

**Meeting of Experts on Safety and Health
in the Non-ferrous Metals Industries**Geneva
28 August-4 September 2001

Report of the discussion

Introduction

1. At its 279th Session (November 2000) the Governing Body decided to convene a Meeting of Experts on Safety and Health in the Non-ferrous Metals Industries. The Meeting was held in Geneva from 28 August to 4 September 2001.
2. The agenda of the Meeting consisted of a single item: to draw up and adopt a code of practice on safety and health in the production of non-ferrous metals.

Participants

3. Twenty-four experts attended the Meeting, eight of them appointed by the Governments of China, France, Japan, Norway, Peru, United Kingdom, United States and Zambia, eight after consultation with the Employers' group and eight after consultation with the Workers' group of the Governing Body.
4. Several observers also attended the Meeting, representing: the European Commission; the International Copper Study Group (ICSG); the International Nickel Study Group (INSG); the European Association of Metals (EUROMETAUX); the International Council on Metals and the Environment (ICME); the International Metalworkers' Federation (IMF); the International Occupational Hygiene Association; the International Organization of Employers (IOE).
5. A list of participants is annexed to this report.

Opening address

6. The Secretary-General of the Meeting (Mr. Oscar de Vries Reilingh, Director of the Sectoral Activities Department) welcomed the participants and explained the purpose of the Meeting. The adoption of a code of practice on non-ferrous metals would ensure good safety and health practices in a major sector of many economies. Although a code of practice did not have the weight of a legally binding Convention, it nevertheless enjoyed a high standing as a result of being developed and adopted by experts. The status of a code could be enhanced when its contents are incorporated in national legislation or collective agreements. Adoption of the code would strengthen the double ILO objective of promoting social dialogue between governments, employers and workers and achieving decent work for everyone.

Election of the Chairperson

7. Mr. Fahey, the expert appointed by the Government of the United Kingdom was unanimously elected Chairperson of the Meeting.

Presentation of the draft code

8. The Deputy Secretary-General (Mr. Jennings) briefly outlined the strategic objectives of the ILO and placed occupational safety and health issues and codes of practice within the context of the main activities of the Organization. Unlike Conventions which were binding and stated general principles, codes of practice were voluntary but more specific as the 19-chapter draft before the Meeting testified. The draft had been circulated to all member States and about 40 comments had been received prior to the Meeting, summaries of which were available to all participants and the full text of the comments were available for reference.

General discussion

9. Spokespersons on behalf of the Employer and Worker experts congratulated the Office on the draft code. The Employers stressed the need to have a definition of the non-ferrous metals industry and to strike a proper balance between occupational health and safety issues, mandatory and non-mandatory items, identifying all the hazards and paying attention to the ability of small and medium-sized enterprises to fulfil the provisions of the code. The Workers welcomed the code in a previously neglected area where until now it had been difficult to improve the OSH situation in the absence of universal principles.

Point-by-point discussion

General provisions (objectives, scope and application)

10. Greater precision was introduced into the objectives of the code to emphasize the goal of worker protection.
11. It was generally agreed that the scope of the code should be more clearly defined. It should exclude fabrication and mining. A Convention already existed for the latter to which reference should be made in the Introduction. The code should include primary and secondary production of metal and metal alloys as well as foundries.

General principles and practices

12. The Worker experts were concerned that there was no mention under “general principles” of the duty of employers to protect the occupational safety and health of the workers. Neither was the obligation to consult with the trade unions mentioned in the draft. It was agreed that the text should be amended to include these two principles.
13. The Employer experts suggested that governments needed to make special provision for small enterprises in the application of the code and that this should be recognized in the *General principles*. However, the Worker experts and a number of Government experts were strongly opposed to any differentiation between large and small enterprises in the statement of principles. The ILO expert pointed out that the draft recognized that differences existed (in size, technology, culture, etc.) but explicitly stated that these should

not serve as justification for diluting the principles. The Employer experts responded that the argument was not about diluting standards but recognizing the reality. Small enterprises have high injury rates, few resources and limited knowledge. Governments therefore had an obligation to recognize the differences in the capacity of small and large enterprises and to offer support. Failure to do so because of the need for apparent parity was in fact endorsing the current situation. Despite these arguments, the Government and Worker experts did not see the need to differentiate the special problems of small enterprises and no provision to do so was made. However, it was agreed that the issue of assistance to small enterprises be reconsidered in the discussion of “general duties”.

14. In the discussion on *organizational measures*, the Employer experts complimented the authors of the draft on their recognition of the “hierarchy of controls”.
15. In the discussion of *procedures*, the Employer experts suggested listing the persons to whom responsibility should be allocated; the list should include senior managers as well as supervisors and workers. However a Worker expert spoke against this, arguing that it might allow employers to offload responsibility and result in managers or supervisors taking the blame for accidents. It was therefore agreed not to list those to whom responsibility should be allocated.
16. There were a number of substantial comments on the issue of *classifying hazards in the production of non-ferrous metals*. The Worker experts suggested the inclusion of some examples in the text (e.g. of the standards adopted in different countries) that could give practical guidance. A disclaimer should be added to the effect that threshold values were not necessarily acceptable. An observer requested some information on hidden hazards. A Government expert noted that the text referred to a “competent authority” whereas it was a tripartite task to identify and classify hazards. Another Government expert objected that it was the producers of chemicals who should identify the hazards and label the products accordingly. The Employer experts noted that the text was concerned mainly with occupational health and needed to be strengthened as far as safety was concerned. The Chairperson remarked that he found this section of the text very difficult to understand and referred the Meeting to section 2.1.8 of the ILO code of practice “Safety in the use of chemicals at work” which was easier to read and covered much the same ground. After much discussion, it was agreed that the section be removed and that a modified version of sections 2.1.8, 2.1.9 and 2.1.10 of the code of practice on the use of chemicals at work be inserted into Chapter 3 in the section dealing with the competent authority.
17. With regard to *exposure limits*, the Government expert from Japan requested that the Japanese system of monitoring and assessment of the exposure of workers to hazardous chemicals should be referred to, as it is in the Chemicals Convention, 1990 (No. 170) and the code of practice on the use of chemicals at work. The Employer experts suggested that reference to the Japanese system, which was unique, should also be included in Appendix A. It was agreed to insert an oblique reference to Japanese practice in the main part of the text and to add several lines to Appendix A.

General duties

18. A new text was inserted at the beginning of this section to recognize the need for commitment to effective health and safety and the desirability of cooperation between the tripartite constituents. The amended text of section 3.6 on cooperation was moved to follow the new paragraph. There was considerable debate about the role of the competent authority with minor deletions made to sharpen the focus of these provisions. A modified text on the duties of the competent authorities drawn from Chapter 2 of the code of practice on *Safety in the use of chemicals at work* was inserted in Chapter 3, replacing 2.4.

The last sentence of section 3.2.5 was moved to 3.1.5 to highlight the provision of assistance by government to employers. Some editing of the section on employers' duties also occurred to reflect what could be reasonably expected of them and section 3.2.4(iii) was deleted.

19. When debating section 3.6 on cooperation, the Worker experts felt that “should” should be replaced by “shall”. This was opposed by Governments and Employers on the grounds that “shall” was reserved for obligations arising out of legally binding texts, such as Conventions, whereas “should” was used in all non-binding ILO instruments such as Recommendations and codes of practice. This practice was confirmed by the Office. The Worker experts agreed to leave the text as it was but felt that the ILO should move forward and employ terms that were more specific in providing the necessary direction that was being recommended in this code of practice.
20. Further changes were agreed and incorporated into the text in order to raise the level of requirements: national laws and regulations were to be regarded as a minimum; education and training on health and safety was to be provided to managers and supervisors as well as to workers; employers were to provide measures to deal with emergencies and accidents, including adequate first-aid arrangements; and these measures were not to involve any financial cost to the workers (in line with Article 21 of Occupational Safety and Health Convention, 1981 (No. 155)).
21. Considerable discussion was devoted to section 3.2.9 on the provision of occupational safety and health (OSH) information by multinational enterprises. The Employer experts recognized the need to share information and to spread best practices, but were concerned that the requirement of multinational enterprises to divulge information might be interpreted to include economically sensitive information. They wished to see a restriction on the obligation to share proprietary information, so long as it was not detrimental to health and safety. The Worker experts did not agree to this approach. The solution agreed upon was to insert at the beginning of the section a reference to the ILO's *Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy (1977)* and to add a sentence at the end emphasizing that all OSH studies were to be made available to the workers and their representatives.
22. The Meeting agreed that the duties of managers and supervisors were a part of the duties of employers and should not therefore come under a separate heading, but the clauses spelling out the duties of managers and supervisors (3.3.1 to 3.3.6) should be retained, except for clause 3.3.7 which clearly referred to duties of the employer, rather than of the manager or supervisor. Clause 3.3.7 was amended to reflect this decision and moved up in the text. It was also strengthened by the addition of a sub-clause requiring the employer to also verify the competence of workers, managers and supervisors for their tasks. The clauses referring to the duties of managers and supervisors were also strengthened.

Workers' duties and rights

23. The Employer experts proposed a change in the heading of this section to “workers' duties and rights”. It was agreed that the section should commence with a general clause to the effect that workers have the duty to cooperate with employers to achieve compliance with the code.
24. The Employer experts suggested that workers should be required not only to participate in training programmes provided by the employer or competent authority (as stated in paragraph 3.4.2) but also to retain and use the knowledge acquired through training. Government experts agreed that workers should cooperate in making training effective.

But the Worker experts felt that there is also a need to ensure that training is appropriate. After much discussion, paragraph 3.4.2 was amended to reflect these points.

25. It was generally agreed to be of major importance that the confidentiality of medical records were safeguarded and the text of clause 3.5.4(ii) was amended accordingly. The words “in accordance with national legislation” were added to reflect the fact that in some countries the government had the right to retain some medical data.
26. The Worker experts proposed the addition of a sub-clause to this section to indicate that workers have the right to withdraw from unsafe or unhealthy work. After much discussion it was agreed that this was covered in clauses 3.4.1(ii) and (iii) and protection against discrimination in clause 3.5.5. But clause 3.5.4(iii) was strengthened to include co-workers.

General measures of prevention and protection

27. A significant amount of reorganizing took place to move material to other sections where it was considered to be more closely related. After some discussion it was agreed to move sections 4.3-4.5 to Chapter 6 and section 4.2 to Chapter 10, with reference to chemical spills inserted into 4.2(iii). Section 4.1 remained for the time being, with Chapters 14-18 being moved to Chapter 4.
28. In subsequent discussion of section 4.1 the Employer experts agreed that employers had the duty to comply with OSH laws and regulations, but they proposed inserting a preliminary phrase to indicate that OSH was the “mutual responsibility” of employers and workers. The Worker experts disagreed, arguing that “mutual responsibility” did not make sense in the context of this section, which was about management systems. The United States Government expert agreed with the Worker experts and proposed that “shared goal” be used. This was accepted.
29. The Meeting agreed to a proposal of the Worker experts that a reference to Convention No. 135 (Workers’ Representatives Convention) be included in section 4.1.2. At a later stage, it was decided to include this reference in section 3.1.
30. A new version of figure 4.1 was provided by the Office. The Government expert from Norway felt that the principles it contained needed further explanation, rather than the reader having to refer to other guidelines, in line with other relevant sections in the draft text. The Office prepared a section that summarized the first main elements in figure 4.1.
31. The Meeting agreed that the title of Chapter 4 should be changed to “General **principles** of prevention and protection”, the first section of which had already been approved. A revised text was prepared and discussed for the second section headed “Risk assessment and risk management”. The Employer experts suggested the addition of a clause to alert the reader to the fact that decisions and actions of workers and employers could inadvertently lead to somebody getting hurt. The Government expert from China felt that the clause should not be taken as an excuse for accidents, but the Meeting agreed to insert the clause. The text was also amended, at the suggestion of the Employer experts, so as to avoid the legitimization of job rotation as a mechanism to deal with unmanageable risks.
32. Discussion then moved on to the section headed “Surveillance of the working environment”. The text on personal sampling was amended to ensure that *maximum* levels of exposure could be detected. Also, the section on record keeping was amended to reflect the need to keep records for as long as medical records for purposes of epidemiological research.

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33. In the section on “Workers’ health surveillance” additional text was included to the effect that where the results of medical examination indicated unacceptable exposure or effect it was incumbent on the employer to move the worker to a safer environment and also to investigate the circumstances of the exposure and take corrective action. The Worker experts’ proposal to add “with no loss of pay” was accepted. A new subsection was added to ensure that medical records would be forwarded on a confidential basis to the competent authorities in the event of the closure of a company and kept for an appropriate period of time.
 34. A suggestion of the Employer experts to include the training of workers on a voluntary basis for first-aid certification was inserted into the section on “Emergency procedures and first aid”. Drawing from the recently adopted code of practice on HIV/AIDS at the workplace, a new sentence was added to include worker training in infection control.
 35. With regard to fire-fighting equipment, it was recognized that in most cases it would include the local civic fire department, unless the company had its own facilities because of its size or location.
 36. Much emphasis was placed on defining the role and functioning of personal protective equipment (PPE) which should be sufficiently available, individually where appropriate, with adequate training in its use. It was particularly important to ensure that contaminated PPE did not leave the premises and was laundered by the employer (before re-use) at no cost to the worker. In response to proposals made by the Government expert from Peru, additions were suggested by the Chairperson to the section on personal hygiene to ensure that washing facilities, drying equipment and toilets were available.
 37. Following a proposal from the Worker experts for the systematic re-evaluation of OSH programmes, at the Employer experts’ suggestion, amendments were made to the text of the section headed “Investigating and reporting occupational accidents, occupational diseases and incidents”. Investigation of incidents should be based on “root-cause analysis”, corrective action should be taken to prevent recurrence and this should be in all areas of the workplace where there was a risk of similar accidents occurring. It was agreed that this section be inserted in Chapter 4 after the section on risk assessment.
 38. The Meeting also discussed the alternative terminology used to refer to incidents and agreed to review the definition of “dangerous occurrence”, so as to include “near hits” and “near misses”.

Prevention and protection specific to non-ferrous metal production processes

39. The Government expert from France proposed continuing discussions with draft Chapter 6 as the key chapter on which all else rested. Several experts felt that Chapter 6 on prevention and protection specific to non-ferrous metals lacked mention of several specific hazards. It was agreed that each group would make a list of the major hazards, including any that might have been omitted, which would later be consolidated. The Government and Workers’ groups subsequently tabled suggested lists of hazards.
40. The main purpose of section 6.1.1 was to list those hazards which, although not specific to non-ferrous metal production, were nevertheless significant. This led to a considerable expansion of the original list. The Worker experts’ proposal to include altitude as a hazard was discussed but not retained.

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41. The Government experts also tabled a “recommended structure” for Chapter 6 which separated health hazards from safety hazards and proposed a format for dealing with each of the major hazards. The Government experts subsequently fitted the relevant sections of the draft text on noise, vibration and heat into the new structure. This was commended by both Workers and Employers and the text was agreed with a few modifications, notably to the text on heat. Experts discussed whether references to standards other than ISO standards should be included in Appendix A. It was agreed that the ILO expert should investigate appropriate standards and provide feedback.
 42. The Worker and Employer experts then tabled a list of hazards specific to the non-ferrous metals industries. The Employer experts explained that their list comprised two groups of hazards, those unique to non-ferrous metals and those that were particularly severe or frequent in the sector. The Meeting decided for each hazard whether an in-depth analysis was required or simple guidelines would suffice. The work of preparing the text on each hazard (based on relevant sections of the draft text) was divided up amongst the three groups.
 43. The section on “Furnaces” was agreed with a few minor amendments and the addition of a clause to indicate that hinged covers should be provided at openings in elevated walkways and platforms and should be kept closed when not in use and guarded when in use.
 44. The ILO expert redrafted the section on “Handling molten metal”. At the suggestion of the Worker experts it was agreed that “damage to eyes” be included in the table and the text was approved with a few minor amendments. The section on “Processes and waste gases” was also approved with one minor change.
 45. The Employer experts were concerned that there was no mention of the possibility of exposure to alloys, especially beryllium, in the section on “Recycling non-ferrous metals”, nor any caution against radioactive contamination from recycling of copper scrap. The Worker experts pointed out that radioactive scrap concerned other metals as well as copper and suggested that there should be cross-reference to the section on radiation in Chapter 4.
 46. The section on chemicals and alloys was edited by the medical experts. Reference to particular metals was included to give practical guidance. The Employer experts felt that the text underestimated the effects of beryllium, which is one of the most toxic materials used in the industry today.
 47. Observers from the International Copper Study Group (ICSG) and the International Nickel Study Group (INSG) commented on the draft text. The former pointed out that the statement on metal fume fever was based on very limited information. He also provided some technical comments concerning the recycling of copper that were taken into account. The observer from the INSG reported that comments from its members had been forwarded to experts in the nickel industry, some of whom were at the Meeting.
 48. A new expanded draft on specific non-ferrous metals, proposed by an ILO expert, was discussed and minor amendments agreed.
 49. The other sections of the text on individual hazards which were prepared by the three groups were agreed with minor amendments and additions.

Definitions

50. It was generally agreed that the draft Chapter 19 would simply be called “Definitions” and placed at the beginning of the document without numbering. The phrase “near miss” or “near hit” was added to the end of the definition of dangerous occurrence.
51. The definition on occupational health services was expanded to refer to “regulated health care professionals and occupational hygienists” in order to make this concept more clear. The definition of “workers and their representatives” was amended to cover consultation and moved to the other definitions of workers’ representatives.

Appendix A

52. An addition to describe the unique Japanese system for exposure limits was included in paragraph 2 of Appendix A.
53. A number of experts felt that where possible, the Internet address of agencies, which constantly updated the information on their websites, should be included.
54. The Worker experts objected to the reference to ISO standards in the sections on heat, noise and vibration, since worker representatives did not participate in the formulation of these highly technical standards. While most governments were indifferent, the expert from China and one Employer expert wished to see a reference to ISO. The Chairperson proposed the insertion of a paragraph at the start of Appendix A, clarifying the way in which some standard-setting bodies worked.

Introduction

55. The Meeting agreed to an amendment proposed by the Employer experts to clarify the scope of the code of practice and to amendments proposed by the Office to highlight the revised structure and content of the code.

Adoption of the code of practice and of the report

56. After examining the text of the draft code of practice on safety and health in the non-ferrous metals industries, the experts adopted the code of practice.
57. After examination of the draft report, the experts adopted it as amended. Thereafter, the experts adopted the report and the code of practice.

Geneva, 4 September 2001.

(Signed) Mr. M. Fahey,
Chairperson.

Appendix

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Commission internationale de la santé du travail
Comisión Internacional de Medicina del Trabajo

International Confederation of Free Trade Unions (ICFTU)
Confédération internationale des syndicats libres (CISL)
Confederación Internacional de Organizaciones Sindicales Libres

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International Social Security Association (ISSA)
Association internationale de la sécurité sociale
Asociación Internacional de la Seguridad Social

Organization of African Trade Union Unity (OATUU)
Organisation de l'unité syndicale africaine
Organización de la Unidad Sindical Africana

Pan-African Employers' Confederation

**World Confederation of Labour
Confédération mondiale du travail (CMT)
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**World Federation of Trade Unions
Fédération syndicale mondiale (FSM)
Federación Sindical Mundial**

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