



COMMISSION OF THE  
EUROPEAN COMMUNITIES



TENTH REPORT OF THE  
STEEL INDUSTRY SAFETY AND  
HEALTH COMMISSION

(1978)







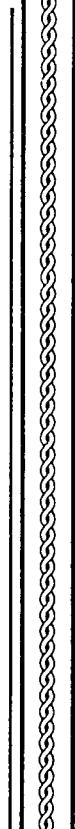
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*Manuscript finished in June 1978*





## C O N T E N T S

	<u>Pages</u>
1. Introduction.....	1
2. Meeting of the SISHC held on 26 April 1978.....	3
3. Meetings of working parties.....	4
4. Examination of the annual reports of the SISHC by the European Parliament and the Consultative Committee of the ECSC.....	9
5. Studies.....	11
6. Study of very serious accidents.....	13
7. Conclusions of the working parties adopted by the Steel Industry Safety and Health Commission in 1977.....	15
8. Dissemination of information.....	17
9. List of documents of the Steel Industry Safety and Health Commission.....	19
Appendix. List of the members of the Steel Industry Safety and Health Commission and its working groups.....	25



## 1. INTRODUCTION

This report, like earlier annual reports, has been drawn up with a view to informing the European Parliament and the Consultative Committee of the ECSC about the activities of the Steel Industry Safety and Health Commission and its working parties during 1978.

Apart from a working party meeting postponed for administrative reasons, all the meetings planned by the SISHC in its programme for 1978 were arranged and took place normally.

It should be mentioned that the aim of the Steel Industry Safety and Health Commission, which the High Authority of the ECSC decided to set up in 1964, is to bring about an exchange of practical experience so as to find the most suitable solutions to the safety and health problems which it selects for study.

The conclusions at which it arrives take the form of codes of good practice and recommendations which are in no way binding but which it would be advisable to apply in steel works to ensure improved safety.

This approach, which is peculiar to the SISHC, arises from the willingness of the social partners in the iron and steel industry to cooperate with each other within the framework of Community activities in improving industrial safety and health in this sector.

The organization of exchanges of views, leading to the editing and wide dissemination of codes of good practice and not to the preparation of regulations, is justified by the fact that no set of regulations can cover all aspects of accident prevention, occupational diseases or improvement of working conditions, and that there is and always will be considerable scope for exchange of information on solutions found for the many technical and organizational problems which constantly arise in an ever-changing technological sector.

Experience has shown, moreover, that the conclusions adopted by the SISHC in the early years of its existence have now been widely disseminated and applied, although when they appeared they might have seemed very advanced or even audacious to some people.

Every year, part of the SISHC's activity report is devoted to an assessment of Community statistics of industrial accidents which have taken place in steelworks. These statistics are drawn up by the Statistical Office of the European Communities in consultation with a working party made up of the experts responsible for collecting data in the various Member States of the Community.

The figures show that there was a marked decrease in the number of fatal accidents both in the Community of the Six between 1960 and 1972 and in the Community of Nine between 1973 and 1976.

However, the trend of all recorded industrial accidents, i.e. those resulting in at least one day's absence from work, was much less favourable.

These diverging trends, together with other disparities noted, led the SISHC to undertake studies aiming at a better understanding of the statistics and a better assessment of the accident phenomenon. This report contains information on the stage reached in these studies.

However, the SISHC is unable to analyze the trend of accidents since 1976 because of the change in the structure of Community statistics on accidents in the iron and steel industry, decided upon by the Statistical Office of the European Communities and its Working Party with the full agreement of the Commission official responsible for the SISHC's activities. This modification of the statistical basis had become essential, and this report takes account of it.



It will not be possible to resume this analysis until a few years have elapsed and a sufficient series of annual results has been built up. Moreover, at the same time the studies on this subject undertaken by the SISHC will probably make possible a better definition of the statistical elements necessary for better assessment of accidents.

The economic situation of the iron and steel industry in 1978 continued to pose many problems for undertakings, workers and trade unions. Closures of works or parts of works, restructuring of undertakings, reductions in the workforce, compulsory early retirement, short-time work, transfers to other jobs, cutbacks on production, changes in work rates and anxiety about the future are real and worrying difficulties which could influence the dynamism of accidents.

The SISHC holds to the view which it expressed in earlier reports on the constant need for effective action against industrial accidents and diseases, in the belief that whatever the social and economic situation, the physical safety of all workers is and should remain a major concern and an essential objective of all the parties involved and all works personnel, whatever their job or grade.

## 2. MEETING OF THE SISHC HELD ON 26 APRIL 1978

The SISHC met in Luxembourg on 26 April 1978. In the course of this 15th Meeting, it did the following:

- approved the summary minutes of its 14th meeting (25 January 1977);
- adopted its Ninth Annual Report (covering its activities in 1977);
- adopted the conclusions of the following working parties:
  - Safety - Training, on the training of members of the safety services;
  - Safety - Gas Lines, on water seals and drain seal pots;
  - Safety - Oxygen, on oxygen-enriched atmospheres;

- recommended the publication and distribution of a document prepared by an expert on 'Integration into the industrial environment of unqualified production workers';
- recommended that the following be carried out:
  - a study by an expert of the means and methods suitable for ensuring safe replacement of tuyeres;
  - the examination by the working Party on the Organization of Accident Prevention of ways and means to ensure integration of safety measures in the works;
  - a research project to devise a drain seal pot model capable of resealing itself after an explosion;
  - a study of the measures adopted for installations using gaseous oxygen under pressure at high speed;
- recommend to the Commission of the European Communities that it supplement the directive on safety signs at the workplace, by including in it specific signs for risks in the iron and steel industry, and in addition that it prepare a directive on the harmonization of identifying colours for pipes and receptacles intended for liquids;
- heard a paper on asbestos problems read by the Head of the Industrial Medicine Division;
- confirmed its interest in the pilot study undertaken by its Secretariat with a view to eliciting more significant accident statistics than the traditional statistics.

### 3. MEETINGS OF WORKING PARTIES

#### 3.1. Working Party on the Organization of Accident Prevention

This working party met twice in 1978.

On 28 and 29 September, it continued its examination of the various accident prevention activities which can be carried on in an undertaking by workers or their representatives, on the basis, inter alia, of the

various tasks in the safety field entrusted to workers' representatives in the various countries.

On that occasion the Working Party adopted a number of conclusions which will be finalized at its first meeting in 1979.

### 3.2. Working Party on Safety - Training

This working party held two meetings in 1978.

The first of these was the joint meeting with the Working Party on the Organization of Accident Prevention held on 13 and 14 April 1978 (see Section 3.3.).

In the course of the second meeting, held on 19 and 20 October 1978, the Working Party discussed suitable training schemes to provide workers' representatives with the expertise necessary for them to carry out their accident prevention duties effectively.

These duties vary a great deal from one country to another, because legislation, collective agreements or practices in this matter are very different. Nevertheless, it was possible to define a number of general principles upon which a minimum training programme can be based.

At its first meeting in 1979, the working party will examine the draft conclusion on this subject drawn up by the Secretariat.

### 3.3. Working Parties on the Organization of Accident Prevention and Safety Training

In November 1977 these two working parties held a joint meeting to share their experience of the various forms of cooperation by workers and their representatives in accident prevention measures, and to give their views on the training which is needed for this purpose.

At this meeting it was agreed that one expert from each country would provide information on the various legal, contractual or customary tasks carried out in that country.

It was at the meeting on 13 and 14 April 1978 that the two working parties drew up two documents summarizing the information provided for each country.

One of these documents (Doc. No 339/1/78) is a table listing by country:

- the various cooperative bodies empowered either to deal with employer/worker relations as a whole including safety, or to deal specifically with accident prevention problems, or acting in the field of safety and health;
- single or sporadic instances of cooperation;
- workers' representatives dealing with social problems as a whole, including health and safety problems, or specifically with the field of safety;
- the services and experts working wholly or partly on accident prevention.

The second document (Doc. No 3341/78) lists by country the tasks of the cooperative bodies and workers' representatives in the field of safety, whether such tasks are obligatory (by virtue of a regulation or agreement) or non-obligatory.

These two documents enabled each of the working parties to study the subject submitted to it; the Working Party on the Organization of Accident Prevention dealt with the various forms of action which can be taken by workers or their representatives in the field of safety, and the Working Party on Safety - Training with the type of training programme to be provided for workers' representatives.

### 3.4. Working Party on Safety - Gas Lines

At its meeting on 1 and 2 June 1978, this Working Party continued its examination of problems relating to gas explosions and their prevention, and dealt with the following subjects:

- the repressurizing of gas
- the use of spark-free tools
- explosions in furnaces,

and undertook the study of explosions occurring in gas compressors - a study which is to be continued at the next meeting on the basis of further information.

The second meeting of this Working Party in 1978 had been envisaged for 7 and 8 November, but was postponed for administrative reasons.

However, in order to abide by the work programme planned for this Working Party by the SIHSC, three meetings instead of two will be organized in 1979.

### 3.5. Working Party on Safety - Oxygen

This Working Party met twice in 1978 to continue its study of all the problems arising from the use of gaseous oxygen under pressure in the steel-making process.

On 28 and 29 June 1978 it completed its discussions and drew up its conclusions on the use of oxygen in LD and LD-AC steelworks and other processes involving oxygen injection by vertical nozzle as well as bottom blown oxygen converters. Burners using pure oxygen rather than air as the oxidant were also discussed.

On 23 and 24 November 1978 it re-examined all its conclusions on the various uses of pure oxygen or oxygen-enriched air in the iron and steel industry with a view to ensuring that its texts were harmonized. These must be supplemented at the first meeting in 1979 with a section on

large-diameter oxygen lances, and will constitute a new document which will be submitted to the SISHC for approval.

### 3.6. Working Party on Health - Electric Furnaces

This Working Party held two meetings in 1978, on 30/31 March and 14/15 December, at which it continued its examination of problems of pollution in electric arc steelworks. It decided on its conclusions on this subject, but they have yet to be completed with those points which could not be discussed as the two experts who had undertaken to deal with them were absent. They will be discussed at the first meeting in 1979 and the complete draft conclusion should be available at the end of 1979.

The Working Party also exchanged information on problems arising from noise, and following these discussions the Secretariat drew up a first draft conclusion on this subject which will be examined and supplemented at future meetings.

### 3.7. Working Party on Health - Rolling Mills

Two meetings of this Working Party were organized in 1978, on 13/14 March and 7/8 September.

At these two meetings it continued with its exchanges of experience on the problems of pollution in rolling mills. These problems are many and very varied because the different rolling processes give rise to a wide range of by-products, combustibles, smoke, gases etc.

The working Party adopted most of its conclusions, but they are still incomplete in some respects.

It is to be hoped that the whole document will be finished in 1979 so that it can be submitted to the SISHC in 1980.

### 3.8. Other Working Parties

At its meeting on 26 April 1978, the Steel Industry Safety and Health Commission adopted its programme for the years 1978 to 1980; this does not envisage a revival of the two working parties previously put on ice (those on Safety - Overhead Travelling Cranes and on the Use of Explosives at the Blast Furnace).

## 4. EXAMINATION OF THE ANNUAL REPORTS OF THE SISHC BY THE EUROPEAN PARLIAMENT AND THE CONSULTATIVE COMMITTEE OF THE ECSC

4.1. At its plenary sitting of 13 October 1978, the European Parliament unanimously adopted the report prepared by its Committee on the Environment, Public Health and Consumer Protection relating to the sixth, seventh, eighth, and ninth reports\*) of the Steel Industry Safety and Health Commission and the 12th, 13th and 14th reports of the Mines Safety and Health Commission.

The paragraphs of the European Parliament resolution which concern the activities of the Steel Industry Safety and Health Commission read as follows:

#### The European Parliament,

- having regard to the sixth, seventh, eighth and ninth reports of the Steel Industry Safety and Health Commission and the 12th, 13th, and 14th reports of the Mines Safety and Health Commission,
  - having regard to the report of the Committee on the Environment, Public Health and Consumer Protection,
1. Confirms that for the period under review both the Steel Industry Safety and Health Commission and the Mines Safety

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\*) Activity reports for 1974, 1975, 1976 and 1977

and Health Commission have managed well, but that because of the staffing, administrative and partly financial difficulties that have arisen they have been unable to cover the whole field of safety and health at work;

2. Is concerned about the shortage of staff in both organizations, considering that the working population is the mainspring of development in the Community and that it should be safeguarded for humanitarian and economic reasons by every possible means;
4. Notes that the Steel Industry Safety and Health Commission due to serious administrative difficulties was unable to hold any meetings of the Commission or its working parties in 1976;
5. Deplores that for financial reasons it has been impossible for the Steel Industry Safety and Health Commission to organize a planned colloquy in 1978 and that its realization in 1979 depends on whether the Council finally will provide the necessary funds in next year's budget;
6. Emphasizes the importance of completing the special study into serious accidents started in 1976 by the Steel Industry Safety and Health Commission and scheduled to enter an important and expensive phase in 1979;
9. Calls upon the Steel Industry Safety and Health Commission to report in its next annual report on the different studies carried out or being carried out, i.e. the study on the significance of accident statistics, their comparability and their trends and the special study on major accidents initiated in 1976;
10. Calls upon the Commission and the Council of the European Communities to provide the necessary staff and funds to both Safety and Health Commission to enable them to operate properly and efficiently;



11. Points out that until the question of the staffing of these two Commissions is settled, proposing new areas of study or fields of action is not considered useful;

12. Requests its President to forward this resolution and the report of its committee to the Council and Commission.\*\*)

4.2. The Consultative Committee of the ECSC examined and approved the Eighth Report of the SISHC on 3 March 1977 (in the labour problems committee) and 17 March 1977 (in plenary session).

On 11 January 1979 the labour problems committee of the Consultative Committee of the ECSC unanimously approved the Ninth Report (1977) of the Steel Industry Safety and Health Commission, and on 23 January approved it in plenary session.

## 5. STUDIES

### 5.1. Study on accident statistics

It will be recalled that following a study carried out by its Secretariat on the significance of accident statistics, the SISHC decided to launch a pilot study starting in 1978 with undertakings willing to cooperate, with a view to checking, on a larger sample than in the aforementioned study, the value of having separate statistics according to the severity of the accident (expressed in number of days lost as a percentage rate of disability) giving numbers of accidents either per million hours worked or per hundred active workers.

Thanks to the help of the members of the SISHC, the Secretariat obtained the agreement of 43 different undertakings to provide a series of statistical data annually. The following page reproduces the form used for this purpose.

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\*\* ) NB: paragraphs 3, 7 and 8 of the European Parliament Resolution relate only to the Mines Safety and Health Commission.

Directorate-General  
for Employment and Social Affairs

STEEL INDUSTRY SAFETY AND HEALTH COMMISSION

Voluntary pilot survey on the significance of occupational accident statistics

Overall results for 1978

Average number of workers:

Plant :

Categories of accidents	: Frequency rate		: Incidence per	
	: all workers	: (1) (2)	: 100 active workers (1)(3)	: 100 workers on payroll (1)
<u>Inclusive categories</u>	:	:	:	:
- injuries	:	:	:	:
- accidents involving at least one day of absence from work	:	:	:	:
<u>Exclusive categories</u>	:	:	:	:
- benign (very minor) accidents	:	:	:	:
- accidents without permanent disability, involving absence from work from one to 21 calendar days	:	:	:	:
- accidents without permanent disability, involving absence from work for more than 21 calendar days	:	:	:	:
- fatal accidents or accidents involving permanent disability exceeding 20% (5)	:	:	:	:

See explanation overleaf

(\*) to be filled in and forwarded to Mr. DUBOIS, Secretary, Steel Industry Safety and Health Commission, Directorate General, Employment and Social Affairs, Commission of the European Communities, Luxembourg, by 31 March 1979 at latest.

The first results are expected at the beginning of 1979. However, it will be necessary to wait until 1981, when several annual series of results have been received, before they can be analyzed with the help of the participating undertakings.

## 5.2. Study of very serious accidents

This study deals with the causes of very serious accidents (permanent disability of more than 10 % or fatalities) which took place between 1970 and 1976 in a number of steel mills in Lorraine. Its first two stages were entrusted to the Association pour la formation en sidérurgie, under the sponsorship of ASSIMILOR (Association de la sidérurgie et des mines de fer lorraines).

The first of these stages consisted of drawing up, on the basis of a sample of accidents, the standard questionnaire for all such accidents which took place in the participating steel mills during the years concerned. It was begun in 1976 and completed in 1977.

The second stage, which aimed to draw up a report based on the standard questionnaire for each accident which occurred, was carried out between September 1977 and the end of 1978.

The Secretariat of the SISHC now has about 700 accident reports which will be used in the third stage of this study, i.e. to bring out similarities between the causes of very serious accidents, using a computer. The aim of this study is not only to determine the causes of very serious accidents with a view to preventing them, but also to produce standard report form for very serious accidents (and possibly for other accidents) and to develop a research method applicable to other regions or to other periods of time.

## 6. ACCIDENT STATISTICS

In previous years, the SISHC reports always included a commentary on the trend of accident statistics based on the data published by the Statistical Office of the European Communities (Social Statistics -Industrial

Accidents - Iron and Steel Industry).

However, following a decision taken by the SOEC Working Party on Industrial Accidents in the Iron and Steel Industry in February 1976, the structure of annual statistics was modified. The modifications, applicable from 1977 onwards, comprise:

- the inclusion of ECSC salaried staff, whereas previously the statistics covered only ECSC wage-earners;
- a definition of a fatal accident (death within 30 days after the accident);
- a more detailed classification of accidents by technological branch.

These modifications were necessary for various reasons. Firstly, the distinction between wage-earners and salaried staff was no longer suitable, since the proportion of workers being paid monthly is rising steadily and because the iron and steel industry employs an ever-increasing number of technicians (previously considered as salaried staff) exposed to the same risks as manual workers.

Secondly, it was observed that the criteria for the collection of data varied from country to country and sometimes even from one steel mill to another in the same country.

Finally, a broadening of the technological sectors was seen as useful, for the old classification concentrated half the workers in a single sector.

The improvements are very worthwhile and will certainly make for better comparability of the statistics in the future.

However, the statistical data for 1977 (see document 'Social Statistics - Industrial Accidents - Iron and Steel Industry' - 1977) are in no way

comparable with those of previous years, making any analysis of trends impossible, so this report does not contain statistical tables similar to those of previous reports.

It is only two or three years' time that the SISHC will have an adequate chronological series of new figures and will thus be able to comment on the annual statistics of industrial accidents in the iron and steel industry.

## 7. CONCLUSIONS OF THE WORKING PARTIES ADOPTED BY THE STEEL INDUSTRY SAFETY AND HEALTH COMMISSION IN 1977

### 7.1. Training of safety staff

In accordance with the principles of accident prevention, the safety staff must play an active role and take the initiative in the fight against accidents - an activity which will be all the more effective of those involved have been well selected and well trained.

The Working Party, after examining the various qualifications and human qualities desirable in members of the safety staff, defined a minimum theoretical training programme which should take account of the special conditions in each undertaking, regulations or contractual agreements, etc., and be supplemented by experience and further training.

### 7.2. Integration in the industrial environment of unqualified production workers

This document, drawn up by Mr. Peslerbe, a member of the Working Party on Safety - Training, was submitted to the SISHC on the recommendation of the Working Party, with a view to publication.

It reports the results of quite a long experience of the training of unqualified production workers coming from a rural background, the building sector or the tertiary sector, and who together make up 60% of the workforce of the Forges de Basse-Indre.

It describes the reception arrangements and the various training programmes (general, manual handling, driving of overhead cranes and power trolleys) as well as the way in which specific training is carried out in different departments.

One section and tables of annual accident statistics show the progress made in this steelworks, and the particularly favourable results compared with those in the French iron and steel industry as a whole.

### 7.3. Water seals and drain seal pots on gas installations in iron and steel production

Water seals are devices for cutting off a gas network by means of a mass of water; drain seal pots are devices to ensure, simultaneously and according to need, the draining of residual moisture from gas or from a water seal, and the sealing of a network against external leaks.

Their presence in gas networks creates a whole series of safety problems arising from variations in gas pressure, operating condition, gas explosions (which cause these devices to lose their air tightness), frost, accidental failure of water supply, formation of sludge, etc., - risks which are especially high of these devices are installed in workshops or similar premises.

The document provides very precise recommendations, which must be respected to ensure maximum safety and thus avoid poisoning and/or explosions which can result from leaks.

### 7.4. Oxygen-enriched atmospheres

An oxygen-enriched atmosphere, i.e. containing more oxygen than atmospheric air is especially dangerous, since materials burn much more quickly and strongly in it and the risks of spontaneous combustion are greatly increased.

Many fires, and frequently fatal accidents, have resulted from oxygen-enriched atmospheres.

The documents analyzes the various causes of oxygen enrichment of atmospheres (oxygen leaks due to imperfect sealing of the installations, internal leakage in valves, opening-up, decompression and scouring of lines and equipment, i.e. replacement of the oxygen in part of the network by air or an inert gas) as well as the corresponding precautions.

The second part is devoted to the ventilation of buildings containing oxygen installations, working and protective clothing and general instructions.

## 8. DISSEMINATION OF INFORMATION

### 8.1. Requests for documents

The documents published by the Commission of the European Communities in connection with the work of the Steel Industry Safety and Health Commission are very frequently requested. In 1978, 1 773 documents were made available (over 1 100 in 1977).

This figure shows a distinct increase over that for previous years, but it should be pointed out that the free distribution of documents to undertakings and teaching establishments was discontinued two years ago. This may explain the significant increase in requests in 1978.

It should also be pointed out that the discontinuance of free distribution did not give rise to any complaint on the part of the addressees.

### 8.2. Publication of documents

The reports listed below, previously adopted by the Steel Industry Safety and Health Commission, were published in 1978 in the series 'Industrial

Health and Safety' of the Commission of the European Communities:

- Blast furnace tapping
- Accident prevention programme
- Oxygen - precautions to be taken in the preparation of plant and equipment
- (Exhaustive recording of accidents to avoid those causing injury)
- Trends in industrial safety at Cockerill - Liège, 1956 - 1974 analysis and conclusions
- First aid and rescue.



9. LIST OF DOCUMENTS OF THE  
STEEL INDUSTRY SAFETY AND HEALTH COMMISSION

LIST OF DOCUMENTS  
OF THE STEEL INDUSTRY SAFETY AND HEALTH COMMISSION

PREVENTION

- Memorandum on the prevention of accidents in the Swedish iron and steel industry - 1966  
(DE. FR. IT. NL.) out of print
- Report on the information seminar held on 29 and 30 November 1966 - 1967  
(DE. FR. IT. NL.) free
- Application of the principles of accident prevention in the United Kingdom - 1968  
(DE. FR. IT. NL.) free
- Adoption and regular use of individual means of protection - 1971  
(DE. EN. FR. IT. NL.) free
- Principles of accident prevention - 1973  
(DE. EN. FR. IT. NL.) free
- The accident prevention policy on the British Steel Corporation - 1973  
(DE. FR. IT. NL.) out of print
- Check questionnaire of the accident prevention organisation within the enterprise - 1974  
(DE. EN. FR. IT. NL.) free
- Accident prevention programme - 1977  
(EUR 5922 - DE. EN. FR. IT. NL.) UKL 2.40  
DKR 25,50
- Trends in industrial safety at "Cockerill-Liège" 1956 - 1974 - Analysis and conclusions - 1977  
(EUR 5927 - DE. EN. FR. IT. NL.) UK 4.10  
DKR. 44.-

TRAINING

- Principles of training in industrial safety - 1969  
(DE. FR. IT. NL.) out of print
- Training of industrial safety advisers  
(EUR 6091 - DE. EN. FR. IT. NL.) to be published
- Integration into an industrial environment  
of unskilled production workers. The experience  
of the Forges de Basse-Indre  
(EUR 6205 - DE. EN. FR. IT. NL.) to be published

OVERHEAD TRAVELLING CRANES

- Access to the cabin of an overhead travelling crane  
1968  
(DE. FR. IT. NL.) out of print
- Selection and training of crane-drivers - 1970  
(DE. FR. IT. NL.) out of print

TAPPING THE BLAST

- Blast furnace tapping - 1977  
(EUR 5896 - DE. EN. FR. IT. NL.) UKL4.80  
DKR 51.-

MAINTENANCE AND REPAIR WORK ON GAS LINES AND  
APPARATUS

- Construction requirements - 1968  
(DE. FR. IT. NL.) free

Personal protection; monitoring and detection of gases 1970 (DE. FR. IT. NL.)	free
Insulating and degassing lines - 1973 (DE. FR. IT. NL.)	free
Water seals and drain seal pots - 1978 (EUR 6048 - DE. EN. FR. IT. NL.)	UKL2.50 DKR 26,20
<u>OXYGEN</u>	
Oxygen pipe connections - 1969 (DE. FR. IT. NL.)	free
Shut-off and control devices - 1970 (DE. FR. IT. NL.)	out of print
The design, construction, location and operation of fittings in oxygen installations - 1971 (DE. FR. IT. NL.)	free
Filters, intermediate storage vessels, measurement equipment of importance for safety, lubrication, degreasing of oxygen lines and equipment - 1973 (DE. FR. IT. NL.)	free
Flexible pipes - 1974 (DE. EN. FR. IT. NL.)	free
Precautions to be taken in the preparation of plant and equipment - 1977 (EUR 5923 - DE. EN. FR. IT. NL.)	UKL2.20 DKR 23,80
Oxygen enriched atmospheres - 1978 (EUR 6047 - DE. EN. FR. IT. NL.)	UKL2.- DKR 21.-

MISCELLANEOUS

Symposium on accident prevention - Luxembourg  
21, 22 and 23 October 1970 - 1972  
(DE. EN. FR. IT. NL.) BFR. 300.-

Information seminar in Dortmund, on 20 and 21  
October 1973  
(DE.) free

Comprehensive accident control for preventing  
accidents causing injury - 1977  
(EUR 5926 - DE. EN. FR. IT. NL.) UKL 4.80  
DKR 51.-

First aid and rescue - 1978  
(EUR 5928 - DE. EN. FR. IT. NL.) UKL 5.-  
DKR 53.-

Hydrogen in the iron and steel industry -  
safety aspects to be published

BIBLIOGRAPHIES

- Problems of lifting, the use of explosives  
in the blast furnace - 1967  
(DE. FR. IT. NL.) out of print

- ECSC Publications, problems of the iron and  
steel industry, anti-collision devices for  
overhead travelling cranes, handling cost of  
accidents - 1968  
(DE. FR. IT. NL.) out of print

- Noise  
(DE. FR. IT.) out of print

- Transport and handling  
(DE. FR. IT.) out of print

REPORTS

First report of the Steel Industry Safety and Health Commission - 1969 (DE. FR. IT. NL.)	out of print
Second report of the Steel Industry Safety and Health Commission - 1970 (DE. FR. IT. NL.)	out of print
Third report of the Steel Industry Safety and Health Commission - 1971 (DE. FR. IT. NL.)	out of print
Fourth report of the Steel Industry Safety and Health Commission - 1972 (DE. EN. FR. IT. NL.)	out of print
Fifth report of the Steel Industry Safety and Health Commission - 1973 (DE. EN. FR. IT. NL.)	out of print
Sixth report of the Steel Industry Safety and Health Commission - 1974 (DE. EN. FR. IT. NL.)	out of print
Seventh report of the Steel Industry Safety and Health Commission - 1975 (DE. EN. FR. IT. NL.)	UKL 0,70 DKR 7.-
Eighth report of the Steel Industry Safety and Health Commission - 1976 (DE. EN. FR. IT. NL.)	UKL 0,70 DKR 7.-
Ninth report of the Steel Industry Safety and Health Commission - 1977 (DA. DE. EN. FR. IT. NL.)	UKL 2.60 DKR 26,30

FORTEGNELSE OVER MEDLEMMERNE AF DET ALMINDELIGE UDVALG  
OG ARBEJDSGRUPPERNE

LISTE DER MITGLIEDER DES ALLGEMEINEN AUSSCHUSSES  
UND SEINER ARBEITSGRUPPEN

LIST OF THE MEMBERS OF THE STEEL INDUSTRY SAFETY  
AND HEALTH COMMISSION AND ITS WORKING GROUPS

LISTE DES MEMBRES DE LA COMMISSION GENERALE  
ET DE SES GROUPES DE TRAVAIL

ELENCO DEI MEMBRI DELLA COMMISSIONE GENERALE  
E DEI SUOI GRUPPI DI LAVORO

NAMEN VAN DE LEDEN VAN DE ALGEMENE COMMISSIE  
EN VAN HAAR WERKGROEPEN

COMMISSION GENERALE DE LA SECURITE ET DE LA SALUBRITE DANS LA SIDERURGIE  
ALLGEMEINER AUSSCHUSS FUR DIE ARBEITSSICHERHEIT UND DEN GESUNDHEITSSCHUTZ IN DER EISEN- UND STAHLINDUSTRIE  
COMMISSIONE GENERALE PER LA SICUREZZA E LA SALUBRITA' NELL'INDUSTRIA SIDERURGICA  
ALGEMENE COMMISSIE VOOR DE ARBEITDSVEILICHEID IN DE IJZER-EN STAALINDUSTRIE  
STEEL INDUSTRY SAFETY AND HEALTH COMMISSION

DEUTSCHLAND

- H. KARL - Leiter der Abteilung Arbeitswissenschaft Hoesch A.G. - 4600 Dortmund  
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- J.W. VAN HAMBURG - Chef Veiligheids-en-Milieudienst. Nedstaal B.V. - Alblasserdam
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ARBEITSGRUPPE "ORGANISATION DER UNFALLVERHÜETUNG"  
GRUPPO DI LAVORO "ORGANIZZAZIONE DELLA PREVENZIONE"  
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GROUPE DE TRAVAIL "SECURITE-CONDUITES A GAZ"  
ARBEITSGRUPPE "ARBEITSSICHERHEIT-GASLEITUNGEN"  
GRUPPO DI LAVORO "SICUREZZA - CONDOTTE DI GAS"  
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GRUPPO DI LAVORO "SALUBRITA'-FORNI ELETTRICI"  
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GRUPPO DI LAVORO "SALUBRITA'-LAMINATOI"  
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