

COMMISSION OF THE  
EUROPEAN COMMUNITIES

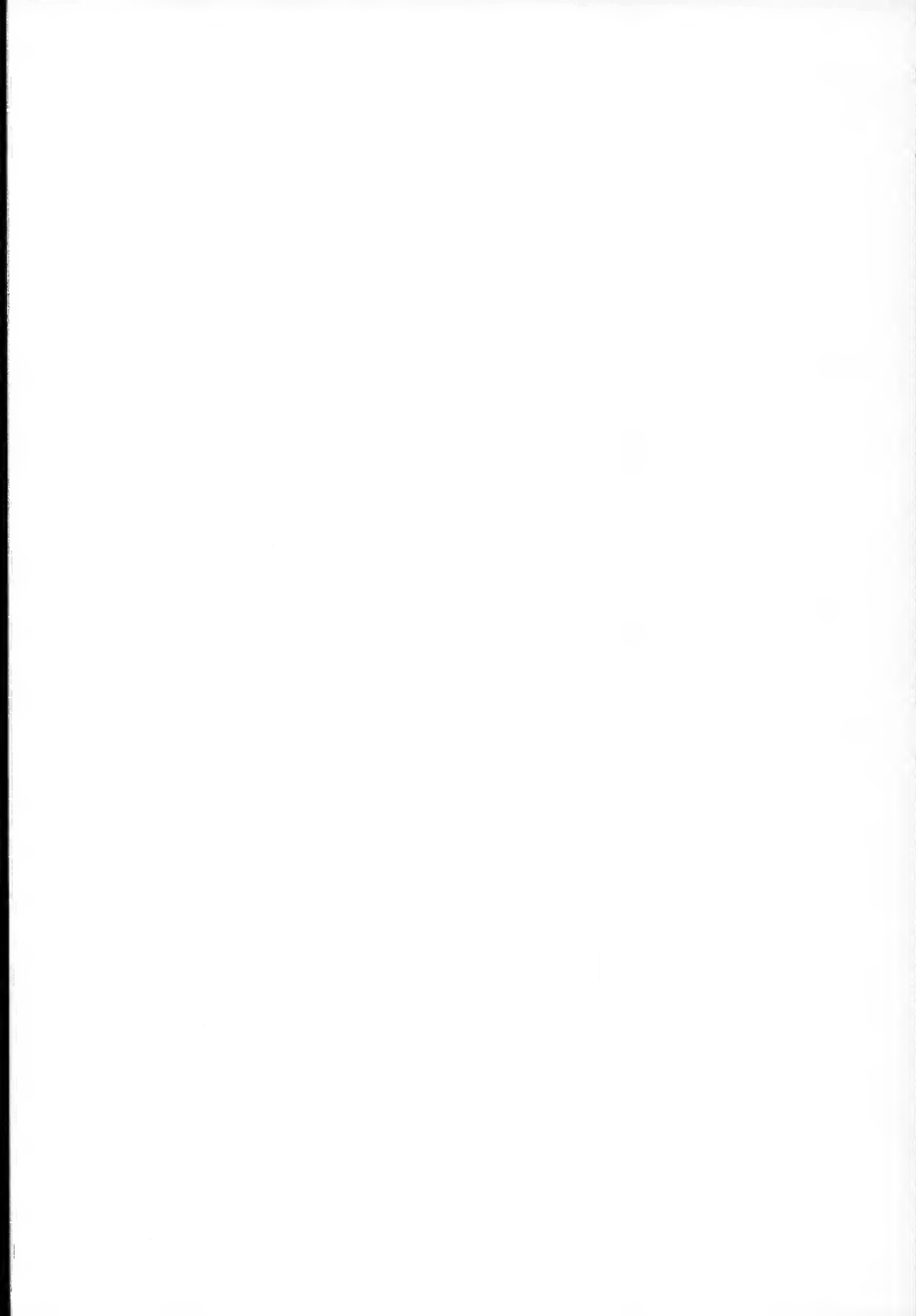
DIRECTORATE GENERAL  
SOCIAL AFFAIRS

FOURTH REPORT  
OF THE GENERAL COMMISSION ON  
SAFETY AND HEALTH IN THE  
IRON AND STEEL INDUSTRY

(1972)

EUR 6548

Luxembourg, April 1973



## INTRODUCTION

The most important event in the European field during 1972 was the meeting of the Heads of Governments from the Member States held in Paris in October. Important decisions regarding new aims were reached, particularly in the social field. A range of new activities in this field, including a broadsheet relating to the improvement of working conditions (including health and safety) is being prepared by the Commission of the European Communities, and will be put into effect as from 1st January 1974.

The steel-making industry has seen an increase in crude steel output, which was estimated (+) at about 112 million tonnes for 1972 as against 103.38 million in 1971 and 109.19 million in 1970. This movement in production is explained largely by the change in stocks and by improved activity in the export market. Actual consumption of steel in the Community of the Six represented only a small increase in 1972, estimated at 1.8 million tonnes of crude steel, to give a total of 96.1 million tonnes.

The percentage utilization of production facilities was 86 % in 1970 and is estimated at 79 % for 1972, a slight decrease which is explained by the increase in output capacity of the order of 5 % per year.

This situation, together with a rather unfavourable development in regard to profitability despite a rise in prices, creates difficulties for steel-making companies. In addition, exchange alterations on the currency market have sometimes resulted in lower revenue for companies, in particular for German undertakings.

(+) When the present Report was written (early January 1973) total output for 1972 from the Community of the Six was still not precisely known.

The heavy rise in the cost of living constitutes one of the main causes for the increase in wages which in all countries is higher than the rise in industrial productivity.

Nevertheless, employment and hours worked have risen in all countries apart from Germany, where the fall, which had attained very considerable proportions in 1971, would at least appear to be diminishing.

In regard to accidents at work, the 1971 results (the last figures known when the present Report was written) point to a continuation of the deterioration apparent since 1967. Certain items contained in the present Report do, however, suggest that a stable situation may be developing. Although the position is very disquieting, one can nevertheless see that, in relation to steel output, both fatal accidents and those occasioning stoppage of work have fallen from year to year, so that the accident/production ratio has been halved in ten years.

The observations regarding the concentration of facilities and the technological development in methods of iron and steel production, which were made in the Third Report of the General Commission, are still valid.

The reader is requested to refer to them.

3. ANNUAL MEETING OF THE GENERAL COMMISSION

During its Annual Meeting held at Amsterdam on 15th and 16th June, 1972, the General Commission:

- a) Examined the European Parliament's resolution on the Second Report which the General Commission had presented to it.

This examination led the General Commission to share the European Parliament's view regarding the possibility of itself handling the health problems which arise in steel-making companies;

- b) Decided upon the layout of its Third Report;

- c) Adopted a series of conclusions received from its Working Groups.

These are the following documents:

- i) From the "Safety - Oxygen Pipes" Working Group:
    - a) Design, construction, installation and use of equipment;
    - b) Lubrication of components;
    - c) Intermediate reservoirs;
    - d) Degreasing;
  - ii) From the "Safety - Tapping of Metal from Blast Furnaces" Working Group:
    - a) Design of the tapping floor;
    - b) Preparation for tapping;
    - c) Machines for opening and closing the tap hole;
  - iii) From the "Safety Arrangements" Working Group:
    - a) Adoption and regular use of individual protection methods;
- d) Approved the proposal made by its Secretariat aimed at the circulation of a document from the British Steel Corporation intended to inform steel-making companies and other interested media upon the policy lines and wide choice followed by British iron and steel makers in regard to safety and operational health.
- e) Discussed the results of the meeting held in Dortmund on 20th and 21st October, 1971, in collaboration with IG Metall (reference is made to this matter in Para. 5.1 of the Third Report of the General Commission);
- f) Noted the Action Report of the Secretariat of the General Commission;
- g) Received information regarding progress made with a film covering the safety principles proposed by the General Commission.

Part of this Meeting was devoted to talks relating to safety presented by the Directors of Hoogovens IJmuiden BV, together with a visit to their works.

The General Commission decided to publish and circulate the

texts of these talks in view of their considerable interest.

#### 4. ACTIVITIES OF WORKING GROUPS

These will be examined in the following order:

##### a) General Studies

- i) "Organization of Prevention" Working Group;
- ii) "Safety - Training" Working Group;
- iii) "Help and Rescue" Working Group;

##### b) Technical Studies

- i) "Safety - Tapping of Metal from Blast Furnaces" Working Group;
- ii) "Safety - Gantry Cranes" Working Group;
- iii) "Safety - Gas Pipes" Working Group;
- iv) "Safety - Oxygen Pipes" Working Group;
- v) "Use of Explosives in the Blast Furnace" Working Group.

#### 4.1. "ORGANIZATION OF PREVENTION" WORKING GROUP

It should be recalled that the terms of reference given to this Group cover the examination of general problems regarding safety and the fight against accidents.

The Group met twice in 1972, on 17th and 18th February and 2nd and 3rd May.

The first of these meetings covered the examination and final drafting of conclusions on the "Adoption and Regular Use of Methods of Individual Protection", a subject studied in 1971.

This document puts forward the conditions which must be introduced in an undertaking in order to decide and adopt the individual protection procedures to be used and to obtain their acceptance by all personnel. Such conditions depend very greatly on the participation of the workers and their representatives. The document was adopted by the General Commission during its meeting on 15th and 16th June, 1972.

During the second meeting a talk on damage control was given by Mr. Barry, Head of the Prevention Department of the British Steel Corporation.

Damage control was developed some fifteen years ago in a steel-making company in the USA. In 1965 it was tried in a British company at the initiative of the British Iron and Steel Federation. The principle of damage control is to enquire into all accidents, whether or not they involve injury, damage to material or loss of production, since the causes of accidents involving only materials are the same as those involving injury. The amount of information available following the taking of preventive measures is thus ten times greater than for accidents involving injury or the stoppage of work.

The Group also undertook the preparation of a check-list containing questions which an undertaking might ask in order to determine the position of its own safety measures in regard to the ten principles laid down by the General Commission. It should be recalled that these ten principles were given in the First Report of the General Commission and received quite wide distribution.

The studies on damage control and the check-list will be continued in 1973.

#### 4.2. "SAFETY - TRAINING" WORKING GROUP

This Group is required to examine the different aspects of safety training in undertakings.

No meetings were held in 1972.

#### 4.3. "HELD AND RESCUE" WORKING GROUP

This Group is required to examine the structure and organization of help and rescue.

At its meeting on 6th and 7th April, 1972, it completed the work assigned to it by ensuring the co-ordination and intro-

duction of conclusions already partly adopted.

The full conclusions of the Group, of which the various sections were announced in the Third Report, could not be completed in time for the June Meeting of the General Commission. They will be examined by the latter in 1973.

At the request of the "Safety - Tapping of Metal from Blast Furnaces" Working Group, the expert members of the "Help and Rescue" Working Group had examined the problem of extinguishing a fire caused in clothing by the projection of molten metal. This particular study is not yet completed and will form the subject of an additional meeting. Its particular aim is to determine the best means of extinction in order to ensure the most satisfactory healing of injuries caused by burning.

4.4. "SAFETY - TAPPING OF METAL FROM BLAST FURNACES" WORKING GROUP

This Working Group is required to examine problems regarding the tapping of molten metal from blast furnaces.

No meetings were held in 1972.

At its meeting on 15th and 16th June, 1972, the General Commission approved the three documents prepared by the Group. These are :

- a) Design of the tapping floor;
- b) Preparation for tapping;
- c) Machines for opening and closing (the tap hole).

These documents will be circulated in 1973.

4.5. "SAFETY - GANTRY CRANES" WORKING GROUP

This Group is required to examine the safety problems relating to the design, construction and use of gantry cranes.

The expert members of this Group did not meet in 1972.



4.6. "SAFETY - GAS PIPES" WORKING GROUP

The duties assigned to this Group consist in the examination of preventive measures to be taken during the maintenance and repair of gas pipes and apparatus.

No meetings were held in 1972.

4.7. "SAFETY - OXYGEN PIPES" WORKING GROUP

The work carried out by this Group is as follows:

- a) Consideration of equipment installed on pipes and installations carrying pressurized oxygen gas;
- b) Maximum velocity of the oxygen in the pipes;
- c) Design, dimensions and layout of piping.

The Group met on 7th, 8th and 9th March, during which meeting it decided upon the conclusions of its examination regarding intermediate reservoirs. It also completed a document reviewing its earlier work. The vital information provided is concentrated upon the following subjects:

- a) Cut-off and control devices;
- b) Connecting devices;
- c) Filters.

The title given to this review is "The design, construction, installation and use of oxygen-plant apparatus".

At its meeting on 15th and 16th June, 1972, the General Commission adopted the following studies prepared by this Working Group:

- a) The design, construction, installation and use of oxygen-plant apparatus;
- b) Intermediate reservoirs;
- c) Lubrication;
- d) Degreasing pipes and apparatus.

4.8. "USE OF EXPLOSIVES IN THE BLAST FURNACE" AD HOC GROUP

This Group is required to examine safety problems arising

when explosives are employed to remove linings and encrustations from blast furnaces. It did not meet in 1972.

5. OTHER ACTIVITIES

5.1. FILM ON ACCIDENT PREVENTION PRINCIPLES PREPARED BY THE GENERAL COMMISSION

At its meeting on 18th June, 1972, the General Commission approved a proposal relating to the preparation of a film covering accident prevention principles. This proposal resulted from consultation with experts belonging to professional organizations representing employers, employees and undertakings.

The basic idea was to attempt to illustrate the ten accident prevention principles using sequences from safety films already in existence, these being assembled to form a complete film. This arrangement was thought more rapid and less costly than the preparation of a fresh film.

It was for this reason that a meeting of these experts was arranged on 7th and 8th October, 1971, so that they might see the safety films recommended by members of the Group. Some 25 films were shown and it was realized that a film covering all the accident prevention principles could not be produced. The preparation of an entirely fresh film was decided upon and the necessary funds obtained. A professional producer was entrusted with the work and he presented his synopsis, scenario and commentary to the Group at a meeting on 5th September 1972, when these were approved apart from various points requiring further discussion. The next meeting of the Group was fixed for January 1973, production of the film proceeding meanwhile.

It may be hoped that this film will be available to those interested during the second part of 1973.

## 5.2. COLLABORATION WITH CIS

Collaboration with CIS continued in 1972. The General Directorate for Social Affairs has at its disposal all the reviews covering reports and articles on safety, health and medical matters published throughout the world, which have been issued by the International Information Centre for Safety and Health at Work (CIS).

It also has at its disposal microfiche copies of these reports and articles. This material is held by the Secretariat of the General Commission.

The bibliography covering transport and maintenance mentioned in the Third Report became available only towards the end of 1972, because of delay over its translation into one of the Community languages. This document will be distributed early in 1973.

## 5.3. DISTRIBUTION OF DOCUMENTS

As a complement to information published on this matter in the Third Report of the General Commission, it may be mentioned that the distribution list used by the Commission when forwarding documents was reviewed in 1972. Nearly 700 new addresses were added. The majority of these relate to the senior officials employed by Ministers in the German "Länder" and Italian "Regione", and also to engineering schools and technical colleges. With these additions the list now comprises over 4,000 addresses.

## 5.4. SPECIAL STUDIES

The Directorate General for Social Affairs decided to entrust to experts the examination of two matters whose importance had been brought to light by the work of the General Commission.

The first of these will be undertaken by Mr. Ph. ARRAGON, Chief Engineer at S.A. Air Liquide in Paris, a member of the

"Safety - Oxygen" Working Group. He has been requested to determine, on the basis of information contained in the documents prepared by the General Commission, the items likely to form the object of special rules within the Community, with the aim of preparing appropriate action.

The second study relates to damage control and has been entrusted to Mr. J.M. Cavé, Head of the Health and Safety Department at U.I.M.M., who is a member of the General Commission and also of the "Organization of Prevention" Working Group. The object of this study is to seek out, on the basis of experience acquired within the Community, the most efficient procedures for investigating and recording damage to materials and to design the most satisfactory models for successful damage control activities. This work will be undertaken with the collaboration of individuals who have acquired experience in this field within the iron and steel undertakings of the Community. The conclusions reached will be examined by the "Organization of Prevention" Working Group and finally by the General Commission.

6. ACCIDENTS AT WORK IN THE IRON AND STEEL INDUSTRY WITHIN THE COMMUNITY

It should first be pointed out that the statistical data to which reference will be made originate from the Statistical Office of the European Communities (+) which each year undertakes a full statistical investigation into accidents at work within the Community, using details forwarded to it by the national Associations of Steelworks Employers.

When the present Report was written, the 1972 statistical data were not available, the latest information relating to 1971.

(+) See document entitled "Accidents at Work in the Iron and Steel Industry" in the "Social Statistics" series issued by the Statistical Office of the European Communities, No. 5/6 - 1971.

The 1971 data relate, of course, to the Community of the Six, not to the enlarged Community.

It should also be borne in mind that the data were prepared using identical definitions and calculation methods, which gives them a high degree of comparability.

In the Second and Third Reports of the General Commission, attention was drawn nonetheless to the need for reasonable care when comparing statistical data originating from different countries.

There is no need to stress this matter further since no fresh circumstances have arisen, but the desirability of care in this connexion may well be noted.

#### 6.1. ACCIDENTS AT WORK - 1971

In the Third Report of the General Commission it was noted that developments in fatal accidents involving stoppage of work were unfavourable within the Community and in most of its Member States from 1967 to 1970.

The 1971 results offer divergent tendencies (+). Within the Community the number of fatal accidents has fallen, moving from 133 for 1970 to 115 for 1971, a frequency rate of 0.16 and 0.15 respectively. On the other hand, although the number of accidents involving stoppage of work has dropped (from 76,382 for 1970 to 73,882 for 1971), the frequency rate has in this case deteriorated from 92 to 94.

Furthermore, this latter rate is rising in all the countries apart from the Grand Duchy of Luxembourg, while the frequency rate for fatal accidents is improving in France and Italy, remains stable in Germany and deteriorates in Benelux.

In conclusion it would seem that the deterioration in results observed since 1967 is now tending to level out. As-

(+) See Appendices 1 and 2 the tables and graphs illustrating the development of these results since 1960.

suming a cyclical movement it may be expected to stabilize.

There is, however, no doubt that this situation remains extremely serious and the results achieved do not measure up to the numerous efforts made over many years to secure better safety.

It is certain that the safety measuring methods are far from perfect (a special paragraph below contains critical remarks concerning the frequency rate, a customary method of measuring the "accident" phenomenon). It is also certain that the "accident" phenomenon is measured solely on the basis of accidents involving bodily injury which result in a stoppage of work, whereas there also occur alongside them other accidents causing slight injury or producing only purely material results. These latter, if they occurred in different circumstances, might quite well result in injury.

Thus not only is an accident measured using a method which is only partly adequate, but in addition it is measured only in part.

The hypothesis could thus be advanced that all judgements concerning an accident are so beset with error as to be entirely inaccurate right from the start and that any evaluation of the position is impossible.

However, such a hypothesis would be incorrect, not only because some undertakings achieve much better results than others, but also because studies carried out in the USA have shown that there should exist in each undertaking a relatively constant relation in time between the frequency rate for serious accidents and that for accidents as a whole.

An internal investigation (whose results were not published) undertaken by the Statistical Office of the European Communities and relating to the accidents occurring at work in 1963 showed that for the same branches in a steelworks (e.g. the steel-making department) and an identical number of employees the number of accidents varied from the same figure to twice,

three, five and sometimes even ten times as many as between two concerns in a single country, in other words between two concerns covered by the same social legislation, producing workers of comparatively similar mentality and using the same technology.

However imperfect the measuring procedure, it does at least permit the observation of differences in the results achieved and as to whether such differences are slight or large.

It would indeed appear that, in regard to accidents, insufficient attention is paid to these differences as between one factory and another. The national and Community statistical values are merely average figures. They convey the general phenomenon at the level of the Community countries, but they cannot convey individual phenomena, which they hide or indeed conceal.

It is certain that if all the undertakings within a given industrial sector presented results of the same magnitude there might be serious doubt as to man's ability or opportunity to act against accidents. However, this is not the case, for results are very different as between one factory and another.

Taken together, these considerations lead to three conclusions:

- a) A comparative judgement between factories in a given area and undertaking similar work can be made, even if the measuring procedures are not fully satisfactory;
- b) Better safety, namely less accidents, is a possibility and an objective which can be achieved;
- c) Rather than undertaking a single Community operation in the safety field and covering some individual technological aspect, it is better to arrange matters so that those concerns which obtain the worst results should follow the example of those having few accidents and adopt lines of actions which have proved to be successful.

This was the spirit in which the General Commission acted when adopting the safety principles which provide the general guidelines to the safety programme which has proved useful within undertakings.

It has been mentioned above that the Commission of the European Communities was preparing a film explaining the subject matter of these principles. Such an action is well-timed and the General Commission greatly desires that the Commission of the European Communities should embark upon the widespread distribution of these principles by showing the film, so that it reaches not only directors and managers, leading personnel and Trade Union leaders in factories which have obtained good results, but - more important - similar personnel in undertakings and factories where the results are poor or only average.

One wondered whether, alongside this work, other opportunities could not be taken with the object of increasing awareness of safety principles, making these principles more real by bringing in examples drawn from actual life, extending their distribution and causing more concerns to put them into effective operation.

With this in mind it will be well if the check-list being prepared by the "Organization of Prevention" Working Group is distributed extremely widely once it has been adopted by the General Commission.

## 6.2. THE FREQUENCY RATE - ITS INSUFFICIENCIES

Examination of the results of the annual investigation into accidents at work in the various branches of the iron and steel industry with which the Statistical Office of the European Communities has been concerned since 1960 has brought to light certain contradictions:

With regard to fatal accidents:

- a) As to absolute numbers, these are by far the most frequent in auxiliary services and self-contained ancillary



installations;

- b) The frequency rate is by far the highest in "steel-making" and "blast furnace" departments;

With regard to accidents involving stoppage of work:

- a) As to absolute numbers, these are most frequent in "rolling" departments;
- b) The frequency rate is highest in "steel-making" departments.

The question of "In which department is the risk of accidents highest?" thus has two different answers according to whether one considers the number of accidents or the frequency rate (number of accidents per million hours worked).

Both answers are equally valid and it is essential that both be taken into consideration. This, however, also means that the frequency rate does not in itself permit the correct assessment of accidents, but that other indicators must also be used.

### 6.3. THE SEARCH FOR OTHER INDICATORS

#### 6.3.1. Gravity rate

A conventional indicator used in regard to accidents at work is the gravity rate. In regard to the annual investigation made by the Statistical Office of the European Communities into accidents at work in the iron and steel industry, this rate is expressed as the number of hours effectively lost as a result of accidents, showing stoppage of work per 1,000 hours worked.

In national statistics the gravity rate is generally defined as the number of working days lost as a result of accidents, showing stoppage of work per 1,000 hours worked. In this calculation, account is taken of the additional costs expressed as days lost for permanent incapacity and subsequent death.

Like the frequency rate, the gravity rate represents a par-

tial operation inasmuch as, besides the occurrences recorded (i.e. accidents involving stoppage of work), there are other accidents which have resulted in injury and loss of time but of which account is not kept. These are the accidents which involve a stoppage of work lasting less than one day.

The importance of gravity rates lies in the overall measurement of the consequences for the worker of accidents which occur. They thus represent a particularly interesting aspect of information at the social and economic level.

Unfortunately they are scarcely of use in regard to accident prevention, since the aspect concerned is only their consequences, not their causes.

#### 6.3.2. The Incidence Rate

Another indicator sometimes used is the incidence rate. This is the number of accidents with stoppage of work related to 100 or 1,000 workers employed. The advantage of this rate is that it is easily understood inasmuch as it is expressed as a hundredth or thousandth. Thus an incidence rate of 150 per 1,000 means that 150 workers out of 1,000 have suffered an accident during the period of reference, which is generally one year.

In the United Kingdom the British Steel Corporation employs an indicator similar to the incidence rate, but expressed as a fraction whose numerator is always 1. Thus a rate of 1 in 25 means that one worker out of 25 suffered an accident within the period under consideration.

The disadvantage of the incidence rate, whether it be expressed as a hundredth or a thousandth or in the form of a fraction, is that it is dependent upon the period under consideration and therefore permits comparisons only with reference to a period which must be identical.

In addition, the incidence rate refers to the same calculation data as the frequency rate, namely a factor K, which consists of the average duration of the working day.

The incidence rate thus introduces no fresh element. It offers the advantage of being more readily understood, but has the inconvenience of having always to be related to a period of fixed length.

### 6.3.3. The Accident/Production Ratio

Among the various hypotheses which may explain the deterioration in statistical accident results since 1967, that considered in the Third Report of the General Commission on Safety and Health in Steel-Making was the effect of increased production.

With the objective of examining this hypothesis before attempting to discover new indicators, the accident/production ratio was calculated for the last twelve years of Community production. The ratios were prepared firstly to cover fatal accidents and secondly to cover accidents involving stoppage of work. The values obtained will be found below and relate to crude steel production expressed in millions of tonnes.

#### Accidents/Production Ratios per million tonnes of crude steel

	<u>Fatal</u> <u>Accidents</u>	<u>Accidents involving</u> <u>Stoppage of Work</u>
1960	2.71	1,405
1961	2.28	1,369
1962	2.62	1,207
1963	2.02	1,154
1964	1.82	1,067
1965	1.94	971
1966	1.35	865
1967	1.19	741
1968	1.37	679
1969	1.27	668
1970	1.22	705
1971	1.11	714

This Table reveals a very clear improvement in accidents at work in relation to production from 1960 to 1971.

However, it must not be forgotten that the accident/production ratio is far from perfect, for the steel production level does not remain the same from one year to the next. Thus, in 1960, Community steel production was 35,920,000 tonnes of basic steel as against 21,946,000 tonnes in 1970. In the same years there were respectively 1,593,000 tonnes and 50,060,000 tonnes of oxygen steel produced in the Community. The production of crude steel was achieved using equipment constantly under development. In addition, even if the accidents which occur in steelworks have a direct relationship to the production of steel, little is known of the link which connects accidents occurring in the blast furnace, cokery, auxiliary and independent departments to steel production. This does not mean that no such link exists; it might, for example, be found in the degree of productivity, on the basis that the entire group of installations in an integrated concern forms a single whole, so that the work carried out in them is therefore similarly interrelated. Such a ratio between accidents and production is not, however, a geographical constant in a factory.

Finally, a further inconvenience of the accident/production ratio is that the numerator takes account of accidents occurring where the steel is processed (e.g. in re-rolling mills) whereas the denominator contains no reference to such plant since it does not, in fact, produce crude steel.

On the other hand it is true that the crude steel is simply a basic product which must be transformed in order to give a finished or semi-finished product. It matters little whether such transformation takes place in a factory associated with the steelworks or in a separate factory and it could indeed be assumed that in the Community framework, or even nationally, such a criterion has no foundation.

Without wishing to prejudge the intrinsic value of the accident/production ratio, the General Commission considers that it deserves to be taken into consideration at the Community level, at least on a provisional basis.

6.3.4. Distribution by Sector

The percentage distribution of accidents by Departments of an undertaking, represents one factor which can assist in assessing the overall pictures, but it cannot, however, be regarded as an indicator.

This method is simple and easy. The number of accidents occurring can be easily identified. However, it is significant only for studying the trend of accidents in time and for comparing undertakings working in the same field. It would thus be suitable for the iron and steel sector, provided that integrated iron and steelworks were considered separately from re-rolling works.

Applied to the results of annual investigations undertaken by the Statistical Office of the European Communities it has provided the Table below, which relates to all accidents involving stoppage of work occurring within the Community in 1960 and 1970.

	1960		1970	
	Absolute value	%	Absolute value	%
Cokeries	1,344	1.32	1,047	1.54
Blast furnaces	8,266	8.04	5,111	6.62
Steelworks	19,901	19.38	14,917	18.97
Rolling mills	39,742	38.71	28,363	35.71
Auxiliary services and independent sections	33,433	32.55	27,505	37.16
	<u>102,686</u>	<u>100.00</u>	<u>76,943</u>	<u>100.00</u>

It can be deduced from this that the proportion of accidents involving stoppage of work has increased in the auxiliary services and independent sections, while it has decreased in the rolling mill and blast furnace sections. The changes found in the steelworks and cokery section are less than 0.5% and are thus of little significance.

It will also be noted that in absolute figures, accidents involving stoppage have fallen by 25 % between 1960 and 1970.

All the statistical information prepared in the Community field concerns:

- a) Fatal accidents;
- b) Accidents involving at least one day's stoppage of work;
- c) Accidents involving more than three days' stoppage of work.

The General Commission considers that it would also be useful to have statistical information regarding benign accidents, i.e. those having some ill-effect on the body but not involving stoppage of work.

The General Commission believes that such information should not be difficult to collect (all undertakings should be able to provide the required details without difficulty) or to collate. It would, however, throw a new light upon the "accident" phenomenon.

In addition, the General Commission also wishes that information on production (crude cast iron, crude steel, tonnage rolled) should be provided undertaking by undertaking to the Statistical Office of the European Communities, together with information on accidents, so that a more precise study of accidents in relation to production sections may be undertaken.

## 7. OBJECTIVES

The General Commission on Safety and Health in iron and steel industry is well aware of the growing importance attaching to the conditions of life and work enjoyed by workers in the modern world. It considers that questions of safety at work and industrial health represent a significant aspect in this respect.

The General Commission has maintained from the outset that safety at work is a matter of clearly defined responsibility -

ties, and has based all its work on this principle. It is pleased to note the increasingly favorable reception being given to its work by all parties concerned in industry and employees organizations, and looks to an even clearer commitment from those quarters.

The aims of the General Commission are to provide the most effective contribution to a more active battle against accidents and the results of industrial mishaps, by making people aware of and making them use the most efficient procedures and most effective methods by encouraging exchanges of information and collaborating in the dissemination of directly applicable results obtained through scientific or technical research.

The General Commission is convinced that the accession of new member-States to the European Community will enable it to realize the objectives which it is pursuing, even better than before. Enlargement of the Community will, however, add to the variety of problems to be faced, and thus call for a new co-operative effort.

More detailed statistical information on industrial accidents has become essential; more particularly it is desirable to consider accidents which do not involve stoppages of work (benign accidents). This would help to throw more light on the "accidents" phenomenon and furnish more complete information for the assessment of existing situations.

Better dissemination of the principles of prevention and their implementation, especially in concerns whose results are least satisfactory, is one of the most basic objectives of a safety promotion campaign. Indeed, greater awareness of personal responsibility, the setting up of a better organizational structure, adopting a real strategic plan of attack, implementation of a serious plan of action based on this strategy and finally organizing collaboration by all concerned are the indispensable bases for such action within the business.

This is the spirit in which the General Commission has approved the plan for producing a film on the principles of prevention and this should become available during the year 1973.

The General Commission considers, in addition, that the pursuit and final achievement of the operations already embarked upon must also represent an objective of priority importance, since any task which has been started must be completed if the results of considerable effort are not to be lost.

There are, however, many other problems over which the interchange of experience or studies undertaken on a common basis are not only desirable, but indeed necessary. In this connexion the General Commission would point out that any delay in proceeding with studies already in hand must inevitably result in the deferment to a later date of other studies still awaiting attention.



APPENDIX

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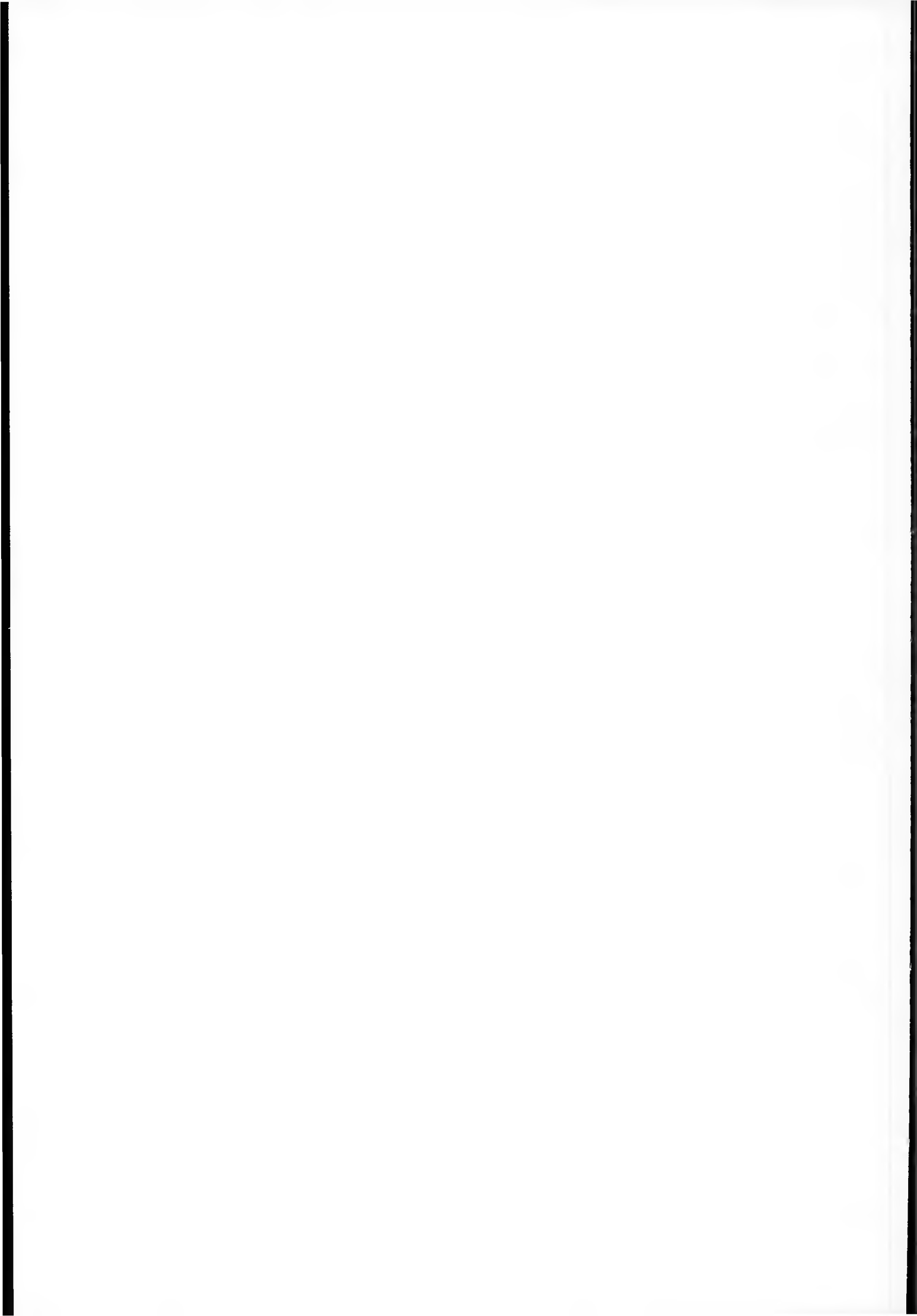
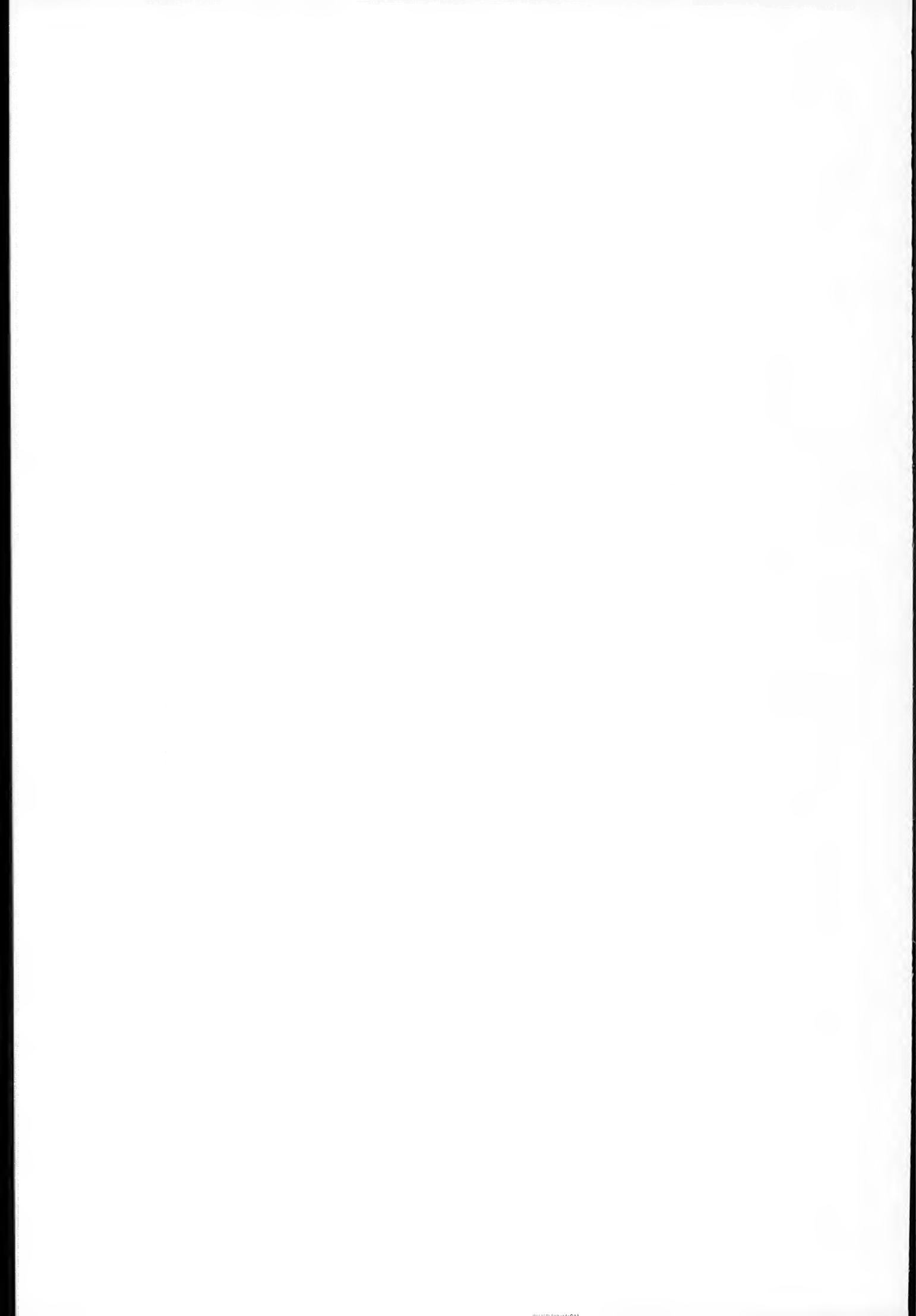


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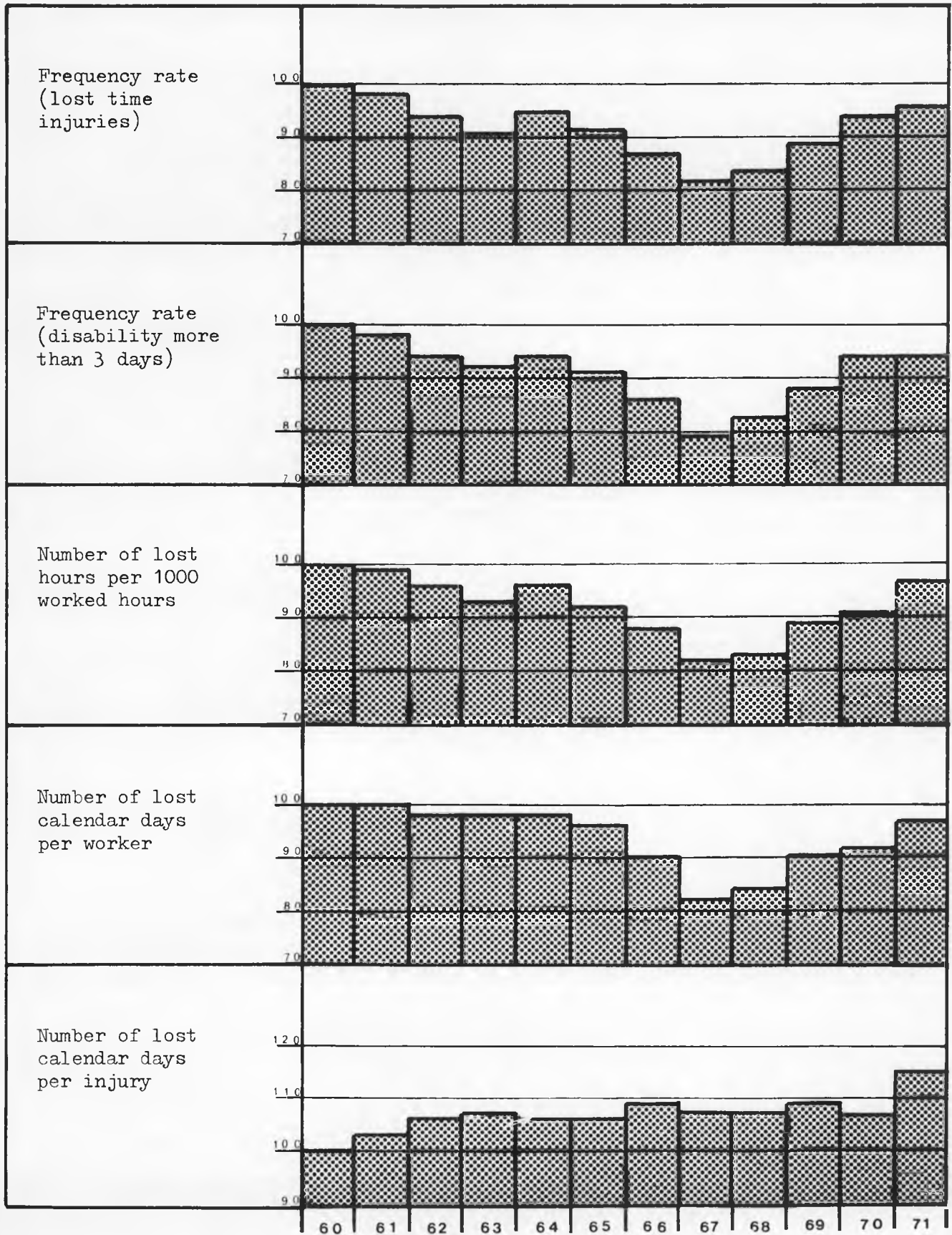
TREND IN ACCIDENTS WITHIN THE COMMUNITY STEEL INDUSTRY							
	No. of workers	No. of fatal accidents	No. of accidents involving stoppage of work	Frequency rate (1)	No. of calendar days lost	No. of hours lost per 1,000 hours worked	No. of days lost per accident
1960	494,264	198	102,686	98	1,735,370	9.59	16.9
1961	501,332	168	100,656	96	1,747,758	9.55	17.4
1962	469,041	192	88,142	92	1,576,954	9.21	17.9
1963	464,702	148	84,496	89	1,527,193	8.98	18.1
1964	468,836	151	88,395	93	1,580,937	9.21	17.9
1965	460,564	167	83,479	90	1,492,686	8.88	17.9
1966	442,123	115	73,687	85	1,355,529	8.40	18.4
1967	426,329	107	66,628	80	1,206,785	7.76	18.1
1968	418,916	136	66,962	82	1,212,514	7.91	18.1
1969	424,273	136	71,686	87	1,323,955	8.55	18.5
1970	433,024	133	76,802	92	1,387,454	8.78	18.1
1971	428,562	115	73,882	94	1,432,769	9.15	19.4

(1) Frequency rate = number of accidents involving stoppage of work per million hours worked.



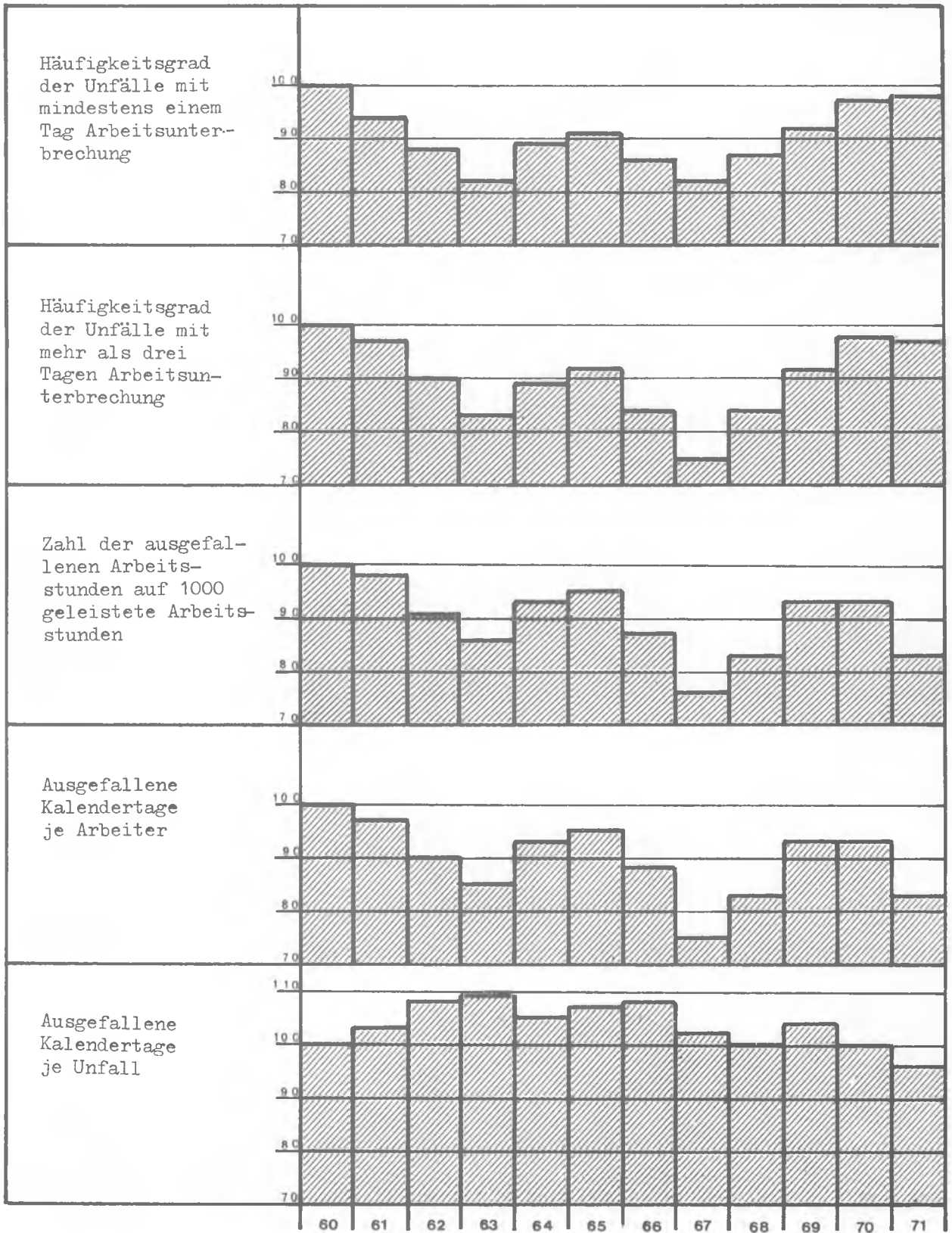
CECA EGKS ECSC

1960=100



# DEUTSCHLAND

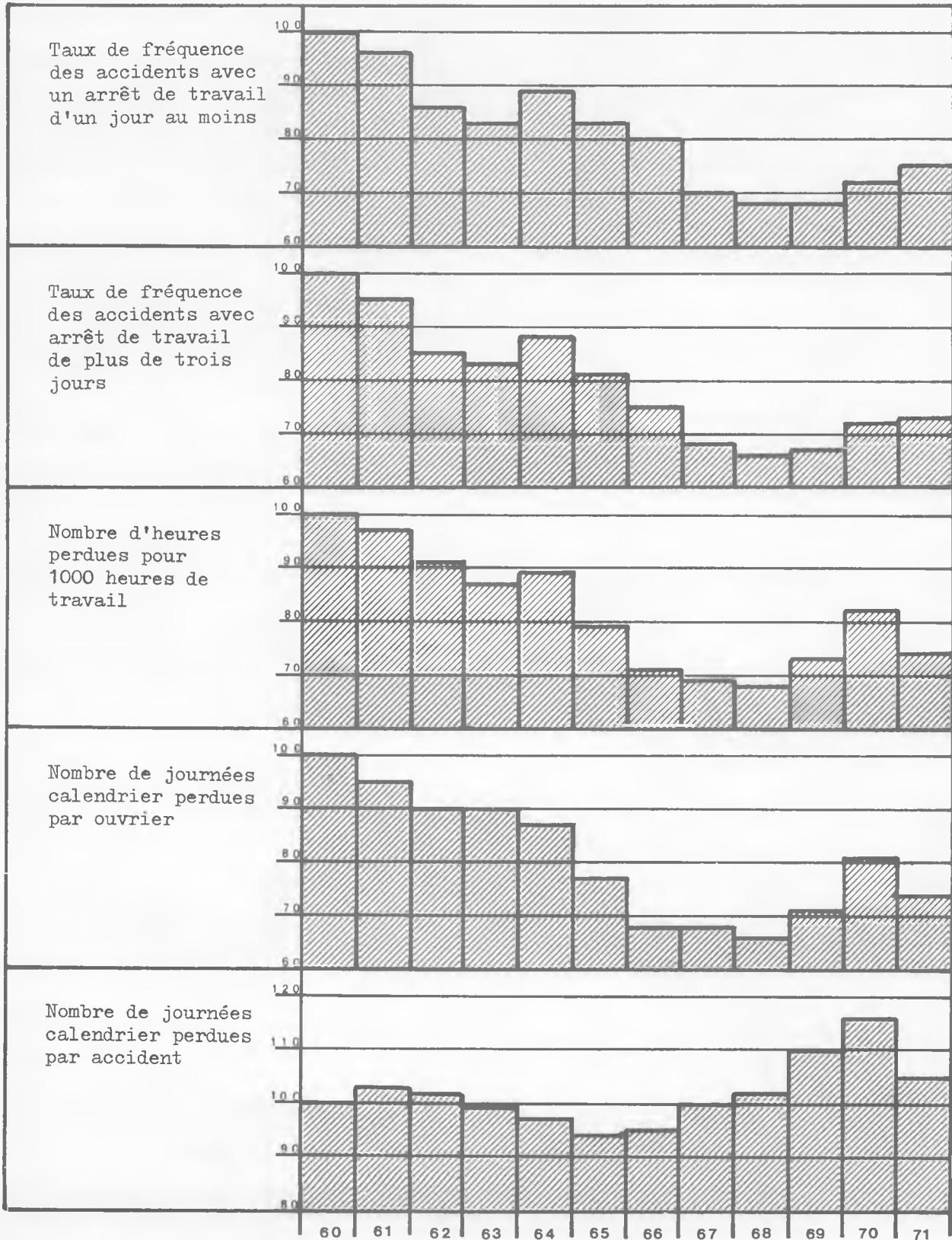
1960 = 100



ANLAGE  
ANNEXE  
ALLEGATO 2  
BIJLAGE  
APPENDIX

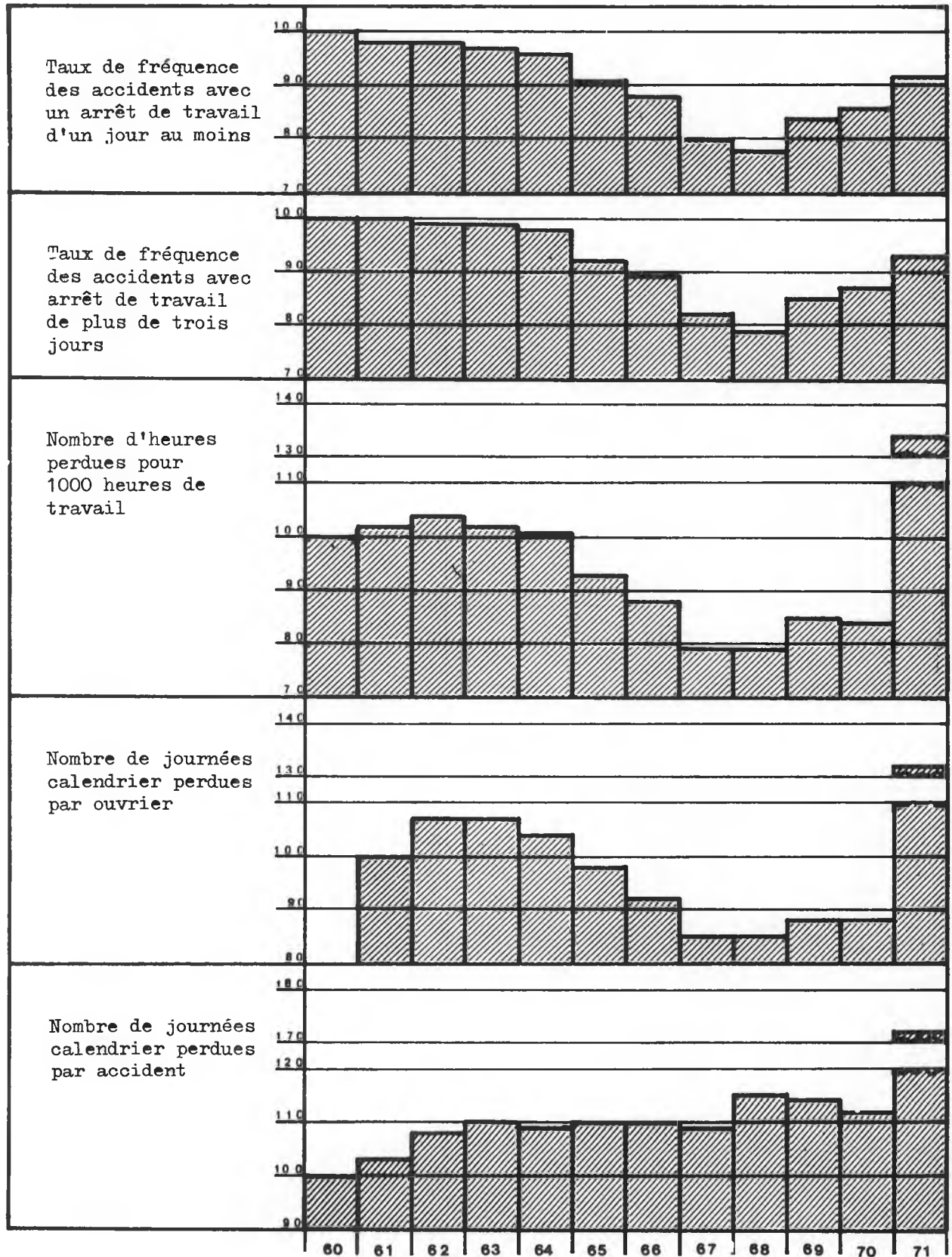
# BELGIQUE

1960 = 100



# FRANCE

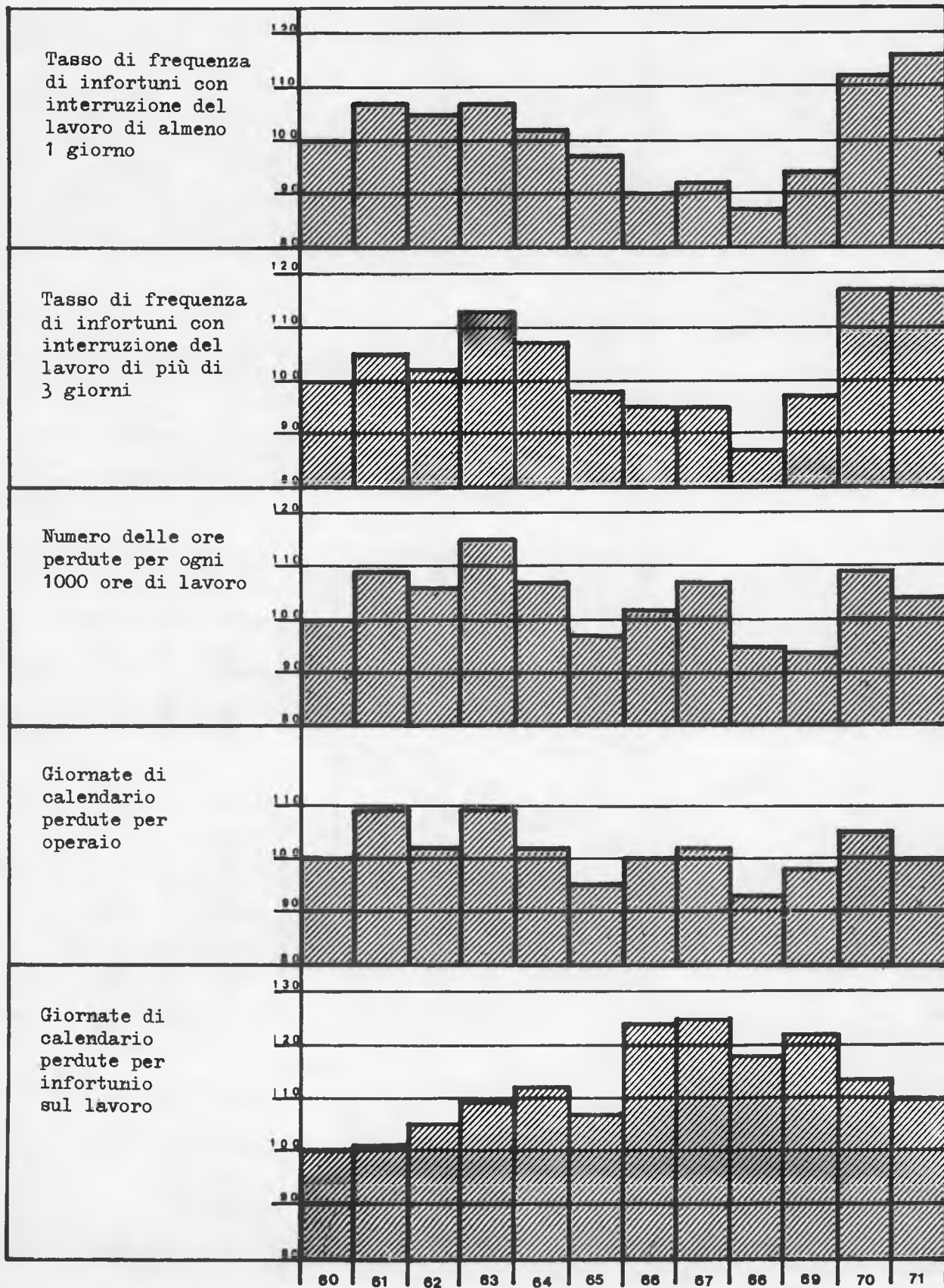
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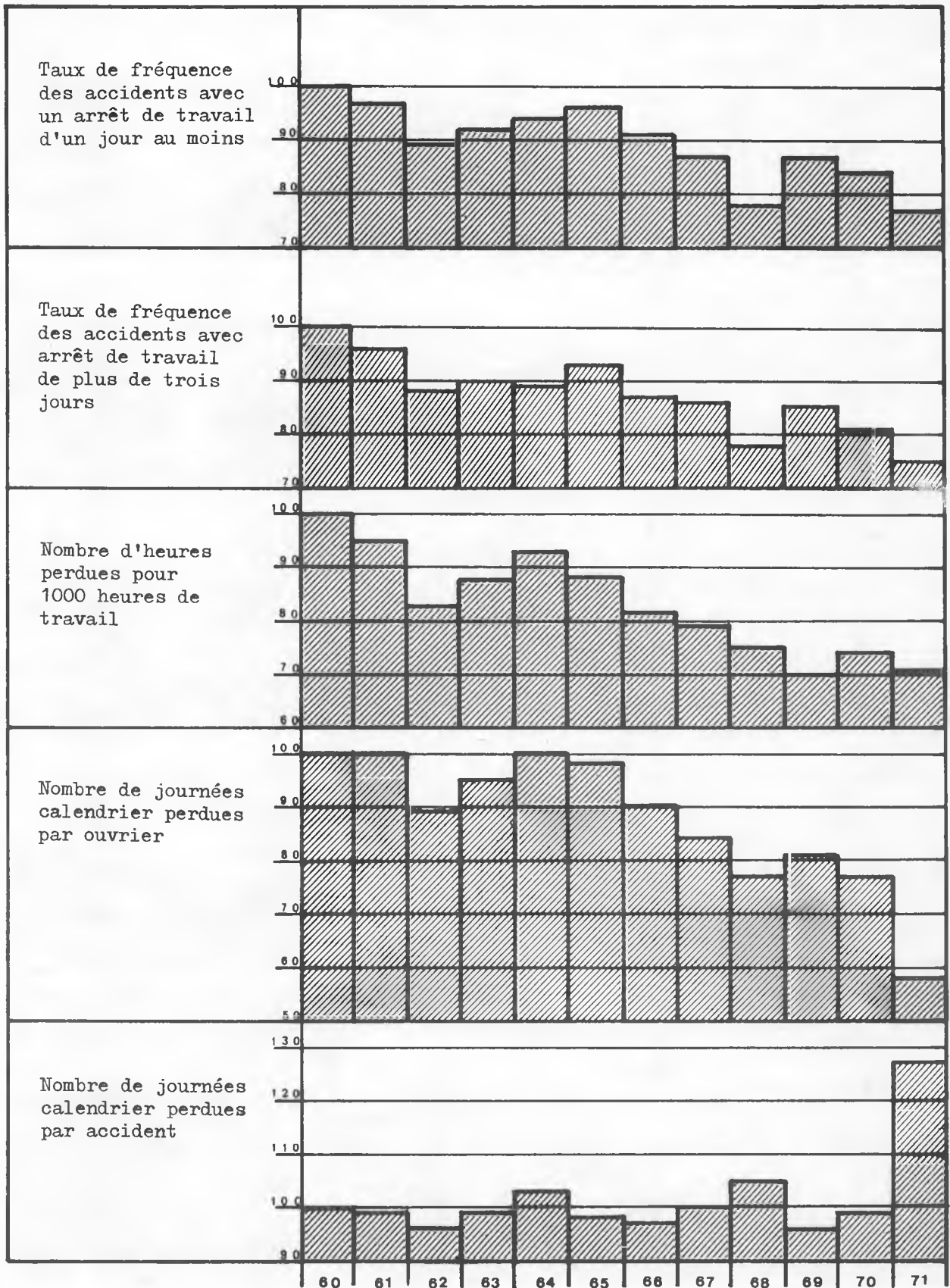
# ITALIA

ANLAGE  
ANNEXE  
ALLEGATO 2  
BIJLAGE  
APPENDIX  
1960 = 100



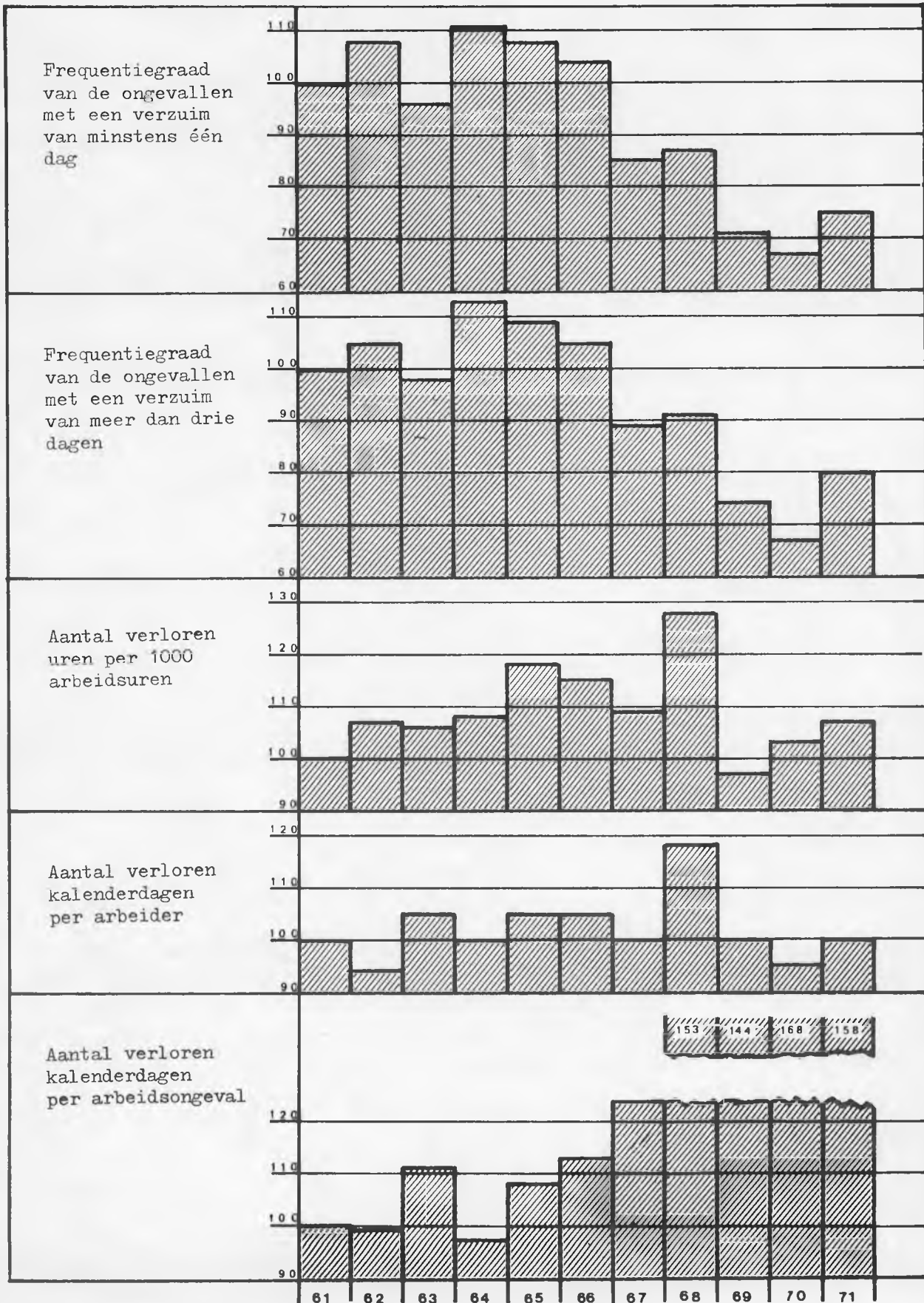
# LUXEMBOURG

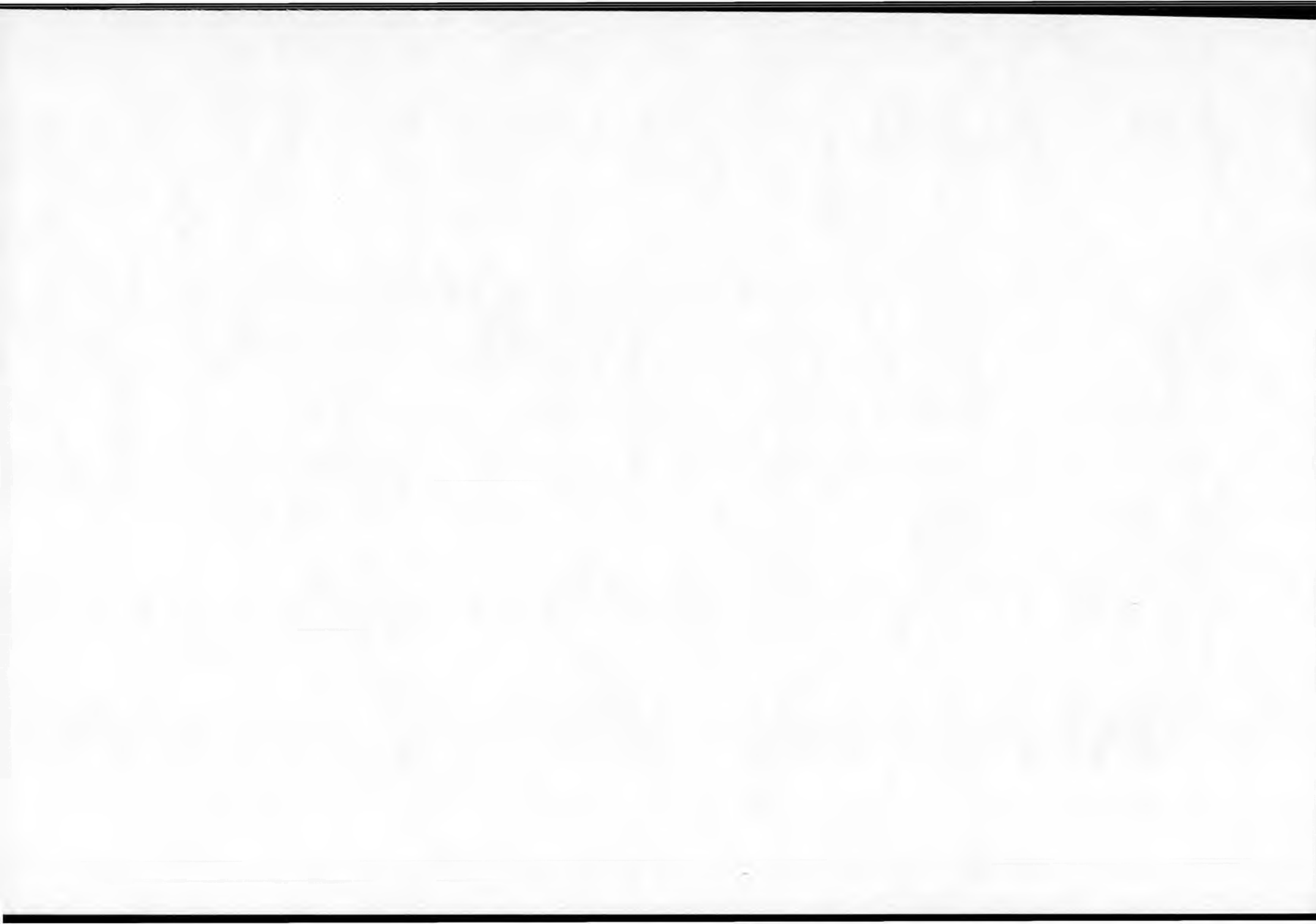
1960 = 100



# NEDERLAND

1961 = 100





ANNEXE	3
ANLAGE	3
ALLEGATO	3
BIJLAGE	3
APPENDIX	3

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

LISTE DER MITGLIEDER DES ALLGEMEINEN AUSSCHUSSES  
UND SEINER ARBEITSGRUPPEN

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

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

LIST OF THE MEMBERS OF THE GENERAL COMMISSION  
AND ITS WORKING GROUPS

---

Commission générale de la sécurité et de la salubrité dans la sidérurgie

Allgemeiner Ausschuss für die Arbeitssicherheit und den Gesundheitsschutz  
in der Eisen- und Stahlindustrie

Commissione generale per la sicurezza e la salubrità nell'industria sidérurgica

Algemene Commissie voor de arbeidsveiligheid in de ijzer- en staalindustrie

General Commission on safety and health in the Iron and Steel industry

---

DEUTSCHLAND

H. Hartmann                      Geschäftsführer der Abteilung Sozialwirtschaft  
Wirtschaftsvereinigung Eisen- und Stahlindustrie  
4 Düsseldorf

R. Judith                          Vorstandsmitglied der IG Metall  
4 Düsseldorf

Dr. H. Karl                        Leiter der Abteilung Arbeitswissenschaft  
Hoesch AG  
46 Dortmund

K. Meyerwisch                   Sachbearbeiter des Zweigbüros des Vorstandes der  
IG Metall  
4 Düsseldorf

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J. Bette                            Directeur du groupe Marchienne-Athus  
S.A. Cockerill  
6030 Marchienne-au-Pont

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Groupement des hauts fourneaux et aciéries belges  
1040 Bruxelles

R. Vandeperre                      Secrétaire général adj.  
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Fédération française des syndicats  
de la métallurgie C.F.D.T.  
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U.I.M.M.  
75 Paris

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USINOR  
54402 Longwy

A. Laval                              Secrétaire général de la Fédération Confédérée  
Force Ouvrière de la Métallurgie  
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ITALIA

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Assider  
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Federazione Italiana Metalmeccanici  
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LUXEMBOURG

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Groupement des industries sidérurgiques  
luxembourgeoises  
Luxembourg

J. Kauffman                        Secrétaire Central  
Letzeburger Arbechterverband  
Esch s/Alzette

P. Metz                                Directeur général adjoint  
S.A. Arbed  
Luxembourg

M. Zwick                             Sekretär der Metall- und Bergarbeiter  
Luxembourg

NEEDERLAND

P. Brussel                           Voorzitter  
Nederlandsche Katholieke Bond van Werknemers  
in het Metaal en het Elektrotechnische Bedrijf  
Utrecht



Jhr. Ir. B. De Jonge

Directeur Productie  
Hoogovens IJmuiden BV  
IJmuiden

P.J.E.Kooper

Directeur  
NKF Staal NV  
Alblasserdam

K. Wijngaard

Industriebond NVV  
Velsen-N

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Ing. Dirigente del Centro  
Prevenzione Infortuni  
Falck  
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Arbed  
Luxembourg

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L.P.A. Van Pol  
Chef van de Veiligheidsdienst  
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IJmuiden

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Manager of the Accident Prevention Section  
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Groupe de travail "Sécurité - Formation"

Arbeitsgruppe "Arbeitssicherheit - Ausbildung"

Gruppo di lavoro "Sicurezza - Formazione"

Werkgroep "Veiligheid - Opleiding"

Working Group "Safety - Training"

---

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Hauptabteilungsleiter  
Mannesmann AG  
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Chef du Service Formation et Sécurité  
Association de la Sidérurgie et des Mines  
de Fer Lorraines  
57000 Metz

R. Peslerbe  
Chef du Service Formation  
Ets. J.J. Carnaud et Forges de Basse-Indre  
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LUXEMBOURG

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IJmuiden

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Groupe de travail "Secours et Sauvetage"

Arbeitsgruppe "Erste Hilfe und Rettungswesen"

Gruppo di lavoro "Soccorso e salvataggio"

Werkgroep "E.H.B.O. en Reddingswezen"

Working Group "First aid and Rescue"

---

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H. Schneider

Dr. med., Fried. Krupp Hüttenwerke AG  
Hüttenwerk Rheinhausen  
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57 Florange

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Esch/Alzette

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Doctor in de medecijnen  
Enschede

Groupe de travail "Sécurité - Coulée de fonte au haut fourneau"

Arbeitsgruppe "Arbeitssicherheit - Hochofenabstich"

Gruppo di lavoro "Colata della ghisa all'altoforno"

Werkgroep "Veiligheid - Ruwijzeraftap bij de hoogovens"

Working Group "Safety - Tapping of Metal from Blast Furnaces"

---

DEUTSCHLAND

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Chef du groupe de production de fonte  
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                                    11100 Aosta

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                                    Service des Hauts Fourneaux  
                                    ARBED  
                                    Differdange

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                                    Hoogovens IJmuiden BV  
                                    IJmuiden

Groupe de travail "Sécurité - Ponts roulants"

Arbeitsgruppe "Arbeitssicherheit - Laufkräne"

Gruppo di lavoro "Sicurezza - Carriponte"

Werkgroep "Veiligheid - Loopkranen"

Working Group "Safety - Overhead Cranes"

---

DEUTSCHLAND

Tasche

Dipl.-Ing. Technischer Aufsichtsbeamter  
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43 Essen

BELGIQUE

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NKF Staal NV  
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Groupe de travail "Sécurité - Conduites à gaz"

Arbeitsgruppe "Arbeitssicherheit - Gasleitungen"

Gruppo di lavoro "Condotte di gas"

Werkgroep "Veiligheid - Gasleidingen"

Working Group "Safety - Gas Pipes"

---

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Oberingenieur, Leiter des Maschinenbetriebes  
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Rodange

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IJmuiden

Groupe de travail "Sécurité - Conduites à oxygène"

Arbeitsgruppe "Arbeitssicherheit - Sauerstoffleitungen"

Gruppo di lavoro "Condotte di ossigeno"

Werkgroep "Veiligheid - Zuurstofleidingen"

Working Group "Safety - Oxygen Pipes "

---

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H. Hermann                   Ingénieur au Service Thermique  
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Differdange

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Hoogovens IJmuiden BV  
IJmuiden

L.J.W. Pichel                Bedrijfsleider Zuurstoffabrieken  
Hoogovens IJmuiden BV  
IJmuiden

Groupe ad hoc "Utilisation des explosifs au haut fourneau"

Ad hoc-Gruppe "Verwendung von Sprengstoffen am Hochofen"

Gruppo ad hoc "Impiego di esplosivi nell'altoforno"

Werkgroep ad hoc "Gebruik van explosieven in de hoogoven"

Ad hoc Group "Use of Explosives in the Blast Furnace"

---

DEUTSCHLAND

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P. Rütze	Leiter der Abt. Werksicherheitsdienst Dipl.-Ing. Fried. Krupp Hüttenwerke AG Werk Rheinhausen 414 Rheinhausen
G. Schnegelsberg	Leiter des Maschinenbetriebes Hochöfen August Thyssen Hütte AG, Werk Ruhrort 41 Duisburg-Hamborn

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P. Trousse	Ingénieur aux Hauts Fourneaux - Seraing C S.A. Cockerill 4100 Seraing



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57 Hayange

M. Dumousseaux                    Chef du service Hauts Fourneaux  
Société Wendel - Sidelor  
Usine de Micheville  
54 Villerupt

E. Herdlicka                        Directeur, Société des Aciéries et  
Tréfileries de Neuves-Maisons  
Châtillon S.A.  
54 Neuves-Maisons

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Scunthorpe Group  
Scunthorpe

