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INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

REPORT
OF
PRELIMINARY MEETING

LONDON

1906

INTERNATIONAL
ELECTROTECHNICAL COMMISSION

REPORT

OF

PRELIMINARY MEETING

HELD AT

THE HOTEL CECIL, LONDON

ON

TUESDAY AND WEDNESDAY, JUNE 26TH AND 27TH 1906

LONDON

1906

THE FOLLOWING IS A LIST OF
DELEGATES AND THE AUTHORITIES
BY WHOM THEY WERE APPOINTED :—

AMERICA

(Institute of Electrical Engineers)

Dr. F. B. CROCKER

Dr. A. E. KENNELLY

Mr. C. O. MAILLOUX

AUSTRIA

(Elektrotechnischer Verein in Wien)

Dr. E. ROSENBERG

Prof. KARL PICHELMAYER

BELGIUM

(Société Belge d'Électriciens)

M. LÉON GÉRARD

CANADA

(Local Standards Committee)

Prof. R. B. OWENS

Mr. L. A. HERDT

SPAIN

(Minister of Commerce)

Señor JUAN ALONSO/MILLAN

Señor BLAS CABRERA FELIPE

Y/

JAPAN

(Denkigakukwai)

Dr. ICHISUKE FUJIOKA

NORWAY, SWEDEN, DENMARK

Accepted, but Delegates not yet appointed.

British Executive Committee:—

Mr. ALEXANDER SIEMENS

(Chairman)

Sir WILLIAM PREECE. K. C. B.

Col. R. E. CROMPTON. C. B.

(Hon. Sec.)

Mr. JOHN GAVEY. C. B.

Dr. R. T. GLAZEBROOK

Mr. ROBERT KAYE GRAY

Mr. CHARLES P. SPARKS

Mr. C. H. WORDINGHAM

Mr. C. LE MAISTRE

(Acting Secretary)

FRANCE

(Société Internationale des Électriciens)

Prof. PAUL JANET

M. PAUL BOUCHEROT

M. CH. DAVID

GERMANY

(Verband Deutscher Electrotechniker)

Dr. E. BÜDDE

Herr G. DETTMAR

HOLLAND

(Koninklijk Instituut van Ingenieurs)

Prof. E. FELDMANN

Herr W. SMIT

HUNGARY

(Minister of Commerce)

M. JOSEPH VATER

M. DESIDÈRE HARSANYI

ITALY

(Elettrotecnica Italiana)

Prof. L. LOMBARDI

M. GUIDO SEMENZA

SWITZERLAND

(Société Suisse des Électriciens)

Prof. J. L. FARNY

Herr K. P. TAÜBER

MEETING

HELD AT THE HOTEL CECIL
ON WEDNESDAY JUNE 26 1906 AT 8.30 A.M.

MR ALEXANDER SIEMENS (President.)

The President having welcomed the Delegates opened the proceedings by calling upon Colonel Crompton to read the resolution adopted at the St. Louis Congress of 1904.

Colonel Crompton stated that at the close of the Meetings of the Chamber of Government Delegates at the International Electrical Congress held at St. Louis in September, 1904, the following resolution had been unanimously adopted: —

” That steps should be taken to secure the
” cooperation of the technical Societies of the
” world by the appointment of a representa-
” tive Commission to consider the question
” of the standardisation of the Nomenclature
” and Ratings of Electrical Apparatus and
” Machinery. ”

It had been suggested that much of the work would be accomplished by correspondence in the first instance and by the appointment of a General Secretary to preserve the records and crystallise the points of disagreement, if any, which might arise between the methods in vogue in the different countries, and it was hoped that the proposed Commission would eventually become a permanent one.

Colonel Crompton mentioned that the preliminary correspondence had been placed in the hands of the President of the American Institute of Electrical Engineers and in his own. He regretted that by an unfortunate misunderstanding, Mexico and the Argentine Republic had not, as yet, been invited to join in the movement, but this would at once be rectified. The preliminary work of bringing together the Delegates being now accomplished, it only remained for him to await their further pleasure.

The names of the Delegates and the Authorities by whom they had been appointed, were read.

Copies of the proposed Rules, which had been previously circulated with the request that any amendments desired should be sent in in writing, were before the Delegates.

The President explained that the British Institution of Electrical Engineers had appointed a small Committee to undertake the preliminary

stages of the movement. In drafting a proposed set of Rules for the guidance of the Commission this Executive Committee had endeavoured to place every country joining the Commission on an absolutely equal footing, to accord each country perfect freedom to arrange the affairs of their respective Local Committees and also to keep the Constitution of the Commission as simple as possible. The Rules were, of course, quite tentative the primary object of to-day's Meeting being to consider them.

He remarked that the Verband Deutscher Elektrotechniker did not appear to think it advisable that the government of each country should be brought into the matter. The Rule dealing with this particular point (Rule N° 4) had been proposed so that any country which had no Electrotechnical Institution might still be enabled to appoint Delegates and there had been no desire whatever to have bureaucratic influence imported into the Commission. He had, however, consulted with Dr. Budde who now thought the Rule might be allowed to stand. The Société Suisse des Electriciens suggested that there should be only two Representatives of any local Committee on the Council instead of three, as proposed. The English Delegates had also an amendment to propose to the effect that this Rule N° 8 should read:

The Council shall consist of :—

- (a) The Chairman of the Commission ;
- (b) The Chairmen and Vice-Chairmen of the Local Committees of the several countries represented ;
- (c) The Chairmen of the Local Committees shall be Vice Chairmen of the Commission (ex officio.)

This latter point was of importance because the Vice-Chairman (Rule N° 10) had a right to call a Meeting of the Council or of the whole Commission, and if it were stated that the Chairmen of the Local Committees were also Vice-Chairmen of the Commission it would give the Chairman in each country the power of calling a Meeting of the Council if they so desired. The Société Suisse des Electriciens had also suggested that the organisation of each Local Committee should be entirely unrestricted: moreover, they desired to propose that each country should contribute to the expenses of the Central Offices in proportion to the number of the Members of their Society. The President mentioned that this had been carefully discussed when the Rules were being drawn up, and it had been found impossible to adopt such a basis on account of those countries having

no Electrotechnical Institution. The fact of each country contributing an equal share and having an equal vote would, he thought, very materially help towards the success of the movement. He desired therefore to know the pleasure of the Meeting with regard to these proposed Rules.

Mr. Mailloux (U. S. A.) ventured to think it would be an unwise proceeding to adopt the Rules *en bloc* before the Delegates had had sufficient time for their consideration; he himself had not had an opportunity as yet of considering the amendments proposed. He mentioned that in discussing the whole question of the proposed Commission, quite informally, with some of the Delegates he found that some difference of opinion existed. In order that the Commission might work harmoniously and accomplish the greatest measure of good, it would, he thought, be necessary to proceed with great caution and deliberation in drafting these Rules, so that there might be no criticisms later on as to the intention of the Commission, which, he felt sure they would all agree with him, was to further the interests of the electrical industry of the world. He, therefore, suggested that a Sub-Committee with one Representative from each country should forthwith be appointed to consider the Rules *seriatim* and report to the whole Commission.

A short discussion took place and this course was agreed to, it being decided that the Sub-Committee should report to an adjourned Meeting of the Commission to be held on the following morning at nine o'clock.

The Meeting then adjourned.

SUB-COMMITTEE
APPOINTED TO CONSIDER THE PROPOSED RULES.

The Sub-Committee met under the Chairmanship of M^r Alexander Siemens and the proposed Rules were considered *seriatim*.

The most important features of the discussion were :—

(1) Manufacturing interests being represented on the Local Committees,

(2) The appointment of the Local Committee by the Government of any country having no Electrotechnical Institution.

(3) The period during which a Technical Society shall have been in existence before it can appoint a Local Committee.

(4) The voting power of each country and method of registering the same.

With reference to the first point, M^r Herdt mentioned that in Canada the Committee already appointed, included Manufacturers as they were more interested in the matter than anyone else.

In the old countries the Manufacturers were probably Members of the Electrotechnical Societies, but this was not the case in the younger countries.

Dr. Budde proposed and it was agreed that in a country having no Technical Society dealing with electrical matters, the Government should appoint the Committee ; he also suggested that the vote of each country might be given by proxy, by correspondence, or in person.

M^r Mailloux suggested and it was agreed that the Technical Society of any country desiring to appoint a Local Committee could do so provided such Society had been at least three years in existence previously.

Several alterations were suggested and agreed to in the Rules and it was decided that a redraft should be placed before the full Meeting of the Commission on the next day together with a French version.

The Sub-Committee then adjourned.

ADJOURNED MEETING

HELD AT THE HOTEL CECIL

H/

ON TURSDAY, JUNE 27TH AT 9 A.M.

MR ALEXANDER SIEMENS (President).

Before discussing the Rules, Colonel Crompton drew attention to the fact that "General Secretary" had been changed to "Honorary Secretary" all through, and he thought that some confusion might arise on account of the wording of Rule N° 6.

Mr. Mailloux suggested the advisability of a motion later on to provide for the employment of a temporary Secretary, as, of course, the Commission would not officially come into actual existence until the Local Committees had been formed and the Rules approved of.

It was, however, suggested that the word "general" in Clause N° 6 might be struck out, and this course was agreed to.

M^r Mailloux, at the President's request, explained the result of the labours of the Sub-Committee on the previous day and presented the amended Rules, together with a French translation. He drew attention to a few alterations, which, as they appeared advisable, had been made in the course of translation. He moved the adoption of the Report of the Sub-Committee, subject to the slight alterations he had mentioned, together with the insertion of the word "electrical" in the title and the substitution of the word "President" for "Chairman" wherever it occurred in the Rules.

D^r Fujioka (Japan) seconded the motion which on being put to the Meeting was carried.

t/ The Rules as redrafted by the Sub-Committee were then considered *seriatim*, copies of which were before the Meeting.

RULE N^o 1.

M. Boucherot (France) remarked that although the French Delegates were in favour of International standardisation in electrical matters he was sorry to say that most of the profession in France did not view the movement with much favour, and he thought that the Delegates themselves would have great difficulty on their return in explaining

how far it was intended that standardisation should go. It would be a somewhat difficult matter to fix any limit, and the large majority of the electrical industry in France were very much afraid of too much detail in the work of standardisation.

Colonel Crompton pointed out that at its commencement the movement of standardisation in England had likewise met with considerable opposition from the electrical industry, as it had been felt that whereas standardisation on broad lines would be beneficial, too much detail might have a very contrary effect. Gradually, however, the industry had been convinced of the benefits accruing from standardisation and had liberally supported the work.

M^r Mailloux remarked that the United States were quite well disposed towards classification. They fully recognised, however, the need of proceeding slowly, and after all it should not be forgotten that modifications might be introduced into the Rules should such be found desirable.

Rule N^o 1 was then adopted.

RULE N^o 2.

This Rule was adopted subject to the words "Chairmen and Vice-Chairmen" being amended to read "Presidents and Vice-Presidents."

RULE N^o 3.

M. Gérard (Belgium) was of opinion that for Belgium it was of the utmost importance to make it perfectly clear that ~~Manufacturers~~ might be appointed on the Local Committees. In order that the Local Committee might work harmoniously it was imperative to have the support and advice of the manufacturing interests.

Colonel Crompton pointed out that there was nothing in the Rules to prevent this, and he also mentioned that in England on the Standardising Committees the manufacturing interests were always represented.

Mr. Mailloux agreed that the Rules did not restrict any country in forming its Local Committee, and that, therefore, there was nothing to prevent Manufacturers being invited to serve on the Local Committees.

M. Gérard, although he thought the intention might be quite clear, considered it should be made more definite in the Rules in order to prevent any possible misunderstanding.

M. Boucherot was of opinion that the Technical Societies might appoint any Members they wished to serve on the Local Committee.

Mr. Herdt suggested that these Local Committees should, in the first instance, be formed

one for each country by the Technical Societies of each country, assisted by other interests, if found necessary.

The President, however, thought the objection to this would be that it would be open to any body to claim that he had an interest.

Mr. Herdt remarked that in Canada the whole of the financial burden would have to be carried by the Manufacturers, some of whom held somewhat different views from those of the Technical Societies and he rather feared that if the Technical Societies had the appointment of all the Members it might militate against ultimate success.

Mr. Mailloux thought dividing responsibility would be most inadvisable. It would be safer to make the Society responsible for the formation of the Committees than to leave it open to competition or rivalry.

The President suggested that the case might possibly be met by inserting the words, "The persons appointed on the Committees need not be Members of Technical Societies."

This suggestion was agreed to, and the Rule, as amended, was adopted.

RULE N° 4.

This Rule was adopted as follows :

“Each Committee shall send technical Delegates to the Commission. The credentials of the said Delegates shall be subject to the approval of the Council of the Commission.”

RULE N^o 5.

M. Boucherot pointed out that the Rule did not say how the findings of the Committee were to be arrived at.

The President said it had not been considered necessary that the vote should be unanimous, as in that case obstruction might be raised by one country thereby upsetting all the work of the Commission.

M. Gérard was of the same opinion, and was in favour of the Rule as it stood.

M. Janet (France) thought it might be unanimity in the case of the whole Commission and a majority in the case of the Local Committee. He suggested the following wording:— “Only such decisions may be published as emanating from the International Electrical Commission which have been passed unanimously by the Commission. All decisions resulting from a divided vote may be published only when the names of the countries voting in favour of such a decision are also given.”

The President was of opinion it might be advisable to give the votes for and against.

Dr. Crocker (U. S. A.) agreed to this proposal.

After some further discussion this Rule was finally adopted as follows :— “Each country shall be entitled to one vote only, either by person, by proxy, or by correspondence, whatever number of Delegates it may appoint. Only such decisions may be published as those of the International Electrical Commission which have been passed unanimously by the Commission. All decisions resulting from a divided vote may be published only when the names of the countries voting for and against are given.”

RULE N° 6.

This Rule was adopted on the motion of M^r Mailloux, seconded by D^r Crocker, subject to the word “general” being deleted.

RULE N° 7.

On the motion of M^r Mailloux this Rule was adopted, subject to the date being altered to June 27th., and the word “President” being substituted for the word “Chairman”.

RULE N° 8.

On the motion of D^r Crocker, seconded by M^r Mailloux the Rule, subject to the following amendment, was adopted. The words "Presidents and Vice-Presidents" being substituted for "Chairmen and Vice-Chairmen" and the word "personnel" substituted for the word "staff".

RULE N° 9.

The word "President" was substituted for the word "Chairman".

M^r Robert Grey questioned whether the word "local" in the last line was necessary.

M^r Mailloux thought that the first line of the Rule should read "the first Presidents and Delegates shall serve...".

At this point Colonel Crompton remarked that in Rule N° 8 the Council had appointed the Honorary Secretary, but there was no Council yet, and therefore no Honorary Secretary to the Commission. Up to the present, he had acted as Secretary and all the correspondence was in his hands, and this could not be re-transferred to him after a year's interval without considerable difficulty.

D^r. Crocker then moved that Rule N^o 7 be reconsidered and that the words "and Honorary Secretary" be inserted after the word "President", which proposal was agreed to.

The consideration of Rule N^o 9 was then continued.

M. Guido Semenza (Italy) thought it would be clearer if the first line of this Rule were to read, "the first Presidents and Delegates of the Local Committees shall serve..." which suggestion was agreed to.

M^r. Robert Grey proposed that in the second paragraph, line 2, the words "of the Commission" should be inserted after the words "Honorary Secretary", which suggestion was also agreed to.

Rule N^o 9 with these amendments was then adopted.

RULE N^o 10.

In this Rule the words "Presidents and Vice-Presidents" were substituted for the words "Chairmen and Vice-Chairmen", and in line 7 the word "a" was substituted for the word "another".

M. Boucherot thought that a Meeting might be called if requested by two countries instead of three, as there were only two Vice-Presidents.

RULE N° 13.

Mr. Mailloux explained that, in making the translation, the question had arisen as to what was really intended to be signed.

The President remarked that it was the accounts which were to be signed. It was, therefore, decided to amend the Rule as follows:— “ The accounts of the Central Offices, which shall be made up annually, shall be signed by the President, or one of the Vice-Presidents and the Honorary Secretary, and the report of a professional auditor shall be accepted as proof of the correctness of the same ”.

On the motion of Dr. Crocker, seconded by Mr. Mailloux, the Rule, as amended, was adopted.

RULE N° 14.

Colonel Crompton suggested that three months was scarcely sufficient time to allow of a reply being received from Japan, and he suggested that the time should be increased to four months.

This proposal was agreed to.

It was also agreed to insert the word “ electrical ” after the word “ international ” at the beginning of the second paragraph.

On the motion of Dr. Crocker, seconded by Mr. Mailloux, the Rule, as amended, was adopted.

Dr. Crocker considered that the term "electrical" in the title was somewhat ambiguous as it would be applied, for example, to a Commission which had to do with Magnetic Units. He suggested that the ambiguity would be avoided if the word "electrotechnical" were substituted.

Mr. Mailloux moved that the title be changed to "International Electrotechnical Commission".

Mr. Herdt seconded the motion, which was carried unanimously, and it was also agreed that wherever the words "International Electrical Commission" occurred in the Rules they should be altered accordingly.

Dr. Crocker then moved the adoption of the Rules *en bloc*.

Mr. Mailloux seconded the motion.

Professor Farny (Switzerland) desired that the Rules should be subject to ratification by the Local Committees.

Dr. Rosenberg (Austria) remarked that where there were no Local Committees the Rules would have to be submitted to the Councils of the Electrotechnical Societies or the Governments which had appointed the Delegates.

M. Mailloux therefore proposed that the motion should be altered, and requested to be allowed to

move that the Rules be adopted subject to ratification by the Authorities by whom the Delegates had been appointed.

M. Guido Semenza desired to know what would happen if one of the Societies did not give its consent to the Rules, in reply to which the President said it would not then be entitled to join the Commission.

M^r Mailloux pointed out that Rule N^o 14 afforded opportunities of making any alterations which might from time to time be thought desirable.

M. Guido Semenza then proposed, as an amendment, that the Rules should there and then be adopted.

M^r Mailloux, though he had no objection to such a course, thought it would only be right and proper that the local Authorities should not feel they were being forced to accept something which they had not fully considered.

The President then put the resolution to the Meeting in the following form :— “ That these Rules be adopted subject to ratification by the Authorities by whom the Delegates were appointed ”.

This motion seconded by M^r Mailloux was carried unanimously and the President declared the Rules adopted.

On the proposal of the President, seconded by

M^r Mailloux, the Right Honorable Lord Kelvin, G.C.V.O., O.M., was unanimously elected first President of the Commission.

On the motion of the President, seconded by D^r Crocker, Colonel R.E.B. Crompton, C.B., was unanimously appointed first Honorary Secretary to the Commission.

Colonel Crompton said it was one of the proudest moments of his life to hear a decision arrived at to continue the work of standardisation.

Several of the Delegates had no doubt been present at the National Physical Laboratory when M^r Haldane, the Secretary of State for War, had opened the new buildings, and they would remember that in his speech M^r Haldane had remarked that this movement was an omen of the peaceful management of the world in the future. It was, by patiently working together and by smoothing down difficulties which were likely to arise in such peaceful matters as standardisation, that the world would gradually arrive at universal peace. He thought everyone who had been associated with the movement would not recall it as the least satisfactory work of their lives, but, on the contrary, would feel that they had done something towards the great cause of helping one another through the world.

At the suggestion of M^r Mailloux it was unanimously agreed that a copy of the Report of the Meetings, together with the proposed Rules, both in French and English, should be forwarded to the Delegates.

M. Gérard then moved a vote of thanks to the President for the courteous and effective manner in which he had conducted the preliminary work of the Commission, and for the amount of time, energy and zeal he had devoted to the movement.

M^r Mailloux, in seconding the motion, desired to express his appreciation of the work carried out by the President and the Honorary Secretary. In his opinion the two names, Siemens and Crompton, would remain inseparably associated with the creation of the Commission. The purposes of the Commission had been well defined in the preliminary remarks made by Colonel Crompton, and it was not necessary to dwell on them. He expressed the wish that M^r Gérard would allow him to add the name of Colonel Crompton to the motion.

M. Gérard accepted this addition to the motion which, on being put to the Meeting, was carried with acclamation.

The President in thanking the Commission remarked that their vote of thanks was more due to Colonel Crompton than to himself, Colonel

Crompton having really been responsible for the success which had attended this first meeting. He further remarked that in presiding over the Meeting he had been most fortunate in that all the Members had come together with the goodwill and good intention of assisting each other. It would he felt sure, give umbrage to no one if he singled out Mr. Mailloux for his co-operation in bringing about the happy result. In conclusion, he said it had been a great pleasure as well as a great honour to him to preside over a Meeting at which, he hoped, a most important International Institution had been inaugurated.

Colonel Crompton also responded and explained the methods which had been adopted in England in carrying out the work of standardisation. He said that both Mr. le Maistre and himself would be prepared to place at the disposal of the Delegates all the information they possessed with regard to the methods of carrying on the work, and he hoped that this might be a means of saving the Local Committees much unnecessary labour. The work in England had been carried on with very great difficulty, and it had been absolutely necessary to have the Manufacturers on their side in fact it had been found by experience that no standardisation could be successful which did not have the co-operation of the Manufacturers, and

he therefore desired to suggest to the Delegates that, before returning to their own country they might, with advantage, spend a few hours in examining the papers and documents which they would have pleasure in laying before them.

The Commission then adjourned.