that senior staff of the operator both in the resort and in London were made aware of the problem and that the necessary steps were taken to try to reduce the levels of hazard and minimise the life safety and fire risks.

Typical problems encountered on this island included:

- Secured fire exits because of a risk of theft and unauthorised visitors;
- A bricked up fire exit because of a security needs due to a change of use of part of a hotel;
- Very high levels of rubbish and old furniture dumped in storage areas;
- Poor electrical wiring;
- Very poor housekeeping;
- Inconsistent, inappropriate or non standard exit signs;
- Absence of proper management presence in a number of units;
- Very long, uncompartmented corridors;
- Fire exit routes discharging into unsafe areas.

(c) Austria: Tirol

The root of the problems here seem to relate to the application of local or regional legislation which exempts smaller hotels (those with fewer than 30 rooms) from much of the requirements of general fire safety legislation. Some of the problems encountered in Austria, and in particular the variations in attitude and approach, have been detailed earlier in this report.

Primary concerns resulting from the inspections of Austrian hotels are:

- Uninterested management/owners;
- Few fire detection systems - even in some four storey hotels;

- Presence of misleading, obsolete exit signs (red 'Notausgang' signs);
- Many remote locations where fire brigade response could be delayed in winter;
- Extensive use of timber in construction;
- Little compartmentation between hazard areas such as boilers and accommodation spaces;
- Poor levels of staff training.

(d) Greece: Crete

The author was surprised and pleased to find a significant number of hotels on the island fitted with automatic sprinkler systems. Whilst it was not possible to verify that these systems were fully operational the discovery of automatic fire suppression systems during the visit to Crete did create the only significant variance in opinion between the author and fire consultants.

This difference relates to the hazard rating that the author would have applied to premises where a sprinkler system had been installed. In most cases he would have assessed the risk rating as being better in such hotels than did some of the consultants.

Many of the hotels inspected did not have full sprinkler systems (that is, all parts of the hotel protected by sprinkler heads) but normally only the guest bedroom corridors and some public spaces. While this is not something of which a fire expert would approve, the presence of even partial sprinklering has to be a significant modifying factor which needs to be taken into account when assessing fire risk. The potential life safety hazard in any hotel must be reduced by the presence of working sprinklers because these will prevent fires developing in corridors or spreading from bedrooms. (They will not, of course, prevent smoke from entering the corridors from a fire elsewhere). In a number of four and five star properties it was pleasing to find sprinkler protected bedrooms which were also protected by a smoke detection system.

Other points of interest:

- Significant inconsistencies with signing in some one and two star properties (mixture of old and new signs in various languages);
- Poor maintenance of emergency lighting;
- Generally high standards of management;
- Very good fire protection of kitchens;
- Some resistance to corridor and staircase smoke stop doors on 'aesthetic' grounds in four and five star properties;
- Lack of guest instructions and floor plans;
- Significant numbers of BCF/Halon 1211 (Bromodichlorofluoromethane) fire extinguishers and fixed systems which will have to be replaced prior to the phaseout of this fire fighting chemical in the EU.

F Conclusions and Recommendations

F.1 Conclusions

The author must conclude from the overwhelming deficiencies exposed by the data studied and gathered during this project, confirmed by site visits and personal observations, that the *1986 Recommendations* have not been effective in providing a uniform minimum level of fire safety in hotels in Europe. This is

despite clear evidence of some improvements having been made when comparing present circumstances with work undertaken up to 1996,

This conclusion reflects both hotels which existed at the time the Recommendations were published as well as those designed and built since then. While it is true to say that in many cases (particularly in Spain and Portugal) good levels of fire safety provision have been provided in many new and refurbished hotels one must question whether this has been achieved as a result of national legislation inspired by the *1986 Recommendations* or by the action of tour operators.

Contrary to the opinions expressed in the CETEN-APAVE report the author found a very poor level of awareness of the *1986 Recommendations* among hotel managers. Of more than 80 questioned, only sixteen said they had heard of the *1986 Recommendations* and all said that they had been told about the Recommendations by a UK tour operator or fire consultant. In Crete and Ibiza, managers said that most of their information on fire safety had been acquired from seminars run by the local hotel association jointly with UK tour operators. Managers in Austria and Crete were particularly critical of the Recommendations which they almost universally condemned as irrelevant and inappropriate.

One of the major criticisms levied at both tour operators and hoteliers in the past was their willingness to rely on the fact that 'we comply with the local regulations'. The Recommendations were intended to provide minimum levels of protection for guests and staff in hotels across the EU. The data analysed in the course of this survey makes it clear that this objective has not yet been achieved and that there is still a long way to go before those living and working in the EU are provided with levels of safety in hotels which are '*compatible with levels of safety at work*'¹.

In particular, it is apparent that while a great deal has been done to upgrade standards of fire protection and fire safety management in some southern European countries (particularly Spain and Portugal) much remains to be done and it is the opinion of the author that this will not happen without EC legislation which imposes penalties for non-enforcement. Too often hoteliers

and national governments appear to rely on the voluntary nature of the *1986 Recommendations* - for example, the failure in Austria to require upgrading of fire standards in existing hotels even when quite substantial renovations take place.

In Italy, the imposition of new regulations has been deferred a number of times and hoteliers have, quite reasonably deferred their response until such time as specific legislation is introduced. It should also be noted that one interpretation of the Portuguese implementation of the *1986 Recommendations* requires implementation of fire safety measures 'only when practicable'.

Another issue which should be considered is the variable standard of enforcement and the resources available to enforcing authorities. The failure of more than half the countries in the European Community to make the 1986 apply to existing hotels (as intended by those who framed the Recommendations) must take part of the responsibility for this situation.

In some countries fire safety standards are enforced by local fire brigades, in others by a local government department while in still others this is done by central government. Sometimes hotel fire safety standards are considered as part of the overall standards imposed on hotels and apartment-hotels as part of their certification (for example, the 'Opening Certificate' of the Balearics which has to be obtained each year prior to the beginning of the tourist season).

In some smaller resorts a lack of fire safety expertise has probably resulted in some unwise decisions by the authorities or at least in some unusual applications of fire safety priority. A good example of this is the requirement in Crete for hotel bedroom floors to be equipped with 'Fire Boxes' containing equipment such a shovel, a pick axe, gloves and a hard hat. Welcome though this kind of equipment might be during an emergency it is the author's professional opinion that a much higher priority would be to enforce the requirement to provide floor plans and guest fire instructions.

Another area where the availability of local fire safety expertise has created problems is in the attitude to fire alarm systems. This report has already mentioned the improper operation of fire alarms which has caused problems in confusing guests. There is a clear need for authoritative advice on this matter which must override local misinformation.

Similar criticisms can be levied at the advice given by local fire authorities in Greece and Spain with respect to fire compartmentation. In both countries it would appear that there is no distinction between the (expensive and heavy) fire door (which is intended to resist heat and fire for long periods) and the much lighter (and cheaper) smoke stop door which is only intended to hold back the spread of smoke into escape routes for a short period. Over

specification of unnecessary fire doors must have consumed large proportions of many hotels' available fire safety budgets as well as creating significant on-going maintenance costs.

Clear Community-wide technical standards would prevent this kind of misunderstanding and ensure that scarce resources are better utilised.

Of the 96 properties visited 65 had significant or serious deviations from the *1986 Recommendations*;

The most serious problems reported on were:

1. Single, unenclosed or inadequate staircases (39%)
2. Uncompartmented corridors (33%)
3. Inadequate exit signs/emergency lighting (43%)
4. Obstructed or unusable escape routes (33%)
5. Inadequate fire training 55%
6. Poor compartmentation around hazard areas 35%
7. Poor fire safety management (50%)
8. Poor maintenance/inoperative equipment (27%)
9. Inadequate guest information/instructions (30%)
10. Very dirty kitchen range hoods with no built-in protection (25%)
11. Inoperable fire alarm systems/emergency lighting (15%)

F.2 Recommendations

As a result of the information gained in undertaking the research for this report it is the professional opinion of the author that urgent action is necessary if this essential element of the EU's implementation of the single market is to be properly completed. Wide variances in fire safety standards clearly exist in all EU member states and the data available on properties in countries outside the EU show there are similar inconsistencies there also. It is suggested that if a hotel fire safety Directive is not implemented prior to any future expansion of the European Union then significant problems will be encountered in ensuring that Community citizens and other travellers are provided with adequate levels of safety in hotels.

It is also worth considering the fact that hotel fire safety appears to be one of the few critical Community consumer protection issues that has not, so far, been adequately regulated. It is suggested that, given the potential life safety impact of a major hotel fire (see G.2), this is a serious omission.

At the very least, the Commission should undertake the following:

1. Contract a reputable fire safety organisation (such as CFPA Europe) to undertake an in-depth review of the *1986 Recommendations* and their present application and enforcement in all EU member states as well as an overview

of actual standards of fire safety in hotels as enforced in candidate member states.

2. Consider the additional duties imposed by the 1989 Framework Directive and 1989 Workplace Directive and consider their impact on and implications for hotels and like premises. Consider also the current levels of compliance with these Directives in the hotel sector.

3. Based on the findings of (1) and (2), the Commission should introduce a new Directive covering minimum standards of fire protection and fire safety for all properties used for accommodation by tourists and travellers. A standardised tariff of penalties for non-compliance should be made mandatory in all member states. The Directive should include technical advice on management, training and information for guests in addition to updating the technical elements of the *1986 Recommendations*. Suggestions as to what changes should be made to the *1986 Recommendations* are attached in Section H.3

4. The Commission should encourage Member States to actively promote fire safety to all owners and managers of multi-occupancy buildings with special reference to hotels and apartments. (There is no need to wait for a Directive before this happens.)

F.3 Other Benefits

A Hotel Fire Safety Directive would also provide additional benefits both for Member States, the travelling public and hotel owners and operators:

- The imposition of a Directive would facilitate a skills-transfer between member states;
- The existence of standardised fire safety requirements would reduce the costs of building hotels and would also encourage hotel developments by the multinational companies who are often deterred by the uncertain impact of local legislation and unfamiliar standards;
- Hotel owners would be assured that their fire protection expenditure was both appropriate and necessary;
- The existence of broadly similar standards would facilitate the regime of inspections and certification and minimise expensive duplication.
- Hotel staff moving between regions or member states would not find radically different training requirements and management procedures.
- The availability and imposition of minimum fire safety standards should result in a decline in the number of fires, loss of life and loss of property and assist insurance companies to reduce premiums.

F.4 Effect of the Framework and Workplace Directives

The two 1989 Directives (described in A.6) placed the primary responsibility

for ensuring health and safety in the workplace on the employer. Thus, any significant improvements in the level of safety of hotel guests will have come about as an unintended - but nevertheless welcome - consequence.

While one of the principal tools of the Framework Directive was the requirement for the employer to be in possession of an assessment of risks - including the risks of or from fire the author was able to find only 12 out of 90 hotel managers who had heard of the Directives. Around half of those questioned said that they were aware of the requirement to 'do a risk assessment' but all of these said that they had been told about this by a tour operator's fire consultant or health and safety manager.

There is no evidence to show that the two Directives have had any effect on the levels of fire safety provided in hotels. None of the managers questioned offered sight of a risk assessment and only one (in a five star property in Crete) claimed to have completed this requirement. In one family owned Austrian hotel the manager stated that they had asked the local fire brigade for guidance on the completion of the fire risk assessment but that no advice had been forthcoming.

F.5 Need for Changes to EC Recommendation 666/86

This opportunity is being taken to suggest what changes might be made to the existing EC Recommendations if it is accepted that these should form the basis for an EC Directive.

1. Definition of 'Hotel'

This should encompass all types of accommodation open to the public used on a temporary basis in return for payment. The definition needs to ensure that all but the very smallest premises are included so it should apply to all premises with sleeping accommodation for say, ten or more guests. Premises where all accommodation and other facilities for guests is at ground floor level should still be included in the definition but relaxations of certain technical features might be permitted for this class of building. The definition should also include all seasonally-used buildings regardless of the duration of use. It should not be possible for national governments to exempt existing hotels from compliance and the minimum standards must be enforced within a reasonable time, say three years.

2. Essential Fire Safety Features

The technical standards should include requirements for the following:

- Means of escape in case of fire;
- Means to ensure that all means of escape are available at all time;
- Structural and other methods for containing fire and smoke;

- Means for removing or dispersing smoke;
- Means for detecting and giving warning of fire;
- The provision of adequate, clear, standardised, fire safety signs;
- Facilities for occupants to fight fire;
- Facilities for the public fire brigade;
- Proper standards of management and planning;
- Maintenance of systems and procedures;
- Training of staff;
- Provision of information to guests;
- The prevention and control of fires.

3. Compensatory Factors

Proper consideration should be given to the need to building-in fire protection measures at the design stage and to consider the benefits of automatic fire detection and suppression systems. Consideration should also be given to the potential value of voice alarm systems which can provide reliable information in more than one language. In the case of new or refurbished hotels the value of fire exits which lead directly to the open air or other place of safety should be stressed.

4. Management

Any Directive must take account of the fact that even when a hotel or other building is provided with adequate fire protection equipment lives can still be lost when there is a management failure (See case studies G.1 and G.2). The Directive must spell out the legal responsibilities for managers and owners and make it clear that there will be a legal duty of care should a fire or injury result from a failure in this area.

The Directive should list Management's duties which must include the need to:

- Undertake a risk assessment and record the results in writing;
- Appoint a competent person to be in charge of fire safety matters;
- Prepare a written fire safety policy;
- Prepare and maintain a fire safety log book;
- Train all staff in the action to be taken in event of fire;
- Train all those staff who may have special duties in event of fire;
- Conduct regular tests of fire detection and alarm systems;
- Maintain/cause to be maintained all fire equipment and systems;
- Conduct regular fire drills including one major drill at the beginning of each season or at other appropriate time.

5. Information for Guests

Each guest room must be provided with a permanent, legible sign in the

languages spoken or likely to be spoken by the majority of the guests providing the following information:

- What to do if a fire is discovered and if appropriate, how to call the public fire brigade;
- What to do if the fire alarm is sounded;
- What the fire alarm sounds like;
- A graphic depiction of the environs of the room and the route(s) to the nearest exit(s);
- What action to take if a guest is unable to evacuate a room;
- Where to assemble after evacuating;
- Any other special measures needed to be taken;
- A reminder that it is forbidden to use elevators (lifts) in the event of fire;
- A reminder that smoking in bed is dangerous.

Similar signs should also be displayed adjacent to each elevator or staircase lobby and, in the case of larger premises, beside each fire alarm call point on bedroom floors. All lifts must be fitted with signs both inside the lift and by each lift call button advising that the use of lifts in the event of a fire is prohibited.

6. Enforcement and Certification

The Directive should spell out how its requirements are to be enforced and should propose a simple system for pan-European hotel certification which could be organised by national or local governments, fire protection associations, other certification bodies or by commercial companies such as insurers.

The Directive should also incorporate a penalty for guests or other persons who steal, tamper with, damage or otherwise misuse any safety equipment.

It is also suggested that it would be extremely beneficial for consumer protection if there were a requirement for all hotels and other properties subject to the control of the new Directive to be required to display a certificate issued by a competent authority certifying that the the property has been inspected, is in full compliance with the requirements and showing an expiry date at which time a further inspection is due.

7. Equipment Standards, Maintenance and Reliability

The Directive should stress the value of installing only fire protection equipment or systems which has been the subject of a third party certification scheme and require that all systems and equipment installed for life safety or fire purposes must be subject to a properly organised maintenance regime undertaken by competent, qualified contractors who are themselves subject to a proper quality assurance or third party certification scheme.

G. Case Studies

G.1 Recent Hotel Fire Incidents in Europe

Although fires in hotels are (fortunately) comparatively rare, enough incidents take place to allow for a meaningful examination of how fire safety provisions affect the impact of a fire on occupants and buildings.

This appendix reviews five fires which have been investigated both by national or regional authorities and by specialist fire consultants employed by a member of the UK Federation of Tour Operators. Each case study contains important lessons on the practical implementation of fire safety standards as well as the ways in which the incidents were handled by the hotel's staff.

Incident 1: Spain, Tenerife

On 10 June 2000 a very smoky fire broke out in a small food preparation of a hotel. The management took the decision not to sound the general fire alarm.

By not operating the alarm, fire doors held open magnetically failed to close and this, together with a 'glass envelope' design at the rear of the hotel funnelled smoke throughout the hotel and in particular to the guest floors.

As a result of the smoke logging some guests were forced to escape from balconies and in the process one female guest suffered a broken leg. It would appear from reports that, in spite of the smoke in the corridors, the guests would have been safer remaining in their rooms or on balconies.

The fire investigation also revealed that there were problems with double door closers which would probably have meant that even if the doors had closed there would have still been smoke spread.

Lessons: Inappropriate staff/management response;
Poor staff training;
Design flaw;
Lack of proper door hardware.

Incident 2: Cyprus

On 18 February 1998 at 0800 hrs a fire took place in a guest room. The fire brigade concluded that the probable cause was a faulty tv set. A significant amount of smoke was produced and this resulted in a full evacuation of the hotel during which a male guest suffered a heart attack and died.

Lessons: Fire could have created substantial life loss had it occurred two hours previously - most guests rescued from balconies;
Delayed management response;
No smoke detection in rooms.

Incident 3: Central Portugal

A severe fire took place on the 6th floor of a hotel on 7 May 2000 at 0430 hours. In the fire a guest died and a local police officer was also killed under circumstances which are not clear. The fire is thought to have started in an polyurethane upholstered sofa on the 6th floor guest bedroom corridor. The power failed soon after the fire started and there appears to have been a delay in summoning the fire brigade. The smoke produced was so thick that by the time guests were awakened by the smell of smoke (on the 6th floor) or by staff knocking on doors (remainder of the hotel) much of the hotel was smoke logged.

The guest who died was trying to get from his own room to a nearby room occupied by his children. The police officer was killed by a round from his own pistol and is thought to have been trapped in the lift he was using to investigate the reason for the smoke.

Lessons: Fire detection system failed to operate;
Power failed at early stage;
Poor management control of emergency;
Both lives lost because basic fire instructions were ignored.

Incident 4 Mainland Spain

A small fire took place in a large hotel on 2 August 2000 at about 0200 hrs. The fire, cause unknown at the time of writing, started in the storage room behind the hotel's main bar, The smoke detection system in the area operated at the fire control panel and the duty receptionist responded by ringing the evacuation alarm bells for about 10 seconds. This was reportedly done as a result of a misunderstanding and confusion with the hotel's agreed procedure in respect of fire alarm testing.

Not all guests heard the alarm and most of those who did assumed it was a false alarm. Some minutes later smoke from the fire travelled up the outside of the building and entered the sixth floor guest bedroom corridor and some of the rooms. The presence of smoke without any proper alarm appears to have caused a degree of concern among the guests some of whom kicked in bedroom doors to 'make sure that the rooms had been evacuated'. Additional problems were reported as a result of significant quantities of broken glass which resulted from the protective devices on the fire escape doors. A small number of guests suffered from cut feet.

Lessons: Glass should not be used to protect door handles on escape routes;
Poor staff training and management control;
Improper operation of fire alarm system.

G.2 Additional Case Study

Fire in Prague

This fire is reported in some detail as it depicts a very serious fire in a city centre hotel. Such hotels are found in all major towns and cities in Europe and it is the opinion of the author that similar consequences can be expected from such a fire in any country in the EU.

On 26th May 1995 a fire occurred in the early evening, at a 20 storey hotel in which eight people died and thirty six were injured, including two firefighters.

The fire began at approximately 1800 hrs on the 11th floor in a utility room and quickly spread through the top floors of the Hotel. The thirty year old, high-rise tourist hotel had 545 guests registered at the time but when the fire broke out there were only about 100 guests and staff in the building. The eight guests that died were all tourists: three Belgians, two Finns, and a German died on the day of the fire and an American mother and daughter died several days later in hospital.

The official report following an investigation of the fire by City officials revealed that the most likely cause of the fire was that the coils on the back of a refrigerator in a utility room had been covered with a towel or some other combustible material which had subsequently caught fire. Examination of other utility rooms revealed that it was common to dry towels on refrigerators.

The fire developed quickly, having a ready source of fuel in the combustibles stored in the room, rapidly filling the stairwells of the main and emergency exits with smoke and trapping guests on the top floors. The official report said that the death toll would have been much higher had the fire occurred during the night.

It was reported that while the hotel had complied with the building standards that applied at that time it was built it did not comply with more recent standards which had come into effect at the beginning of 1995.

H. Notes

1. Preamble to the *1986 Recommendations*
2. The Confederation of Fire Protection Associations - Europe is a formally constituted organisation representing the 11 national fire protection associations of the EU/EFTA. Each association is recognised by its national government and is supported by the country's insurance industry.
3. *Fire Safety in Hotels - Requirements for Europe*(1994) CFPA Europe, The Fire Protection Association, London ISBN 0 902167 80-4. (English language version).

4. Report on CFFPA Europe Conference, *Fire Prevention* 268, April 1994, Page pp 13 -15.
5. 1994 Presidential Address, Mr G Meldrum, President, Chief and Assistant Chief Fire Officer's Association, Bournemouth International Conference Centre.
6. Etude sur la Sécurité Incendie dans les Hôtels et les Etablissements d'Hebergement de la Communaute Europeene.
7. Private communication: M. Alain Georges, President CFFPA Europe to the European Commission, DG12.
8. The Fire Precautions Act 1971 and the the Fire Precautions (Hotels and Boarding Houses) Order 1972
9. World Fire Statistics Centre, Geneva: introductory statement by the Director, Mr T Wilmott at Interschutz, Heidelberg June 2000.

Reference Sources to the 1996 CETEN-APAVE Report

- Commission des Communautés Europeennes (1996) *Etude sur la Sécurité Incendie dans les Hôtels et les Etablissements d'Hebergement de la Communaute Europeene*. Tome 2.
- Whitworth, G (1997) *European Study on Fire Safety in Hotels & Tourist Accommodation*: Report submitted to the UK Fire Protection Association, February 1997
- Whitworth G, (1997) 'Hotel fire safety', *Fire Prevention* No 298, April 1997.

J. Acknowledgements

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In particular, while perhaps invidious to single out one individual he has to thank Mr Gary Whitworth, Managing Director, Fire Stat-International Ltd who provided a great deal of encouragement, information, assistance with the case studies and general support for the duration of the project. He would also like to thank Mr Ken Coulson for for permission to quote from a report on the fire in Prague.

K. Qualifications and Experience of the Author

Stewart Kidd is a loss prevention specialist with significant experience in the application of modern risk management techniques in commerce, industry and the public sector. His has experience of managing all aspects of corporate

security and loss prevention in utilities, health care, hotels and high-end retail.

With more than 30 years experience in the sector his background includes service as an Inspector with the Hong Kong police force and commissioned service with the Corps of Military Police. From 1975 - 1987 he held a range of security and loss prevention posts in Saudi Arabia, Libya, Hong Kong and Bahrain. In 1987 he returned to the UK as County Civil Protection Officer for Cambridgeshire.

From 1989 to 1997 he was Director of the Fire Protection Association, the UK's national fire safety organisation and from 1996 to 1997 was also Director General of the Association of British Insurers /Home Office-sponsored Arson Prevention Bureau. He was Vice Chairman of the Confederation of Fire Protection Associations - Europe from 1991-1997 and chaired their Hotel Fire Safety Working Party.

Mr Kidd is well known as a lecturer and writer and is the author of *A Dictionary of Industrial Security; Heritage Under Fire, Fire Safety in Hotels: Recommendations for Europe* and *An Introduction to Physical Security*.

He is President of the Institute of Fire Safety Managers, a Governor of the the Institute of Risk Management and Registrar of the Security Institute. He is the Secretary General of the British Automatic Sprinkler Association and a member of the Steering Group of the World Fire Statistics Centre. He sits on the Advisory Board of the Cranfield Security Centre (Royal Military College of Science/Cranfield University) and has lectured on loss prevention at a range of centres including the Home Office Crime Prevention Centre, the Fire Service College, the University of Leicester and the University of Loughborough. He is a member of the Association of Security Consultants and the Society of Expert Witnesses

Educational and Professional Qualifications

1969 - 1973	University of Aberdeen: MA in English Literature and International Relations
1977	Institute of Industrial Security, Membership exam
1979	Institution of Fire Engineers, Membership exam
1980	Institute of Industrial Security, Fellow by thesis
1984	Certified Protection Professional
1986	Institute of Risk Management, Fellow
1994 - 1996	University of Leicester: MSc Security Management
1995	Institution of Fire Engineers, Fellow
1999 -	Royal Military College of Science/Cranfield University: Doctoral research into classification of and motives for arson
1999	Institution of Fire Safety Managers, Fellow

1999 The Security Institute, Fellow

Hotel Projects

Chairman, CFPA-Europe Hotel Fire Safety Working Party 1992-96
Organised major hotel fire safety seminar at EC Conference Centre,
Luxembourg 1994

Technical advisor, *Holiday Which* 1992-6 (including three seasons of hotel
inspections and training for HW staff)

Organised hotel fire seminar for Egyptian Ministry of Tourism, 1994

Organised hotel fire seminar, Egyptian Insurance Federation, 1995

Provided in-house training for several tour operators including resort-based
sessions

Technical advisor; *BBC Watchdog* 1994-6

Provided technical expertise for hotel upgrading projects in Eastern Europe
and Middle East 1995 - date

Surveyed hotels in Eastern Europe and Africa for World Bank

Advised Hong Kong Fire Services Department on feasibility of new hotel
sprinkler regulations 1995/6

Inspected hotels in a number of European countries for a multinational chain.
1995/6

Technical expert on major hotel/leisure project in Brunei 1997-8

L. Text of EC 666/86

COUNCIL RECOMMENDATION .
of 22 December 1986 .
on fire safety in existing hotels
(86/666/EEC).

THE COUNCIL OF THE EUROPEAN COMMUNITIES

Having regard to the Treaty establishing the European Economic
Community, and in particular Article 235 thereof.

Having regard to the proposal from the Commission(1).

Having regard to the opinion of the European Parliament(2).

Having regard to the opinion of the Economic and Social Committee(3).

Whereas rules governing fire safety in all hotels do not exist in all the Member

States; whereas in many cases where they do exist the relevant provisions are incomplete and contained in several different texts and it is thus difficult to gain a clear picture; whereas they are not always fully observed;

Whereas, with the rapid expansion of tourism and business travel, more and more people need to stay in hotels in Member States other than their countries of origin; whereas such persons are entitled to adequate protection in the host country and to be informed of the nature and extend of that protection; whereas the safety of guests must be compatible with the safety of staff at work;

Whereas even allowing for any differences in type or construction in hotels in the Member States, it is possible to define a minimum standard of fire safety for all hotels; whereas their conformity with that minimum standard is essential for their continuing operation and whereas it is advisable to subject hotels to periodic inspections;

Whereas for economic, technical, and architectural reasons it will take some time to introduce fire precautions fully in hotels; whereas for the objective in question to be attained the period allowed must be within reasonable limits;

Whereas harmonized provisions regarding the use and application of materials from the point of view of fire protection do not exist at Community level; whereas this situation cannot justify the adoption by Member States of measures liable to aggravate technical barriers to trade; whereas, on the contrary, fire precautions in hotels based on a minimum standard of safety must help to prepare and promote harmonization work in progress elsewhere;

Whereas, for economic reasons and from the standpoint of the safety of tourists and persons travelling for any other reason from one Member state to another, it is important to promote the circulation and dissemination of information regarding measures adopted at national level to protect hotels against the risks of fire; whereas the Commission is called upon to play an essential role in the provision and dissemination of this type of information.

HEREBY RECOMMENDS MEMBER STATES:

(1) To take all appropriate measures in so far as existing laws are not already sufficient to meet the requirements of this recommendation to ensure that fire precautions in existing hotels are subject to provisions based on the principles set out below.

Aim and means of ensuring safety in existing hotels

1. The introduction of fire precautions in existing hotels is intended to:
 - 1.1 reduce the risk of fire breaking out;
 - 1.2 prevent the spread of flames and smoke;
 - 1.3 ensure that all occupants can be evacuated safely;
 - 1.4 enable the emergency services to take action;
2. In order to meet these objectives, all necessary precautions should be taken within the establishment so that:
 - 2.1 safe escape routes are available, are clearly indicated and remain accessible and unobstructed;
 - 2.2 the building's structural stability in the event of fire is guaranteed at least for as long as is needed for the occupants to evacuate the building safely;

- 2.3 the presence or use of highly flammable materials in wall, ceiling, or floor coverings and interior decorations is carefully limited;
- 2.4 all technical equipment and appliances (electrical, gas, heating, etc.) operate safely;
- 2.5 appropriate systems are installed and maintained in proper working order for alerting the occupants
- 2.6 safety instructions and a plan of the premises with an indication of the escape routes are displayed in each room normally occupied by guests or staff;
- 2.7 emergency fire-fighting equipment (extinguishers, etc.) is provided and maintained in proper working order;
- 2.8 the staff is given suitable instruction and training.

3. In applying the above principles to existing commercially operated establishments which occupy all or part of a building and which, under the name of hotel, boarding house, inn, tavern, motel or other equivalent designation, can offer accommodation to at least 20 temporary paying guests, Member States should take into account the technical guidelines set out in the Annex. Member States may use different or more stringent measures than those specified in the Annex, if they achieve at least an equivalent result. In particular, if any of the provisions of the Annex cannot be implemented for economic, technical (including anti-seismic or architectural) reasons, the alternative solutions adopted must ensure the overall minimum safety standard which the provisions of that Annex are designed to establish.

For establishments offering accommodation to less than 20 temporary paying guests, Member States should adopt the most appropriate measures in order to guarantee their safety in conformity with the principles set out under points 1 and 2 above, taking into account the size of the risk;

(2) to subject hotels to periodic inspection of their conformity with the national provisions based on the principles set out above;

(3) to inform the Commission of all national measures designed to ensure that hotels meet the requirements set out above and of the measures which they intend to take for this purpose within the next five years. The Commission will report to the Council, within a period of six months, on the measures taken or proposed.

Done at Brussels, 22 December 1986

For the Council

The President

G. SHAW

Annex TECHNICAL GUIDELINES

1. ESCAPE ROUTES

1.1 General

1.1.1 The escape routes must be arranged and located in such a way as to lead independently into the street or into an open space large enough to allow people to move away from the building and to enable persons to evacuate the premises quickly and safely.

1.1.2 Doors, staircases, exits and routes thereto shall be indicated by

standard safety signs visible day and night.

For this purpose, use shall be made in particular of the symbols for public information laid down in ISO/DIS standard 6309.2 (11 December 1985).

1.1.3 Doors which must not be used by the public in the event of fire and which give direct access to escape routes must, unless they are normally locked, be kept closed or be self-closing and bear an appropriate standard sign.

1.2 Direction of opening of doors - obstruction of escape routes

1.2.1 As far as possible, doors located on escape routes must be capable of opening in the intended direction of evacuation.

1.2.2 It must always be possible for the final exit door of an escape route to be opened easily from the inside by a person escaping from the hotel.

1.2.3 A door opening in the intended direction of evacuation must be provided alongside a revolving or sliding door.

1.2.4 Obstacles (stores, furniture, etc.) which might impede movement and create a risk of fire spread must not be placed in escape routes.

1.2.5 Mirrors which might mislead occupants as to the direction of exits and stairways must not be hung in escape routes.

1.3 Minimum number of staircases

1.3.1 Various criteria may be used to determine whether an existing hotel has a sufficient number of staircases:

1.3.1.1 either the total number of persons that may be in the hotel,

1.3.1.2 or the distance to be covered to reach the staircase.

1.3.2 If the criterion used is the number of persons, hotels with two or more levels above the ground which can accommodate a total of more than 50 persons must have at least two staircases.

1.3.3 If the criterion used is the distance to be covered:

1.3.3.1 the length of blind passages must not exceed 10 metres,

1.3.3.2 when the hotel has two or more staircases the distance to be covered from any point on an escape route to reach one of them must not exceed 35 metres.

1.3.4 An existing hotel in a building of more than three levels above the ground should generally be provided with at least two staircases.

1.3.5 The maximum lengths of 10m for blind passage and 35m for the distance to be covered to reach a staircase must be observed in all cases.

1.3.6 An outside staircase may be accepted as a second staircase, provided that it offers satisfactory conditions of safety.

1.3.7 In a hotel, the existing staircases must each be sufficiently wide to allow satisfactory evacuation of the persons likely to be on the premises. However, should it prove necessary to provide additional staircases to make an existing hotel safe, each of these new staircases shall have a minimum width of 0.80m.

2. CONSTRUCTION FEATURES

2.1 It must be ensured that the construction features of existing hotels are such that:

2.1.1 the fire resistance of the load-bearing components is adequate to ensure the structural stability of the whole for a sufficient length of time in the

event of fire;

2.1.2 the compartmentation provides a barrier to the spread of fire and smoke adequate to keep the escape routes accessible and usable for a sufficient length of time;

2.1.3 in general, the situation must be assessed case by case on the basis of the minimum requirements set out below.

2.2 Building structures

2.2.1 In buildings having not more than three levels above the ground, with the exception of one-storey buildings without a basement, the fire resistance (R) of the structure of the building must be at least 30 minutes (R 30).

2.2.2 In buildings having more than three levels above the ground, the fire resistance (R) of the structure of the building must be at least 60 minutes (REI 60).

[Table removed for clarity]

2.3 Floors

2.3.1 In buildings having not more than three levels above the ground, the fire resistance (REI) of the floors must be at least 30 minutes (REI 30).

2.3.2 In buildings having more than three levels above the ground, the fire resistance (REI) of the floors must be at least 60 minutes (REI 60).

2.4 Staircase enclosures

2.4.1 In general, the staircases of existing hotels having more than two levels above the ground must be enclosed.

2.4.1.1 The wall of the stairwell must have a fire resistance (REI) of at least 30 minutes (REI 30).

2.4.1.2 The access doorsets to the stairwells must have a fire resistance (RE) of at least 30 minutes (RE30), and the doors must be self-closing and bear an appropriate sign indicating that they must be kept shut.

2.4.2 If the same staircase provides access both to levels accessible to the public and to the basement, its enclosure shall be designed so as to enable the basement to be isolated from the remainder of the stairwell.

2.4.3 The upper part of each stairwell must have a skylight or window glazed in the glass about 1 m² in an area which, if it is not directly accessible, must be fitted with a device allowing it to be opened easily from the ground floor.

2.4.4 The protection of the service stairwells accessible only to the staff of the establishment shall be based on the same principles as those applicable to the stairwells to which the public have access.

2.5 Partitions

2.5.1 In general, floor-to-ceiling partitions separating bedrooms from escape routes must have a fire resistance (REI) of at least 30 minutes (REI 30); their access door sets must have a fire resistance (RE) of at least 15 minutes (RE 15).

2.5.2 In general, the structures (floors, floor-to-ceiling partitions and ceilings) separating bedrooms and escape routes from areas presenting special fire hazards must have a fire resistance (REI) of at least 60 minutes (REI 60); their door sets must have a fire resistance (RE) of at least 60 minutes (RE 60)

and the doors must be self-closing and bear an appropriate sign indicating that they must be kept shut.

3. COVERINGS AND DECORATIONS

3.1 The fire behaviour of the interior coverings and decorations of existing hotels shall be such that they do not constitute a particular hazard by contributing to fire spread and smoke production.

3.1.1 This requirement applies in particular to parts of the premises such as:

3.1.1.1 escape routes, especially corridors, staircases and open areas such as halls;

3.1.1.2 rooms accessible to the public and in particular to hotel guests, other than bedrooms.

3.1.2 In the areas referred to in 3.1.1 the coverings and decorations particularly concerned are:

3.1.2.1 floor coverings,

3.1.2.2 wall coverings and decorations,

3.1.2.3 ceiling coverings and decorations.

3.1.3 Since methods for testing and classifying materials as regards their reaction to fire have not as yet been harmonized, the minimum requirements to be met by interior coverings and decorations in existing hotels shall for the time being be expressed by reference to the national provisions on the subject.

3.2 Escape routes

3.2.1 The material classifications in the following table are regarded as corresponding to the minimum safety standard required for interior coverings and decorations in the escape routes of existing hotels:

[Table removed for clarity]

3.3 Rooms accessible to the public with the exception of bedrooms

3.3.1 When the room complies with the provisions in 2.5.2 the interior coverings and decorations must comply with the national provisions in force, depending on the use to which the room is put.

3.3. When the room does not comply with the provisions in 2.5.2, the interior coverings and decorations must at least comply with the provisions laid down in 3.2 which apply to escape routes.

3.3.3 For rooms accessible to the public other than those covered by 3.1.1, independent escape routes must at least comply with all the provisions applicable to the escape routes from the hotel, adapted to circumstances in each case.

4. ELECTRIC LIGHTING

4.1 Principal lighting system

4.1.1 The principal lighting system of a hotel establishment must be an electric lighting system.

4.1.2 The electrical installation in an existing hotel must be designed and fitted in such a way as to prevent among other things the ignition and spread of fires. The installation must be earthed.

4.1.3 Point 4.1.2. shall also apply if the hotel's electricity supply comes from an independent source.

4.2 Emergency lighting system

4.2.1 All hotel establishments must be equipped with a suitable emergency lighting system which comes into operation when the principal lighting system fails.

4.2.2 The emergency lighting system of a hotel establishment must be capable of operating for a sufficient period to enable all occupants to be evacuated if the principal lighting system fails.

5. HEATING

5.1 General rule

5.1.1 Heating may be provided either by a central heating system or by fixed individual heaters.

5.1.2 The heating installations in an existing hotel must be designed and fitted in such a way as to prevent among other things the ignition and spread of fires.

5.2 Boiler room

When the effective capacity of a combustion heater is such, and in any case when it is 70 kW or more, that the heater must be installed in a room separate from other rooms:

5.2.1 this room shall be designed and fitted out in accordance with the rules laid down in the relevant national legislation;

5.2.2 the walls of the boiler room must have a fire resistance (REI) of at least 60 minutes (REI 60) and the door sets must have a fire resistance (RE) of at least (RE 60); the doors must be self-closing and bear an appropriate sign indicating that they must be kept closed.

5.3 Liquid or gaseous fuel supply

5.3.1 Without prejudice to the provisions of 5.1.2, it must be possible to cut off the supply of liquid or gaseous fuel to the heating appliances by at least one manually controlled shut-off device.

5.3.1.1 In the case of fixed individual heaters, this shut-off device must be situated near the appliance.

5.3.1.2 For block heaters installed in a boiler room, this shut-off device must be located outside the boiler room in an easily accessible position and be clearly marked.

5.3.2 Where a gas supply pipe serves the entire building in which the hotel is situated, it shall have at least one manually operated shut-off-device located at the point at which the pipe enters the building and be clearly marked.

5.3.3 When liquid fuel is stored inside a room it must be designed so as to comply at least with the requirement of 5.2.2 and be capable of containing any fuel leaks.

5.3.4 Liquefied petroleum gas must be stored outside.

5.4 Fixed individual heaters

5.4.1 Without prejudice to the provisions of 5.1.2, when the use of fixed individual heaters is authorized in existing hotels they must be installed in such a way as to preclude any danger of fire and not to present a hazard for the occupants of the rooms in which they are located.

5.4.2 Fixed individual heaters must be suitably and regularly serviced and instructions for their use must be clearly posted.

6. VENTILATION SYSTEMS

6.1 Where an existing hotel is equipped with a ventilation system, measures must be taken to prevent among other things the spread of fire, hot gases and smoke through the supply ducts of such a system.

6.2 Ventilation systems must be equipped with a general shut-off device in an easily accessible and clearly marked position.

7. FIRE-FIGHTING, ALARM AND ALERTING EQUIPMENT

7.1 Emergency fire-fighting equipment

7.1.1 Emergency fire-fighting equipment is intended to fight the outbreak of a fire and must be distinguished from more powerful fire-fighting equipment intended to control an established fire and generally used by fire-fighting experts.

7.1.2 The emergency fire-fighting equipment shall consist of portable extinguishers and equivalent fixed devices. They shall be in accordance with the relevant national regulations or standards, or where appropriate, of the relevant European standards.

7.1.3 The emergency fire-fighting equipment must be located on every floor close to the access points to the stairways or exits, in the escape routes at intervals of not more than 25 m and close to areas of particular risk.

7.1.4 The emergency fire-fighting equipment must be easily accessible and kept in good working order.

7.2 Alarm

7.2.1 Hotels shall be equipped with a reliable acoustic alarm system, the noise of which must be distinguishable from that of the telephone system.

7.2.2 Irrespective of type, the operation of this system must be adapted to the structural features of the establishment and must be such as to provide a warning to all persons in the different parts of the hotel in good time in the event of an emergency.

7.3 Alerting

7.3.1 It must be possible to alert the emergency services easily either by the public telephone service or via a direct line or by any other suitable equivalent means.

7.3.2 The procedure for calling the emergency services shall be clearly posted in the immediate vicinity of any point from which a call may be made.

Where the public telephone system is used, the telephone number and possibly the address of the emergency service shall be clearly posted near the hotel telephone.

7.4 Instructions for staff

The hotel management must ensure that:

7.4.1 in the event of fire, the hotel staff are capable of correctly using the available emergency fire-fighting equipment and activating the alerting and alarm systems.

7.4.2 In the event of fire, the hotel staff must be able to:

7.4.2.1 apply the instructions drawn up for their guidance,

7.4.2.2 help in the efficient evacuation of all hotel occupants.

7.4.3 Hotel staff shall be required to participate, at least twice a year, in a manner compatible with the running and, where appropriate, seasonal

operation of the hotel, in instruction and training sessions involving the operation of the emergency fire-fighting equipment and the alerting and alarm system and in evacuation exercises.

8. SAFETY INSTRUCTIONS

8.1 In the entrance hall of the hotel:

8.1.1 Precise instructions on action to be taken by the staff and the public in the event of fire must be prominently posted.

8.1.2 A plan of the hotel for the information of emergency teams shall indicate the location of:

- staircases and escape routes,
- available extinguishers,
- gas and electricity supply shut-off devices,
- where appropriate, the shut-off device for the ventilation system
- the control panel for the automatic detection and alarm system where

appropriate,

- installations and areas of particular risk where appropriate.

8.2 On each floor:

A simplified layout plan located in the vicinity of the floor access point in hotels having two or more storeys above the ground.

8.3 In each bedroom:

8.3.1 Prominently posted and precise instructions shall indicate the action to be taken in the event of fire; in addition to the national languages, these instructions must be posted up in appropriate foreign languages depending on the origin of the hotel's usual guests.

8.3.2 These instructions shall be accompanied by a simplified floor plan showing schematically the location of the room in relation to escape routes, staircases and/or exits.

8.4 The instructions shall, in particular, draw attention to the fact that lifts must not be used in the event of fire, except for lifts reserved for the handicapped which are specially protected.