NATIONAL BUREAU OF STANDARDS REPORT

8182

REPORT ON LATIN AMERICA TRAVEL

CONCERNING

LATIN AMERICAN STANDARDS

AND

STANDARDS FOR TUBULAR STEEL PRODUCTS

September 14 - November 27, 1963

By

LeRoy L. Wyman
Consultant, Metallurgy Division

U. S. DEPARTMENT OF COMMERCE
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1. ABSTRACT:

This report covers the visits to the standards bodies and groups interested in standards promotion in 10 Latin American countries. In the four countries (Bolivia, Colombia, Ecuador, and Paraguay) not having recognized bodies, assistance was given to promote such attainment. Additionally, the activities at the tubular steel products seminar in Santiago, at which the writer was the official U.S. representative designated by the American Standards Association, are reported.

2. SPONSORSHIP:

Standards activities extend through the Department of Commerce, and to the National Bureau of Standards. Also, Bureau personnel are engaged in standards work both in the government and with non-government standards writing groups; the American Society for Testing and Materials, for example. In the present instance, the author is Chairman of Committee A-10 on Stainless Steel, Chairman of Committee E-4 on Metallography, Member of Advisory Committee of A-1 on Steel, and a member of the Executive Committee of the Division of Materials Sciences - all of A.S.T.M., and a member of the U.S.A. National Committee for International Standardization of Steel.

United States participation in the Pan-American Standards Committee (PASC-English; CPANT-Spanish) is via the American Standards Association, thus participation in CPANT seminar activities by the writer was by ASA delegation.

3. OBJECTIVES OF TRIP:

In continuation of the Latin American standards activities in which the author participated in September-November 1962 (NBS Report 7793) and May-June 1963 (NBS Report 8072) visits, this trip was for the purpose of:

1. Participation in Tubular Steel Products Seminar at Santiago, Chile.

2. Discussing standards activities in Argentina, Brazil, Chile, Peru, Uruguay, and Venezuela, and

3. Assisting in the formation of national standards bodies in Bolivia, Colombia, Ecuador, and Paraguay.

4. Discussing standards and standards activities with the Embassy and AID staffs in each of the above countries.

4. Miami, Florida, September 14, 1963

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Mr. Z. Bramnick	Director, NBS Project University of Miami
Professor Recio	Assistant Director, NBS Project University of Miami

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4.1 Miami, Florida, University of Miami

The reason for visiting the University of Miami was in connection with the contract we now have with them for translations; the bulk of which concern Department of Labor safety codes, although some materials standards, including steels, are part of the program.

Having left Washington shortly after midnight, arrival in Miami was so early that flight checks to Rio de Janeiro, customs forms for cameras, etc., were completed far ahead of one's normal breakfast time, and well before the time to contact the University people.

Later, Professor Recio and Mr. Bramnick picked me up at the airport, then we proceeded to the University and the "NBS Project" office which they have set up for this work.

I had brought with me a number of American Water Works Association standards for which we had received an urgent request from Mr. Miller at our Ecuador Embassy for these translated standards. I requested that they process these as soon as possible.

With regard to several questions which they had raised concerning these translations, I advised them that (a) they should not attempt to make English-metric conversions inasmuch as this was a matter of current concern in ASTM and elsewhere - and decisions had yet to be reached; (b) that they should provide 100 copies of each item; and (c) that other, and rush jobs, could be expected.

The latter was exemplified by the AWWA specs. I had just given them. Also, I advised them that the CPANT seminars which produced the proposed specifications were so organized that, following the conclusion of the seminar, the results thereof were circulated by each standards group in their respective countries for comments - and that these comments had to be returned within four months.

As a consequence, we who are faced with the necessity of having the proposals translated are confronted with this time-consuming operation in addition to those encountered in the vagarities of international mailing and several levels of transmittal in each direction.

In this translation operation conducted at the University, each item has its own schedule sheet, and its progress is programmed. Briefly, this consists of the initial translation, checking, technical editing, rechecking, and then reproducing.

The initial translations are usually made by selected University of Miami students from Latin America - of which the university has over 600, the largest number in any U.S. university. These students are usually those who have had 2-3 years of college in their own country as well as several additional years at Miami.

The "technical editing" is usually done by selected and competent engineers and scientists in-exile from Cuba, and who have practical knowledge in their fields.

This Spanish-English translation program was operating well, and I examined some proof-pages of the eight steel specifications (from the May '63 Santiago seminar) which were being processed. These were completed, and copies awaiting me on my arrival at Santiago, somewhat later in my trip.

No progress had been made on the English-Portugese phase of the translation work inasmuch as the Miami group were awaiting word from Mr. Hamerman of our Brazilian Embassy concerning his availability to take on this phase of the work.

Inasmuch as I was on my way to Rio de Janeiro, I agreed to discuss this matter with Mr. Hamerman on my arrival there.

Quite some time was spent in discussing the various aspects of standards, including the "intent" in a specification - which is frequently not too readily apparent.

Because of the differences in Spanish terminology in various areas of Latin America, it was agreed that there would be no editing in this respect; that is, the terms used by the originating group would not be changed.

The visit to the University ended with a short visit with Dr. Man, who emphasized the sincere interest that the University has in providing translation services, and who assured me of their willingness to cooperate in every way possible to provide the best services for us.

5. Rio de Janeiro, Brazil, September 15-19, 1963

Mr. Edward J. Bash	Commercial Attache
Mr. Norman Bouton	Commercial Assistant
Mr. C. Hamerman	Assistant Industry Officer
Dr. Andre C. Simonpietre	Science Attache
Dr. Alberto Sinay Neves	President, CPANT Standards Department, General Elec. Co.
Dr. Dimitri Krone	Consultant, Advanced Engineering General Elec. Co. ASA Representative in Brazil
Dr. Alvaro de Souza Lima	President, Associacao Brasileiro de Normas Tecnicas (ABNT)
Dr. Paulo Sa	Director, ABNT Director, Inst. Nacional de Pesos e Medidas
Dr. Moacir Reis	Assistant Director, Inst. Nat. P. e M.

5.1 Rio de Janeiro, Brazil, U. S. Embassy

Arriving early Monday at the Embassy, I first met with Mr. Bash to outline my contemplated program. Then, with his permission, I discussed the English-Portugese translation situation with Mr. Hamerman.

He has recently been involved in the Trade Fair here, which has left him no time to go into the translation project. However, the Fair terminates this week and he can turn his spare time to the translation proposal.

I discussed with him the several factors, that were of concern to Messrs Bramnick and Recio(University of Miami), and Mr. Hamerman agreed to write them by the weekend in order to facilitate the initiation of the Portugese phase of the translation project. In this, he will be working for the University of Miami NBS Project.

Mr. Hamerman then proceeded with the task of obtaining appointments for me while I went to the General Electric offices to meet with Dr. Neves.

5.2 Dr. Neves, President CPANT, General Electric S.A.

The balance of the day was spent with Dr. Neves in discussing all phases of standards. In particular, we discussed some of the factors concerning CPANT operation which had been of no small concern to those of us in NBS who had been participating in the seminar programs.

One of the important results of this discussion concerns the fact that while many of the changes in CPANT regulations which were approved at the Council meeting in Lima a year ago had been incorporated, it was quite obvious that they were not being used. As a consequence, every effort would be made to create an awareness of these changes so that there would be improvement in the operation of the various programs.

The most important of these factors which need to be clarified and implemented are the following:

1. It should be firmly established that the Working Committee (seminar) that is preparing a proposed specification should write that document exactly as it is to appear in final form, and that no one other than this group shall make any changes whatsoever in the document.

2. Any committee or group that is sponsoring a symposium, seminar, or whatever shall have sole responsibility for such meeting; including dates, agenda, notices thereof, etc.

The General Secretariat and Seminar Director should provide the necessary adjunct services for the above.

Undoubtedly some of the operational difficulties are due to the fact that the CPANT organization is new, and that the planning of international meetings is a long-range affair. Also, this may be severely hampered by faulty communications. For example, Dr. Neves usually receives airmail from me from Washington in 3-4 days. However, when I met him in his office on Wednesday he said he was glad that I was coming to visit him - the letter telling him thereof being about 2 weeks overdue!

I also learned that the CPANT Council would meet in Santiago, November 18-20; that Messrs Gay and Ainsworth were expected from ASA, and that Canada had been elected to membership in CPANT.

While in Rio I had discussed with Dr. Neves the subject of the extent of CPANT standards activities, and it was initially his feeling that CPANT was trying to do too much.

After looking over present CPANT activities, capabilities, and support, one could quite agree with this concept. On the other hand, ALALC will undoubtedly be pressing for much greater activity, to say nothing of the increasing demands from CPANT member countries.

Before concluding this topic, I am sure that Dr. Neves agreed with me that CPANT must materially increase its productivity and extend its activities into more categories of materials.

During my several visits with Dr. Neves I also met Dr. Krone, who remembered me from many years ago.

We had a rather lengthy discussion concerning standards, and what might best be done to promote standardization and the use of standards. Certainly we were in agreement that <u>industry</u> <u>must</u> get behind this movement and give it full support and cooperation.

5.3 Associacao Brasileiro de Normas Tecnicas

I met with Dr. Paulo Sa at the ABNT headquarters, and was introduced to Dr. Reis, who is assistant to Dr. Sa in the latter's recent appointment as head of the new weights and measures institute.

We had a long and enjoyable discussion which was devoted principally to the activities of the new Institute rather than to those of ABNT.

Dr. Sa called particular attention to the many posters in evidence on the walls of his office. These constituted the "popular" approach to the metric system enforcement now being conducted by the Institute.

Upon inquiry, I was told that Ing. Pedroso (who was "out of Rio") was no longer concerned with coming to the U.S. for weights and measures training (see 1st and 2nd trip reports), but that Dr. Reis would be going to France on such a mission - on invitation from the French.

At present, the emphasis on metric system enforcement is concerned with canning and packaging; this to enforce labelling as to net contents in metric units - no conversion fractions.

With reference to the upcoming tubular steel products seminar, Dr. Sa said that there would surely be three representatives from Brazil, and possibly one or two more. Volta Redonda, the government-owned steel mill, would be represented.

ABNT is expanding in to the certification of consumer goods, and will place its label on the items which it tests and approves.

5.4 U.S. Embassy

The Rio visits were concluded by a final visit with Dr. Simonpietre and with Mr. Bash.

Dr. Simonpietre had been actively interested in arranging for Eng. Pedroso of ABNT coming to the U.S. for training; thus I advised him of my conversation with Dr. Sa and the projected visit of Dr. Reis to France.

I also discussed with Dr. Simonpietre the mission on which Dr. Oliverio Phillips, Director of Instituto de Investigaciones Tecnologicas (INIT) would be visiting Latin American countries concerning coordinated regional research projects by cooperating research institutes.

From Mr. Bash I learned that they had up-dated their iron and steel report since my last visit, and I was given a copy of this as well as a copy of their report on agricultural machinery and equipment.

I also gave Mr. Bash the highlights of all of my Rio visits.

6. Sao Paulo, Brazil, September 19-22, 1963

Mr. Fred Exton, Jr.	Consulate
Mr. R. C. Desmond	Consulate
Mr. Horace Hunnicutt	International Nickel Company (INCO)
Dr. Alvaro de Souza Lima	President, Associacao Brasileiro de Normas Tecnicas (ABNT)
Dr. Eudoro L. Berlinck	Eng.-in-Charge, ABNT Sao Paulo
Dr. Helio Martins de Oliveira	President, Instituto de Engenharia

6.1 U.S. Consulate

Two difficulties became evident immediately after my arrival at the Consulate: (1) my flight to Montevideo was fouled up, and (2) my advance notices had not arrived in Sao Paulo.

Mr. Jelinek is still in the States on leave, so I spent some time with Mr. Exton on several items of discussion:

There seems to be a widespread feeling in industry that more should be done concerning materials specifications;

There should be more U.S. technical and trade literature made available to Latin American organizations. For example, as we were talking there arrived in the mail a beautiful descriptive folder describing the new Boeing 727 and relating many items of technical and engineering interest. Thus it is material such as this which, widely distributed gratis in Latin America, could materially assist our technical and commercial efforts. In fact, this is a corollary to the pointed comments which Dr. Marchini of the Brazilian Metals Institute made to me on my last visit to Sao Paulo.

During Dr. Foster's (NBS) attendance at the "cement" seminar he had become acquainted with the activity in the Instituto de Engenharia, Sao Paulo, in proposing to reproduce textbooks at low cost. Dr. Foster had requested that I check into the progress of this proposal.

I discussed this with Mr. Desmond, and found that the initiative was now in the hands of Eng. Martins de Oliveira, President of the Institute, to bring forth the specific proposal, and that this was long overdue. As the result, I agreed to meet and discuss this matter with Eng. de Oliveira.

6.2 Instituto de Engenharia

I met with President Martins de Oliveira in his office at the Institute headquarters, and learned some of the highlights of this proposal.

In essence, they want and need U.S. textbooks - but these are too high-priced for them. For example, an average student who might be fortunate enough to have U.S. $40/month for all his expenses would have a rough time buying $10.00 textbooks. Thus this proposal consists of obtaining copyright waivers from certain U.S. publishers to reproduce specified textbooks at about $1.00 solely for student use - with each copy being assigned.

The reproduction facilities available consist of a Xerox machine at IPT, for the heavy loads, and an off-set machine at the Engineering Institute for smaller jobs.

At the time of my visit, Eng. de Oliveira was awaiting the final recommendations resulting from a canvass of technical faculties as to their preferences of textbooks to include in the program. To date some 75 different texts had been suggested.

I advised him of the fact that Mr. Desmond could not proceed with his efforts to obtain support for this program until he had a specific proposal; thus the survey should be expedited and the proposal drawn up as soon as possible.

6.3 Associacao Brasileiro de Normas Tecnicas

On the two previous trips to Brazil I had visited with Dr. Sa and Eng. Berlinck, but had not had the opportunity of meeting the President of ABNT, Dr. Alvaro de Souza Lima, who lives in Sao Paulo. To remedy this situation, an appointment to meet the President at ABNT was made through the Consulate.

Arriving at the ABNT office, I was glad to be greeted by Eng. Berlinck, because we had been trying to locate him in order to make an appointment for my visit. As it was, the three of us spent several hours discussing standards.

Dr. de Souza Lima was very much interested in the progress of standards at both national and international levels. He also evidenced considerable interest in the subject of industry support of standards programs.

Subscribing to this latter point, it was pointed out that the ABNT program for standardization in the automotive field, and for which ABNT holds the CPANT Secretariat, was progressing very slowly and had obtained but small support from industry.

However, in this same connection, it also developed that the approaches for support had been made at the technical level, not the company executive level. This could be the answer.

It was interesting to find out that several years ago ABNT had published a booklet on the terminology of automotive materials, parts, etc. They had trouble on their hands in one instance for using a trade-marked vehicle name without permission. In the U.S. - and our dictionary, this is also a generic term.

Eng. Berlinck had, on my last visit, thanked me profusely for my first trip report as it had been "very useful to him". He now proceeded to show how useful it had been by presenting me with a copy of the official magazine of INDORT (Instituto de Organizacao Racional do Trabalho, which is affiliated with the Comite International de l'Organization Scientifique, CIOS) in which he had published an article on standards - much of it derived from my report.

In the Saturday A.M. paper I noted a news item that on Monday, in Montevideo, there would begin a series of meetings of representatives of

business associations in Latin America to discuss relationships with the Latin American Free Market organization (LAFTA). Also, that Sr. Juan Fernandez Palacios of UIA, Argentina, (see first trip report) was prominently mentioned.

I decided to look into this on my arrival in Montevideo.

7. Montevideo, Uruguay, September 22-23, 1963

Mr. W. L. Garges	Commercial Attache
Mr. Walter Arendsberg	Industry Officer, AID
Ing. Juan P. Molfino	Director, Instituto Uruguay de Normas Tecnicas (UNIT) Treas., CPANT
Sra. Alba Cabrera	Secretary to Ing. Molfino

7.1 U.S. Embassy

Upon arrival in Montevideo I was met by Mr. Garges, the new Commercial Attache, and we had a pleasant visit enroute to the hotel and my checking in; agreeing to meet first thing Monday morning.

The lower lobby and restaurant of the Victoria had been taken over for the forthcoming meetings and I learned that Ing. Fernandez Palacios was expected on Monday - so I left a message for him at the registration desk.

I noted that the program scheduled a "standards" discussion for Tuesday.

Monday morning I spent quite some time with Mr. Garges in bringing him up-to-date on our standards efforts in Latin America, CPANT, seminars, relation to free market, AID, etc.

Mr. Garges obtained appointments for me at UNIT, and then with Mr. Arendsberg; so I then journeyed next door to meet with Ing. Molfino.

7.2 Instituto Uruguay de Normas Tecnicas (UNIT)

After having received a most hearty welcome at the UNIT headquarters, we settled down to discuss standards matters. First, I inquired about the "free market" meetings and found that the Engineering Society had invited Ing. Molfino to attend.

I called attention to the fact that a "standards" session was to be held the next day, Tuesday; and wondered who would be present to espouse the cause of CPANT.

After a series of discussions alternated with phone calls to Buenos Aires, it was agreed that Sr. Ing. Ciaburri, Prov. Secy. Gen. of CPANT, would come over from Buenos Aires - and that she and Ing. Molfino would be prepared to present discussions on standards in Latin America at the international and national levels.

This crash effort was exceedingly fruitful; resulting in the formal recognition of the status of standards, a committee on standards, and the approval of a resolution which contained several statements of significant importance to the advancement of the Latin American standards program. See Appendix.

7.3 U.S. AID

Since my last visit to Montevideo, Mr. Arendsberg had joined the AID mission as Industry Officer, and he came over to Mr. Garges' office at the Embassy where the three of us had a long and interesting discussion of the standards program.

I pointed out the necessity for a strong standards organization in both the technological and economic development of a country. Also, that this really should be industry-supported; however, in some of the Latin American countries (Uruguay being one) the economy was agricultural rather than industrial, thus the standards groups suffered from lack of support.

Mr. Arendsberg was quite interested in the UNIT efforts; so before leaving Montevideo I arranged with Ing. Molfino to have Mr. Arendsberg visit UNIT to become acquainted with its operation, objectives, and cooperation in CPANT and ALALC (LAFTA).

8.0 Buenos Aires, Argentina, September 23-28, 1963

Dr. F. W. Brown	Scientific Attache
Mr. John Troy	Commercial Attache
Mr. William Lowenthal	Deputy Director, AID
Sra. Beatriz Ghirelli de Ciaburri	Prov. Secy. Gen., CPANT Mg. Dir., Instituto Argentina de Racionalizacion de Materiales (IRAM)
Sra. Dr. Hughes	IRAM Staff
Dr. Salvador del Carrill	Pres., Instituto Nacional de Tecnologia Industrial (INTI)
Mr. Ronald A. Ryberg	B.A. Repr., International Nickel Company (INCO)
Ing. Arturo E. Yermoli	Field Director, CPANT Seminars, Tech. Dir., Consultores Industriales Asociados
Ing. Jaun F. Garcia Balado	Tech. Dir., Instituto del Cemento Portland Argentino
Dr. Abilio Bassets	Librarian, Instituto del Cemento Portland Argentino
Dr. Jaun Fernandez Palacios	Mg. Dir., Union Industrial Argentina
Ing. Alberto del Rio Salas	Dir. Publ. Rel., UIA
Ing. Carlos A. Martinez Vidal	Asst. Chief Metallurgist Comision Nacional de Energia Atomica

8.1 Buenos Aires, Argentina

Arriving in Buenos Aires in the early morning, I immediately phoned Sra. Ciaburri at IRAM and found that she was prepared to fly to Montevideo early Tuesday to work up a pair of speeches with Ing. Molfino - for them to present at the ALALC meeting Tuesday afternoon.

She would return on Wednesday so that we could have a meeting.

8.2 U.S. Embassy

Upon arriving at the Embassy and renewing acquaintances with Mr. Troy, I soon learned of the Department of Commerce requests for Argentine standards on several kinds of water pipe. At Mr. Troy's request, I agreed to get these for him when I visited IRAM.

While Mr. Troy's assistants were busily engaged in confirming the appointments they had made for me, I paid a visit to Dr. Brown. Here I advised Dr. Brown concerning the Dr. Phillips "regional research" program, and in return I was advised that Dr. del Carrill of INTI had been endeavoring to obtain assistance for the INTI program of technical assistance to industry.

Dr. Brown felt that I should visit Dr. Sabato at the atomic energy labs, and proceeded to try for an appointment. Dr. Sabato is to leave for the U.S. very soon, where he will spend several months at Stanford University.

I was very much interested in a yard-square piece of sheet metal that Dr. Brown presented for my scrutiny. It had been found in a pasture in N.E. Argentina; had been identified as a part of an Atlas booster case; and would be returned to U.S.A. for study.

I noted the edges, and there are some beautiful fracture faces that can probably yield some very fruitful information.

Dr. Brown also arranged that we would meet with AID personnel on Friday.

8.3 Instituto Argentina de Racionalizacion de Materiales (IRAM)

On entering IRAM headquarters I noted that the lobby display of IRAM-approved consumer products had grown appreciably since my last visit.

I found Sra. Ciaburri ready-to-go; that is, foul weather had prevented her going to Montevideo yesterday and she was prepared to take off just as soon as the weather lifted.

Also, it was of interest to note her comments that such trips for CPANT were "difficult" because there was no provision in CPANT for expenses. As a consequence, this trip would be through the courtesy of IRAM.

My first chore was to obtain copies of all IRAM and CPANT specifications for Mr. Troy to send to Department of Commerce. These Sra. Ciaburri assembled for me, and I insisted on paying for them - as should be done.

For further reference, I received catalogues of all IRAM and CPANT specifications.

Sra. Ciaburri fully agrees that it is quite important to have a strong presentation of CPANT activities and objectives at the ALALC (LAFTA) meetings in Montevideo. Concerning this, I advised her that a number of comments I had received from business sources quite clearly indicated that ALALC had strong feelings about the necessity for these standards - and might take some initiative if CPANT output seemed inadequate.

This quite clearly indicates that CPANT must very materially increase its specifications output in the areas in which it is now engaged. Also, it must expand its coverage into all areas of interest to ALALC.

I told Sra. Ciaburri that I had also discussed this subject with Dr. Neves, and that he had agreed that CPANT must plan accordingly.

News of the standards activities in other countries was not too plentiful:

COVENIN (Venezuela) had a new President, Sr. Porras Omana

Paraguay had passed the "Institute" law which provided for standards set-up.

Sra. Ciaburri agreed with Neves and my plan to sit tight on the Colombia affair until after my visit.

I made a point of calling attention to the fact that the lack of notices, changing of meeting dates, and shifting of meeting agendas had been deeply disturbing to many of us in the U.S., and that these conditions should be corrected.

On this occasion I had the opportunity of renewing acquaintance with Sra. Hughes, and also to meet Sr. Hicketier, an IRAM Director, who came to call on Sra. Ciaburri.

In reply to a question by Sr. Hicketier, I was enabled to clarify some lack of understanding of the areas of interest which we have in Latin American standards; that is, that NBS is concerned with technical assistance, and the Department of Commerce in enhancing the technology, productivity, and economy of the Latin American countries. As standards are of primary importance in all of these areas, our interests and activities are thus broad in scope.

On the other hand, U.S. representation in CPANT affairs (as with ISO) is handled by the American Standards Association. Thus, when those of us from NBS participate in the CPANT seminars, etc., we do so as Delegates of ASA.

8.4 Union Industrial Argentina

On my arrival in Buenos Aires, I had learned from Ing. Fernandez Palacios that he would not be going to this week's meetings in Montevideo due to press of work at UIA, but that several UIA directors were there. Thus I was able to make an appointment with him at UIA headquarters.

Arriving there, I found a Board of Directors meeting in progress, so had a pleasant visit with Ing. Alberto del Rio Salas, until the meeting concluded.

After the Board of Directors meeting, I was introduced to the members of the Board, and invited to join them for an informal dinner at a typical sea-food restaurant.

During the course of the evening, I learned that the Board of Directors had just renewed its contribution to IRAM. Also, I gathered that the Cement group was active in UIA, for Dr. Fernandez Palacios and several of the directors urged that I visit Ing. Balado at the cement institute. This was interesting because Dr. Foster (NBS) had also urged that I visit there.

8.5 Comision Nacional de Energia Atomica (CNEA) - Metallurgy Division

When Dr. Brown and I were about to go out to CNEA to visit Dr. Sabato, word came that Dr. Sabato's physician would not permit him to leave home and had forced him to cancel a lecture trip and send Ing. Martinez V. as a substitute. Thus, from this angle the CNEA visit was called off, and I went to lunch with Mr. Ryberg of INCO.

During lunch, Mr. Ryberg offered his "good offices" with CNEA, and we were soon enroute to their labs.

It was a pleasure to meet Ing. Martinez V., and our trip through the CNEA Metallurgy Division was both interesting and instructive. However, due to the fact that Ing. Martinez V. was Dr. Sabato's substitute for the lecture trip - beginning that evening - he had to go to see Dr. Sabato before leaving. This made our visit too short, but provided for an urgent return visit invitation.

The Metallurgy Division consists of a central laboratory containing many individual research labs as well as classrooms and library. In addition, there are three pilot plants for casting and heat-treatment, for mechanical working, and for powder metallurgy.

In the nuclear field, activities range from UO_2 powder and pellets for fuels through uranium processing on to structural research and fuel-element design and fabrication.

The general area of physical metallurgy involves research in plastic deformation, defect structures, dispersion systems, recrystallization, solidification, and welding.

These laboratories have made some very noteworthy contributions in many of these areas, and also fabricated the fuel elements for RA-1, the first reactor to be constructed in Latin America.

In addition, the Metallurgy Division is a center for scientific meetings, graduate research, and metallurgy training courses. It has sponsored international colloquia, calling on many foreign metallurgists, including more than a few from U.S.

In collaboration with the Asociacion de Industriales Metalurgicos de la Republica Argentina, the Metallurgy Division has formed SATI (Servicio de Asistencia Tecnica de la Industria Metalurgica) which is in effect a consulting organization for the benefit of industry and which also conducts industry-sponsored investigations.

8.6 Instituto Nacional de Tecnologia Industrial (INTI)

I had two very interesting meetings with Dr. del Carrill at INTI, and found him to be very much concerned over two major factors affecting the progress of his organization.

As mentioned in my 2nd Trip Report, INTI is sorely in need of dollar-assistance to enhance the facilities, equipment, and personnel of the 19 small satellite laboratories which it has established to serve "small business". The demands far exceed the capabilities of these labs.

Dr. del Carrill has approached our representatives in an effort to gain assistance, but as yet to no avail.

The second item concerns the exchange of technical personnel wherein it is felt that, in order to send someone to the U.S. for training, the endless "red-tape" and time-delay is most discouraging - to say the least.

In a similar vein, it is most desirous that they have much more technical assistance from scientists and engineers that can come down from NBS and other laboratories, universities, etc. In addition, if support can be gained for the small-labs improvement, Dr. del Carrill would much prefer that this be accomplished by means of good U.S. equipment and instrumentation, and that the whole program and set-up be made with the assistance of NBS or other competent U.S. personnel.

8.7 Instituto del Cemento Portland Argentino

Ing. Balado of the Institute had attended the cement seminar in Rio Janeiro, and is certainly a staunch advocate of standards.

This is quite understandable because he and the Institute are in the forefront in the development and use of cement and concrete products. In fact, a large portion of Ing. Balado's time is spent in connection with the laboratory work going on at their La Plata facilities.

As a metallurgist, and active in standards work, I received a bit of gentle ribbing on the score that, by specification, they use steel reinforcing bars at 50,000 psi stress-allowable whereas we only permit 30,000 psi.

In this same area, he called my attention to some tests that they were conducting on an improved design of deformed re-bars. These bars have deformation patterns which are quite unlike the "regular" patterns that run along the bar surface to provide greater holding-power in that the pattern consists of a double-spiral - the two spiral patterns being of different "pitch".

The design concept here is that if either tension or rotation is applied to an unbedded bar, then the double-spiral surface will "jam" and resist the force. This is not the case with conventional designs now in general use.

The Institute has a 12,000 volume library on cement, and a most comprehensive card index reference file on everything pertaining to cement.

8.8 U.S. AID Mission

Dr. Brown and I had a very interesting visit with Mr. Lowenthal, and it became abundantly clear that the principal efforts of our present assistance program was in the field of agriculture rather than in industry.

As I had already learned from other sources, our earlier assistance efforts in Argentina had been largely in the industrial area, and that agriculture now needed the help. On the other hand, I was most interested to note and comment on those agricultural needs which included "more tractors and less horses", more trucks, more grain storage facilities, more roads, etc.

8.9 CPANT Field Director

Ing. Yermoli had been in La Paz, Bolivia on business for his firm, and returned in the early hours of Friday, thus my late P.M. visit to him was the last on my Buenos Aires schedule.

I was very much interested to learn of his contacts at the cement and textiles seminars, and had mentioned to him our U.S. concern over late notices, changed meeting dates, and changed programs.

It was when I inquired about seeing him at the forthcoming steel seminar that he unknowingly dropped the bomb - the meeting was in November - not October!

Hadn't we received notices of the change?

So now what to do?

9. Change of Itinerary

It was already Friday evening when I received this shocking news from Ing. Yermoli - and it certainly raised more than a few questions in my mind; the most important being my own trip schedule, and what could I do about it at this late hour and when I had to leave for Asuncion in the morning.

The most sensible course of action would be to invert my schedule out of La Paz, carry out the Lima-thru-Caracas visits; then return to Santiago for the seminar. This would, however, entail the cost of a Caracas-Santiago round-trip, and I was unsure that funds were available, thus I would need Dr. Mc Pherson's assurance on this score.

Not knowing his home address, I decided to cable Mrs. Wyman and have her contact Dr. Mc Pherson with my suggested changes, and for him to notify me at Asuncion.

Also, wanting to be absolutely sure that this message did go through, I phoned the Embassy, found that the communications office was operating, and that they would see to it that the message was delivered.

It was - at 3:00 A.M.!

Arriving in Asuncion, I went to the airline office and spent the rest of the day in putting together a new itinerary out of La Paz and having it checked by airline personnel in readiness for the change.

10. Asuncion, Paraguay, September 28-October 2, 1963

Mr. Benjamin R. Moser	Commercial Attache
Mr. Michael P. Boerner	Economic Officer
Mr. Henry Ceuppens	Commercial Assistant
Mr. John Hudson	U.S. AID
Dr. Antonio Moreno	Minister of Industry and Commerce
Dr. Gulio Sanobria	Sub-Secretary, Minister of Industry and Commerce
Sr. Francis Silvart	Resident Representative of U.N.
Ing. Alfonso Munoz Cabrera	Experto Industrial de la Mision DOAT (UN Junta de Asistencia Tecnica)
Dr. Hilario Amorilla Fretes	President, Centro Paraguayo de Ingenieros
Ing. Zoilo Rodas Ortiz	President, Comite Paraguayo de Normas Tecnicas, Centro Paraguayo de Ingenieros

10.1 U.S. Embassy

I thought that my 0830 arrival at the Embassy would be early, but to my consternation I found that they begin the day at 0730. Also, it is not unusual to encounter 0630 business appointments in Paraguay.

My first job was to acquaint Messrs. Boerner and Moser with my trip predicament, and to insure that any messages from Dr. Mc Pherson reached me promptly.

Because of its pertinence to my projected efforts in Asuncion, and most particularly because these were associated with requests we had received from Ingrs. Munoz Cabrera and Rodas Ortiz, I spent some time, with Mr. Ceuppens as a most able translator, in studying the new Law 862 which created the technical Institute which would be concerned with research, standards, etc.

This organization is to be completely autonomous, and is to be governed by a directorate consisting of the Director of the Institute together with four other members; these being selected from

1. The National University
2. Government (Min. of Ind. & Comm.)
3. FEPRINC - Business Promotion Organization
4. Development Bank

I noted that whereas the law did not specifically mention weights and measures establishment, there are objective statements which are broad enough to encompass such activities.

With these items in mind, I was ready to go visiting.

10.2 U.S. AID

My first call was to the AID Mission where I met Mr. John Hudson who was in charge; Mr. Wiley being in the U.S. on budgetary matters, and Mr. Kennedy being on sick leave.

Quite some time was spent in briefing Mr. Hudson on our objectives, as well as on the requests we had received for assistance in standards and the institute program.

Mr. Hudson assured me that Paraguay does need standards for quality, and also testing facilities for determining quality in evaluating its products for the market; free market, ALALC (LAFTA), that is. Here is an area wherein this new institute can be of great service to the country.

This Institute Law, and program, is a joint venture between the Ministry of Industry and Commerce (under the guidance of the Sub-Secretary)

and the technical assistance group of the U.N.; thus these visits were next in order, and were set up for the next morning at the Ministry and the U.N. respectively.

By phoning the Embassy I was assured that there was still no word concerning my trip change. Nonetheless, I journeyed to the Pan-American office where they agreed with me that it was safer to cancel than to get - so I gave them the go-ahead on my revised itinerary.

10.3 Ministry of Industry and Commerce

Mr. Hudson and I had appointments at the Ministry at 0815 and at the U.N. for 1000. However, shortly after meeting and being warmly greeted by the Sub-Secretary, Dr. Gulio Sanobria, Ing. Munoz Cabrera of the U.N. arrived.

These gentlemen have been the principals in this project which gave rise to the new law. It is a 50/50 venture on the part of the Paraguayan government and the U.N. The project is planned for a period of five years, at the end of which time the Institute should be on its own feet.

In essence, this project has all of the earmarks of the Institute program that was so successful in Ceylon, and I agreed to have a copy of a recent report on this sent down from my office.

The present program calls for the appointment of the Director by February, 1964 and the selection of the four members of the governing Council (Consejo) shortly thereafter. Following this, the several divisions or activity areas will be set up and directors appointed over 6-12 month intervals.

Although several divisions are already programmed, this is not inflexible, and personnel availability and/or technical or economic pressures may alter the order of expansion.

The money for this project is currently being deposited in Paraguayan banks.

All through this discussion it was evident that the emphasis was on new developments, testing, standards, and product quality. These people will need much technical assistance in setting up and equipping the Institute, and want <u>our</u> help. Because this is a U.N.-backed enterprise, requests for this assistance will come from Paraguay via the technical assistance office in U.N., New York.

At the conclusion of our long and fruitful discussion we were ushered in to meet the Minister, Dr. Antonio Moreno, who expressed his deep interest in the Institute program and in standards, and expressed his gratitude for our assistance.

Following this meeting, I went with Ing. Munoz Cabrera to his office, and then to that of Sr. Silvart, who expressed his sincere thanks for our assistance.

10.4 Centro Paraguayo de Ingenieros

I was disappointed in our attempts to meet with Ing. Rodas Ortiz and continue our discussions begun on my last trip - but he was out of town. However, Dr. Amorilla Fretes had agreed to meet with me at the Embassy. On this occasion, it was a pleasure to find that Ing. Rodas Ortiz had rushed back to Asuncion so as to join in our discussions.

In these we were faced with the language problem - which was easily resolved by the excellent services of Mr. Ceuppens of the Embassy staff acting as interpreter.

In brief, the Engineering Institute has been active for a long time, through the Standards Committee of which Ing. Rodas Ortiz is Chairman, in endeavoring to attain established standards and standards activity in Paraguay. Thus, at first glance, it might seem that the new Institute project might take over all of their efforts in this area.

It is certain that the new Institute will have the authority in this area - but activity is still in the planning stage. As a consequence of recognizing this situation, it would seem to be most reasonable that the Engineering Institute and its Standards Committee volunteer their services as the standards division of the Institute. By such a combined effort, the present Standards Committee would gain the sponsorship and authority which they now lack, and the Institute could be in the standards business <u>now</u> instead of several years hence.

Dr. Amorilla Fretes is on the technical faculty of the University, which could lead to an even closer tie between the Institute, University, and Engineers organization.

10.5 U.S. Embassy

By Tuesday morning, having not heard from Washington concerning the change in itinerary, I was beginning to wonder if my message had gotten through. So I determined on a second effort; Mr. Moser and I concocting a message to go on a priority basis.

With this done, and with the necessary approvals obtained and the message sent to communications - word arrived from Washington approving my suggested change of itinerary.

This, of course, not only involved my own transportation, but also all of my earlier trip notices and especially the lectures I was to give in Lima. Thus to change all of these it was essential that notices be sent out at once.

This was a big, and a rush job, and was admirably performed by Mr. Moser and his assistants.

On checking the airline, I found that they had been working on my proposed schedule and had obtained confirmations on all but one short leg of the trip - and had changed all the hotel reservations.

II. La Paz, Bolivia, October 2-8, 1963

Mr. Robert P. Coe	Commercial Officer
Mr. Alexander Firfer	Director, AID Mission
Mr. Nathaniel Rafler	Chief, Ind. Dev., AID Mission
Mr. Potter	Assistant Chief, Supply, AID Mission
Mr. L. S. Hedgepeth	Eng. Advisor, AID Mission
Dr. Miguel Tejada Velasco	President, Instituto Tecnologico Boliviano

11.1 U.S. Embassy

At the Embassy I met Mr. Coe, who was substituting for Mr. Gibson while the latter was on leave.

After explaining the purpose of my visit and the standards efforts in Latin America, we went over my visiting list which was headed by Dr. Tejada Velasco from whom we had not only received requests for assistance, but had also visited us at NBS not long before my departure on this trip. Also, my scheduled visit with Dr. Tejada V. on my last trip, several months ago, was frustrated by transportation difficulties, thus cancelling out some meetings that had been planned for that time.

11.2 U.S. AID

While Mr. Coe was arranging other appointments for me, I proceeded to do a bit of fact-finding by visiting Mr. Firfer, who advised me concerning the objectives of the AID Mission in Bolivia.

Because of my standards activities, he wanted me to be sure to meet with several members of the staff, whereupon I subsequently visited Messrs. Rafler, Potter, and Hedgepeth to discuss standards and Latin American standards activities as well as the anticipated invitation of standards efforts in Bolivia.

Of a certainty, the consensus strongly emphasized the need for standards in Bolivia.

11.3 Instituto Tecnologico Boliviano (ITB)

This Institute is a technical university which had its inception with several of the technical and engineering faculty of the centuries-old university here in La Paz in collaboration with a number of Bolivian engineers. The basic idea was to provide an education facility which was directed toward educating people in those areas most needed for the betterment of Bolivian productivity and economy. The U.N. approved of the idea, and the Institute came into being as a joint Bolivian-U.N. project of 5-years duration, at the end of which the Institute should be self-supporting.

The Institute is beginning to move into its partially completed 8-story building on the main street of downtown La Paz. It has about 2000 students, and is the headquarters for the 15 young people assigned here on the Peace Corps.

One of the concepts of the Institute is that its laboratories should be capable of providing much-needed testing facilities for the country. Thus it is hoped that these services, plus tuition fees, will support the Institute.

It is in this "testing facilities" area that one can associate a standards activity, because specifications mean but little unless supported by the capabilities of compliance testing.

The metallurgy activities of ITB are being built up, but, as might be expected, early emphasis is needed on mining and extractive metallurgy; physical metallurgy will then follow.

There is a dire need for electrical engineers in Bolivia, and present plans call for the establishment of the electrical engineering courses two years hence.

After the AID visits I proceeded to ITB for another lengthy meeting with Dr. Tejada V. whereupon I learned that he wanted to gather together a selected group to which I could lecture on all phases of standards.

I agreed - and we set up 1500 Friday for the first session.

This arrangement had me on the spot because the very lecture material that I now needed was that which I had prepared for the forthcoming Lima lectures - and which I had loaned to Ing. Molfino in Montevideo. So, Thursday night was a short one, and Friday morning a busy one as I prepared a full set of lecture notes.

We began the lectures in one of the ITB classrooms at 1500 Friday, the invitees being:

Rene Aguirre Cuadros	Saenz, Ltd.	4495
Lorenzo Riveros Flor	Camara Nat'l de Commercio (National Chamber of Commerce)	4340
Jose Zamora Z.	YPFB (Government Petroleum Corp)	8666
Jose Ramirez	Camara de Industrias (Chamber of Ind.)	8671
Jorge Jung	Corp. Bol. de Fomento (Bolivian Development Corporation)	6878
Jose Luis Daza M.	Ministry of Econ.	4916
Carlos Zapata	Ministry of Econ.	4916
Cosme Kirigin	Camara Nat'l. de Mineria (National Chamber of Mining)	10623
Fausto Rolando Davalos	Dept. de Acquis y Abastecimiento (Purchasing and Supply) Min. of Econ.	5645
Andres J. Simon	Camara Nat'l. de Ind.	5021
Raul A. Teran	Camara Nat'l. de Mineria	2927
Rene Ballivian	Mgr. Int. Bank B/D Camara Nat'l. de Industrias Industrial & Development	

This session lasted until 1830, and the group was eager to begin again at 0900 Saturday. Actually, my day began with Dr. Tejada V. at ITB at 0800 Saturday, because it was obvious at the end of the Friday session that there would need to be some very specific proposals for a wind-up on these lectures. Thus we spent over an hour in outlining a proposed standards set-up; then I lectured from 0930 until 1230.

I spent Monday morning in some more fact-finding in connection with the developments here; then, after lunch Dr. Tejada V. and I put in quite

some time on a proposed standards program and organization.

Following this I had another lecture session of 3-1/2 hours - much of which was devoted to answering questions as to "what", "how", and "how soon" for the program.

At the conclusion of this session, Sr. Simon asked if I would be willing to talk to the Board of Directors of the Camara Nacional de Industrias - the top business organization in Bolivia. I agreed, so we went immediately to the Camara headquarters and where I certainly received a red-carpet reception and discussed standards for well over an hour with the assistance of Dr. Tejada V. as interpreter.

This presentation was, quite obviously, very well received - and I was pleased at having the opportunity of talking before this group of outstanding executives.

During the subsequent dinner with Dr. Tejada V., I was particularly interested in his comments concerning the great success of these meetings and that he most certainly wanted me to be in La Paz during the "building up" of this program - because if I were prominent in this effort there would be the full assurance that this standards operation would be completely democratic because I represented and acted from a completely impartial viewpoint. He considers this to be quite essential to the success of this program.

12. Lima, Peru, October 8-12, 1963

Mr. Frank A. Mau	Commercial Attache
Mr. Richard Kaynor	Asst. Ind. Officer, AID
Mr. George Lindahl	Industry Officer, AID
Dr. Paul C. Clifford	Consultant on Quality Control, AID
Ing. Schenone	Mgr. Instituto Peruano de Administracion de Empresas (IPAE) (Peruvian Inst. of Business Management)
Dr. Alberto Bedon C.	Asst. to Mgr., IPAE
Dr. Mario Fonseca	Vice-President, IPAE
Sr. Edgar Herrera Bustamante	Director Seminars, IPAE
Prof. Juan V. Cabrerizo	Director, Instituto Nacional de Normas Tecnicas Industriales y Certification (INANTIC)
Sra. Ing. Susana de Carrillo	Chemist, INANTIC
Sra. Ing. Beatriz Sotelo W.	Staff, INANTIC
Dr. H. J. Adriani	Controller General, University Agraria, La Molina
Dr. Enrique Monge Gordillo	President, Junta Energia Atomica Dean, Dept. Mining and Metallurgy, National University
Sr. Hans Otto Seeger	Metalurgica Peruana S.A. (MEPSA)
Mr. Frank G. Koval	National Castings Co. and MEPSA
Miss Joan Blandford	National Bureau of Standards, Textiles

12.1 U.S. Embassy

My arrival in Lima on my new schedule necessitated a complete revision of the plans for my lectures in Lima. This change was too recent to permit adequate meeting notifications, so we would either have to forgo the lectures or I would stop in Lima after the seminar. To further complicate this situation, I still had conflicting reports on the closing date of the seminar and had written Ing. Aguirre Tupper of ILAFA to obtain the correct information.

At the Embassy with Mr. Mau, we reviewed my lecture, "Standards Help Business", as well as the Spanish translation which the Embassy had prepared. Then, with these in order, Mr. Mau sent the manuscripts to have the duplicating stencils prepared; it being the intent to give each attendee a copy of the Spanish version and also distribute other copies rather widely.

We agreed that the lectures should be postponed until after the seminar, when I would stop over in Lima for this purpose on my way home. However, we still could not set the dates until I heard from Ing. Aguirre T., with letter copy to Mr. Mau for his early information.

12.2 AID Mission

My second stop was at the AID mission in their new offices near the Embassy where I reviewed with Mr. Kaynor the discussions I had just had with Mr. Mau. We were in full agreement as to my stop-over to address the Society of National Industries.

I learned that on that same evening there would be a meeting of the highly important Peruvian Management Institute at which Dr. Clifford would lecture on Quality Control. I was invited to attend as Mr. Kaynor's guest.

The close relationship between standards and quality control is obvious, and Mr. Kaynor wanted to have us discuss this with Ing. Schenone. However, we were unable to reach him until after our arrival at the IPAE meeting.

12.3 Instituto Peruano de Administracion de Empresas Meeting

This meeting was held in a ballroom of the Crillon Hotel, and upon my arrival Mr. Kaynor introduced me to Dr. Clifford and to Ing. Schenone.

Our ensuing conversation on standards and quality control soon resulted in Ing. Schenone inviting me to address IPAE on Standards. I agreed to do so on my return, and left it to be arranged with Messrs. Kaynor and Mau.

Ing. Schenone requested that he be given some "leader" write-ups for advance publicity in the Institute's publications, and Mr. Kaynor agreed to furnish these.

Dr. Clifford gave a most interesting and instructive presentation, and from this and from the many questions which were subsequently asked I picked up several points which I could use to enhance my own standards lecture.

12.4 Instituto Nacional de Normas Tecnicas Industriales y Certification (INANTIC)

The primary reason for my lecture on standards was in order to familiarize business executives with the significance of standards in an effort to gain adequate industry support for INANTIC. See Second Trip Report, NBS 8072.

With the original plan now extended to include IPAE, I had much to discuss with Professor Cabrerizo and Sra. Ing. Carrillo on my arrival at INANTIC. The Professor had attended the IPAE meeting, and I had advised him of my invitation to speak to the group - so we settled down to a bit of planning for the event.

In addition to this, we also had a lengthy discussion of the possible collaboration of INANTIC with the CENIP program.

INANTIC was extremely busy with the aftermath of the five-week textile seminar which Miss Joan Blandford of NBS had attended. Concerning this meeting, they considered it to have been highly successful, with much accomplished by way of new textiles standards.

At the end of the day (evening, to us) I was invited to sit in on a first-run viewing of many color slides and movies made at various times during the recent textiles seminar.

12.5 National University

In order to catch up on a number of metallurgical activities, I visited Professor Monge - not at the University where he had recently been elected Dean, but rather at his new office where he is now installed as the President of the Atomic Energy Committee of Peru - in addition to his many other duties.

At the University there is much need for support in order to provide for the necessary facilities and equipment. Professor Monge has been actively exploring potential sources as it is quite important that laboratory and testing facilities be available at the University in order to assist Peruvian industry.

Both the Iron and Steel Institute and the Foundrymen's group are progressing slowly but satisfactorily, and Professor Monge hopes to accelerate the pace as soon as he has settled down in his new jobs.

12.6 Metallurgico Peruana S.A. (MEPSA)

I had known since my first trip a year ago (See First Trip Report, NBS 7793) that a new castings venture was being considered for Peru - and this is now coming into being.

I contacted Sr. Seeger by phone, and he was most anxious to show me what was going on, so off to the new million-and-a-half dollar steel castings plant being erected on the outskirts of Lima.

Here I met Mr. Koval who is in charge of this entire operation, looked over the plans, and toured the semi-finished buildings - these hopefully to be completed and in operation by the end of this year.

This plant was designed and is being built under the supervision of our National Castings Company and will be operated by them. They have financed about 2/3 of the cost.

Melting facilities consist of two large Lectromelt furnaces and a medium sized cupola; the mold-making is nearly completely automatic; the sand system de-gating and heat-treatment are fully mechanized; the principal product being heat-treated cast-steel grinding balls for the mining industry.

A smaller portion of the plant will be devoted to the production of "general" steel castings, again mostly for the mining industry.

Excellent chemical and metallurgical control laboratories are in the administration building.

For production, this plant will be assured of its "bread-and-butter" because it will take over all of the Latin American grinding-ball business now being supplied by the Phoenix, Arizona plant of National.

13. Lima, Peru, November 23-26, 1963

Although chronologically and trip-wise this section of the report is out-of-order, its locale and subject matter warrant inclusion at this point in the report.

This is actually my third visit to Lima on this trip; the second having been but a brief overnight stop enroute from Caracas to Santiago. This visit was specifically for the purpose of lecturing.

Ing. Aguirre T.'s letter to me at Bogota, with copy to Mr. Mau, and subsequent confirmation between Mr. Mau and myself had permitted the dates of November 25-26 to be established for this return to Lima.

On this historic week-end of President Kennedy's assassination.

13.1 U.S. Embassy

As I was about to leave for the Embassy on Monday morning, Mr. Mau phoned me, saying that they would be closed all day, and that I was invited to attend the Diplomatic Corps Requiem Mass for President Kennedy to be held at the Temple Santa Marie Reine in Miraflores.

The lecture was firmed-up for a several-society affair for Tuesday evening - so not to worry.

I attended these services; Ambassador Jones and Peruvian President Belaunde T. and their aides at the altar front and a U.S. Marine Honor Guard at the "casket".

This was indeed impressive - and there wasn't even standing room left inside the temple.

After returning from the services, Dr. Bedon of IPAE called on me and gave me the run-down on the plans for Tuesday night.

This was to be a jointly sponsored affair - by IPAE and the Soc. Nat'l. Industries - and also INANTIC, CENIP, Nat'l. Engineering University and Impact 2 (Peruvian management group that had trained at University of Indiana). These groups were invited to send representatives to this meeting, and a number of industry representatives were also invited.

Dr. Bedon would call at the hotel the next evening to escort me to the prominent Club de la Banca where the meeting was to be held.

The program was to consist of a short "coffee talk" by Professor Cabrerizo, a coffee-break, my presentation and discussion, then refreshments.

Following Dr. Bedon's visit, I went to INANTIC to discuss this program with Professor Cabrerizo; most particularly the subject matter which we would emphasize inasmuch as the entire effort was for the purpose of enhancing industry support of the standards program. Professor Cabrerizo was to outline those areas of standardization in which standards were sorely needed in Peru, and I would direct my presentation toward industry support of standards and the benefits derived from such support and participation.

13.2 Standards Lectures

In Latin America one finds that many customs differ from ours, and the timing of meetings such as this is an example. For example, these meetings are held "after work"; are of short duration; wind up with refreshments; then permit one to go home and get ready for 9:30-10:00 P.M. dinner.

Instead of 1800, Srs. Fernandez Garcia and Herrera Bustamante called for me at 1700, and we proceeded to the Club and I was introduced to the officers. After brief arrangements concerning the program, I next found that we were the receiving line to greet the incoming guests.

Professor Cabrerizo discussed the operations of INANTIC, with frequent references to the government statutes under which INANTIC operates within the Ministry of Promotion and Public Works.

Because of the availability of Spanish translations of my rather lengthy lecture, it was preferable that I bring out the highlights in a much shorter extemporanious presentation in order to allow more time for discussion.

So went the program, and a number of very significant questions were raised by members of the audience. Afterwards I felt very well satisfied, as did Mr. Mau, with the attentiveness and sincerity of the audience. For example, Dr. Adriani was insistent that I lecture on standards to his people at the University - even if I had to return in order to do so.

At the conclusion of the occasion I returned to the hotel, checked out, and was off to the airport for the last leg of this trip - to home!

14. Guayaquil, Ecuador, October 12-16, 1963

Mr. Roger S. Lowen	Commercial Officer
Mr. Daniel H. Clare	Commercial Officer
Mr. James McGuiness	Mgr., La Cemento Nacional
Ing. Martin Ycaza Perez	President and Chief Engineer, Compania Tecnica de Construcciones
Ing. Eudoro Cevallos de la Jara	Compania Tecnica de Construcciones
Ing. Claudio Luque	President, Sociedad de Eng. and Arch.
Sr. Ernesto Louvin C.	President, Camara de Industrias, Ex-Minister of Economy, and ALALC delegate

14.1 U.S. Consulate

Arriving at the Consulate I renewed acquaintance with Mr. Lowen, and met Mr. Clare. Then, after a run-down on my objectives and the general standards situation, we proceeded with firming up appointments. In fact, I was soon away on the first of two visits with Ingrs. Ycaza Perez and Cevallos de la Jara.

The outcome of this meeting was that these gentlemen would arrange a meeting for the next day to include Ing. Luque and Sr. Louvin C.

At this second session, also attended by Messrs. Lowen and Clare, we really made some headway. Ing. de la Jara was quite articulate on the need for standards in Ecuador and cited the many needs in the construction industry. I emphasized the economic aspects, international phases, and the ALALC (LAFTA - Free Market) attitude toward standards.

As the result of the ensuing discussions, Sr. Louvin C. enthusiastically agreed to shortly call a meeting of industrial representatives, together with engineering interests via Ing. Luque, for the purpose of initiating standards activities as soon as possible.

It was particularly encouraging that Sr. Louvin C. so readily grasped the significance of the standards program both to the country and internationally and that he so willingly offered his services. This is important because he is nationally recognized.

I advised these gentlemen that there would probably be further developments during my Quito visit, and that I would advise them in detail concerning these so that the two efforts could be coordinated.

When visiting Mr. McGuiness at La Cemento Nacional, I was able to tell him of the local activities. I also advised him concerning the cement seminars, and found that he would like to send a company representative. As a consequence, I wrote for a confirmation of seminar dates to be sent to Mr. McGuiness.

15. Quito, Ecuador, October 16-21, 1963

Mr. William B. Miller	Commercial Attache
Miss Audelia V. High	Commercial Officer
Mrs. Helen P. Wulf	Economic Assistant
Ing. Galo H. Montano	Exec. Director, Centro de Desarollo (CENDES)
Ing. Humberto Esteve	Funcionario Asesor, CENDES
Dr. Alberto Queredo	Sub-Secretary, Ministry of Commerce and Banking

15.1 U.S. Embassy

My immediate program had already been firmed up by Mr. Miller and Miss High, as I found on my arrival at the Embassy.

I advised them concerning my progress in Guayaquil, and in turn I was told of the progress of the "Institute" program in Ecuador.

15.2 Centro de Desarollo (CENDES)

Prior to departing on this trip I had been in correspondence with Ing. Montano, and had reviewed the Institute proposal for him. Thus it was natural that my first visit should be with him at the CENDES headquarters.

To save referencing, I might add here that this Development Center is AID-backed.

From Ing. Montano I learned that the new law would cover the formation of the Institute and also the standards programs.

He felt that my visit was most timely, and he wanted to get two things moving right away: First, an appointment for me with Dr. Queredo so that I could learn "first-hand" what was going on with respect to the Institute and standards. Second, that Ing. Montano wanted to call a meeting of Engineering, Business, University, Government, and CENDES representatives for the next day so that I could lecture to them on standards and organization for standards work.

15.3 Ministry of Commerce and Banking

In but a few minutes I was meeting with Dr. Queredo - and this was a most interesting and instructive event.

It was expected that the law creating the Institute would be passed the first of the following week. Also, the law was written in a broad manner so that details could be subsequently developed to best advantage. Also, the handling of all of these features will be under CENDES - for only through this strong central organization could it become effective. The main reason for this was the frank recognition of the fact that Ecuador was surprisingly lacking in strong, national organizations in engineering, chambers of commerce, industry, etc. Thus, while devoid of national activities, many local organizations were strong and effective; so only through the efforts of an organization like CENDES could these many small efforts be unified.

With reference to the desirability and preference for an "independent" standards body, Dr. Queredo advised me that this, too, had been studied. The outcome was that CENDES could pull the technical and industrial interests together into a national standards group - and if this group functioned well over a 2-3 year period, it would then be set up as an independent standards body.

I told Dr. Queredo of Ing. Montano's plan for a standards meeting next day, and he was heartily in favor of this.

I also learned that a complete Weights and Measures program for Ecuador will be a part of this effort.

15.4 Centro de Desarollo (CENDES)

On returning to see Ing. Montano, much fortified with the information and assurances from Dr. Queredo, I found that the meeting had been set up and invitations extended.

Ing. Montano was most specific in wanting to know if CENDES could depend upon us for assistance in these programs. To answer this, I explained Dr. Astin's favorable attitude in this matter, and also that he had two avenues of approval to assistance - by direct request to NBS for technical assistance or via AID for more extensive help.

I also discussed with Ing. Montano the proposed "regional research" program on which Dr. Phillips of IIT, Bogota, was now touring Latin America. During this I learned that Dr. Phillips was to have been in Quito that day - but had run afoul of transportation trouble, was now in Lima, and would visit Quito next week.

15.5 Standards Meeting

This meeting was held in the conference room at CENDES headquarters, and it proved to be a rough one - for me, that is. This was due to the fact that in a 3-1/2 hour session I had to crowd in all the information of the 10-1/2 hour series of lectures in La Paz. Then too, these men were sharp, alert, curious, and anxious.

Before leaving Guayaquil, I had agreed to advise them concerning the outcome of my visits in Quito. Thus, in order to accomplish this, I wrote a brief resume of both meetings for Mr. Miller to type, duplicate, and have copies sent to Ing. Montano for distribution in Quito, etc., and copies to Messrs. Lowen and Clare for Guayaquil distribution.

As I stated to Mr. Miller and Miss High just before leaving for Bogota, I believe that we have made some real progress in initiating standards work in Ecuador and we want to do everything possible to "keep the show on the road".

RESUME OF MEETINGS IN ECUADOR ON STANDARDS

October 12 - 21, 1963
L. L. Wyman

The significant attainments during these visits occurred during three meetings; one at Guayaquil on Tuesday, October 15 at the office of Compania Constructores Tecnicas; the second was that with Dr. Alberto Quevedo Toro, Sub-Secretary of the Ministry, during which I became acquainted with current government activities which had appreciable bearing on standards; the third at CENDES Headquarters in Quito on Friday, October 18.

At the Guayaquil meeting, those attending were:

Ing. Ycaza Perez, Compania Constructores Tecnica,
Past President Sociedad de Ingenieros

Ing. Cevallos de la Jara, Compania Constructores Technica,
Past President Sociedad de Ingenieros

Ing. Claudio Luque, Chief Engineer Comité de Vialidad and
President Sociedad de Ingenieros

Sr. Ernesto Jouvin, President Camara de Industrias

Mr. Roger Lowen, U. S. Consulate

Mr. Daniel Clare, U. S. Consulate

Mr. L. L. Wyman, National Bureau of Standards

After discussing the role of standards in the technology and economy of the country it was fully agreed that prompt action was needed in order that Ecuador should have an adequate National Standard Body for its national needs as well as for participation in Latin American Standards via the Comision Pan-Americana de Normas Tecnicas.

To implement this effort, Sr. Jouvin agreed to gather together a "steering committee" representing the technical and business interests in order to initiate this effort as soon as possible.

Mr. Wyman also agreed to report back to the Guayaquil group the results of his visits in Quito in order that the activities could be coordinated.

It was unfortunate that Ing. Santos, Empresa Electrica, with whom I had most hearty cooperation on my previous visits was in Europe, thus not present.

The meeting in Quito, called by Ing. Galo H. Montano, Executive Director of CENDES, was attended by:

Ing. Gustavo Jaramillo L., Camara de la Construccion

Ing. Pable Grab, Laborat. Life

Dr. Luis A. Romo, Laborat. Life

Dr. Alberto DiCapua, Laborat. Life and Ch. Camara Indust.

Ing. Jose A. Sosa V., Soc. of Eng. & Architects of Pichincha

Ing. Luis Homero de la Torre, Soc. of Eng. & Architects of Quito and Universidad Central

Ing. Raul Penaherrera, CENDES

Ing. Arturo Mora Velez, Sociedad de Ing. Politechnicas

Ing. Raul E. Estrada, Sociedad de Ing. Politechnicas

Ing. Vicente L. Pinto, CENDES

Ing. Humberto Esteve, CENDES

Ing. Galo H. Montano, Exec. Director CENDES

Mr. L. L. Wyman, National Bureau of Standards

This meeting lasted for 3-1/2 hours, during which practically all aspects of standards were discussed. I would evaluate this session as follows:

1. It appeared that the group was unanimously in favor of immediate action in all phases of standards, i.e. measurements standards (weights and measures) and standard practices (material stds., test methods, and codes).

2. Having been asked my opinion, I ventured that the present group could very well act as a "steering committee" to set up the entire program.

3. In reply to the question as to the support of such programs, I cited the Ceylon example - but that this should be industry support - if enough industry!

4. Again in answer to inquiry, I volunteered that the initiation of and growth of this effort "under the wing" of CENDES would be most advantageous.

Within my limited ability to understand these "rapid fire" Spanish discussions, I gathered the impression that to Ing. Montano and CENDES this was acceptable.

5. On inquiry, I explained the position of N.B.S. in the area of "technical assistance" as set forth by Dr. Astin, Director of N.B.S.

6. I agreed to a brief stop-over in Quito on my return to U.S. after the Santiago meetings, if at all possible.

7. I mentioned that the Council of COPANT would be meeting in Santiago November 18 - 20, and that I would be most happy to be able to report to that body that Ecuador was "in the standards business" and would shortly apply for COPANT membership.

In response, I saw nods of agreement all around the conference table.

16. Bogota, Colombia, October 21-25, 1963

Mr. George A. Ellsworth	Commercial Attache
Sr. Enrico Rosales	Commercial Officer
Mr. Samuel D. Eaton	Acting Director, AID Mission
Mr. Milton Drexler	Hsg. Ad., AID Mission
Mr. Theodore G. Markow	Ind. Ad., AID
Dr. Anibel Vallejos Alvarez	Minister de Fomento (Industry)
Sr. Carlos Jiminez Gomez	Gen. Secy., Ministro de Fomento
Dr. Luis Pinto B.	Jefe, Rama Tecnica, Min. de Fomento, Pres., Consejo Nacional de Normas
Dr. Victorino Zuccardi	Jefe, Sec. de Normas y Calidades, Min. de Fomento, Secy., Consejo
Ing. Fernando Ospina H.	Pres., Asociacion Colombiana de Ingenieros Electricistas y Mechanicos, Board of Directors - ICONTEC
Dr. Alberto Combariza	President, Instituto Colombiano de Normas Tecnicas (ICONTEC)
Dr. Javier Henao L.	Exec. Dir., ICONTEC
Dr. Norton Young	Acting Dir., Instituto de Investigaciones Tecnologicas (IIT)

16.1 U.S. Embassy

At the Embassy, Mr. Ellsworth had a letter for me from Ing. Aguirre T. (ILAFA) that definitely established the seminar dates in Santiago, so at long last I could advise Mr. Mau in Lima that he could set the Lima lectures for November 25 and 26 - and I might be home for turkey dinner on Thanksgiving!

Mr. Drexler was with Mr. Ellsworth when I arrived, thus I first met him, and found him to be most interested in the standards program because it would be a significant influence in his housing programs.

I later phoned Mr. Markow, then visited him at AID headquarters. He is still most anxious that there be a strong standards activity in Colombia.

It took quite some time to locate Ing. Ospina - and quite timely, too, for he immediately arranged that I be invited to attend a meeting of the Board of Directors of ICONTEC that would be convening within the hour.

Later in my stay I had the opportunity of visiting Mr. Eaton, through Mr. Ellsworth's courtesy. I found Mr. Eaton to be very much in favor of our standards objectives, and he volunteered the complete cooperation of his group; adding that Messrs. Drexler and Markow would give their complete cooperation.

Mr. Ellsworth was hosting an official dinner which would include a number of the Ministry personnel, and he invited me to be present. Much as I would have enjoyed being present, I had to forgo this because of my second meeting with the ICONTEC Board.

16.2 First Instituto Colombiano de Normas Tecnicas Visit

Well, ICONTEC is truly in business. It is duly incorporated under Colombian laws, has its own headquarters on the "main stem" but a few blocks from the Embassy, and also has a very dynamic Executive Director.

ICONTEC has recently received added approval from the Instituto de Credito de Territoreana (ICT) a housing project which is backed 50/50 by the Colombian Government and by the U.S. AID Housing Project. The other approval came from the Association of Universities.

There is still no decision from the Ministry concerning the transfer of standards work from the Consejo to ICONTEC. There have been several meetings with Ministry personnel, and a decree has been drafted to implement this change.

Much of this hours-long meeting was devoted to detailed discussion of the proposed and the desired wording of the decree - and it became evident to me that this group was certainly doing things the hard way.

It would be much simpler, and easier, merely to request that the Minister withdraw the prior application to CPANT, in favor of ICONTEC.

So I was "elected" to present this concept to the Ministry.

16.3 Ministry of Industry

In striving for an appointment with the Minister, Sr. Rosales was told that the Minister was still at the ALALC meetings in Montevideo. Later it was learned that he had just arrived back; so we left word as to my objectives - and their relation to ALALC.

Next morning I had just returned to my room after my usual early breakfast when I received a phone call from Dr. Pinto (See First Trip Report, NBS 7793) who had been at the Institute (IIT) at the time of my visit a year ago. He had now replaced Dr. Malabon at the Ministry; and wanted to discuss the Consejo-ICONTEC matter.

I could meet the Minister anytime.

I was in Dr. Pinto's office at the Ministry in less than ten minutes, and Mr. Markow soon joined me. Then Dr. Zuccardi joined us.

For several hours we went over every detail of a "three-body" standards set-up that was completely agreeable, and we were all set to visit the Minister to report the progress and receive his assurance of the speedy issuance of the decree.

While waiting in the Minister's outer office I again met Sr. Jiminez G. with whom I had discussed this problem in my last visit.

Unfortunately for us, the Minister then received word to immediately visit the President. He asked Dr. Pinto to present to us his excuses, and his assurance of rapid action on the decree.

Following this, I agreed with Dr. Pinto that I would again visit him prior to my departure in order that he might be fully advised as to current progress.

On this return visit I was pleased to be able to show Dr. Pinto the organizational set up for six technical committees, with 28 appropriate sub-committees. Acceptances of over 75% of the officer compliments of these groups had already been obtained; the most of the balance being instances wherein the personnel involved were to be designated by other organizations. These had, in every instance, assured ICONTEC that they would make such appointments just as soon as they could officially act.

16.4 Second Instituto Colombiano de Normas Tecnicas Visit

Because of the highly encouraging discussions on the first visit to the Ministry, and the resultant complete agreement on the set-up and operation of ICONTEC with reference to the Consejo - post decree - I requested an immediate re-convening of the ICONTEC Board of Directors.

After working with them for over six hours, we had arrived at an organizational set-up, suggested personnel to head the several committees and subcommittees, and the decision that they would immediately begin operations by studying existing CPANT specifications and proposals for adoption as Colombian Standards.

To implement this, I had Mr. Ellsworth cable Mr. Troy (Buenos Aires) to obtain these documents and forward them at once. I also wrote to Sra. Ing. Ciaburri concerning this, then I wrote her another letter advising of the expected communications from the Ministry and from ICONTEC.

By the following noon, when I had lunch with Srs. Henao and Ospina, they advised me that the all-night and morning efforts of the group had resulted in 75% acceptances of committee appointments - with not even one refusal!

They would continue the organization work, and have a complete report for me at breakfast next morning - for my final visit at the Ministry.

In order that there would be complete liaison concerning these developments, I agreed to write a brief resume which Mr. Ellsworth would distribute to those concerned. This follows:

RESUME OF BOGOTA VISIT

On arriving in Bogota I learned that since my visit here four (4) months ago, the industry-and-trade association supported independent standards group Instituto Colombiano de Normas Tecnicas (ICONTEC) had been duly incorporated and was awaiting the action of the Ministry of Promotion to recognize ICONTEC as the national standard issuing body and to represent Colombia internationally (COPANT).

This decision rests with the Ministry, and upon visiting Dr. Luis Pinto B. at the Ministry, on Wednesday, October 23, accompanied by Mr. Theo Markow, US AID, we learned that a decree which would accomplish this transition would assuredly be issued this week.

In effect, this decree designates ICONTEC to be the nation's "National Standards Body"; its scope of activities to include all standards practices (materials standards; codes, etc.) as well as measurements standard (weights and measures).

In the Ministry there will be established a five-member committee, consisting of two governmental representatives, two from ICONTEC and one from the University at Bucaramanga.

This committee will function to:

1. Select and adopt for government use those ICONTEC standards and codes which need government administration for adequate enforcement. That is, such items as foods and drugs, building, electrical, plumbing, sanitary, safety, etc. codes. Also, weights and measures.

2. Require government purchasing in accordance with ICONTEC issued standards.

It was also agreed that, in order to clarify the present complex concerning the applications to the Comision Pan-Americana de Normas Tecnicas (COPANT)* the Ministry would immediately transmit an official request to COPANT that its prior application for COPANT membership be withdrawn in favor of the current application of ICONTEC as the official representative of Colombia.

Due to the fact that this communication must go via official channels, it is quite possible that this may not reach the COPANT Secretariat in time for the November meeting of the COPANT Council in Santiago. Thus, in order to prevent any delay of COPANT action, it was agreed that a copy of this official letter would be given Mr. Wyman, for him to use (if necessary) to insure COPANT approval of the ICONTEC application.

Mr. Wyman will also have a copy of the ICONTEC letter of application.

*CPANT

It was also agreed that, with full assurance of the issuance of the decree this week, that Mr. Wyman should immediately cooperate with ICONTEC to insure that this organization was so constituted as to become immediately effective in issuing standards.

Mr. Wyman's suggestion that the adopting by ICONTEC as Colombian Standards those COPANT Standards now in existence would be a most effective starting point for ICONTEC was definitely favored.

Following this most significant development I requested an immediate meeting with the Board of Directors of ICONTEC, and the afternoon and evening were devoted to stream-lining ICONTEC into the "3-body" organization recognized as best for operation, and to establishing Technical Committees on Iron and Steel, Building Construction, Petroleum Products, Foods and Drugs, Textiles, and Test Methods; together with the Subcommittees presently deemed necessary in each committee. Also, the make-up of the standards-approving body and its responsibilities were established.

Most of the committee and subcommittee officers were also designated.

By cable to the Commercial Attache, U.S. Embassy, Buenos Aires, copies of existing COPANT Standards are to be forwarded immediately to Bogota for the use of ICONTEC committees to formulate these into National Standards for Colombia. Also, all COPANT proposed-standards now in process will be furnished.

Meetings of the Iron and Steel, Building Construction, and Textile committees will be convened for business immediately upon the arrival of these COPANT documents.

On re-visiting Dr. Pinto at the Ministry on Friday, October 25, I was pleased to be able to report this progress in ICONTEC, and to learn that the decree would be signed by the Ministry this week, and have the final signature by the President on Monday or Tuesday.

The offical letter to COPANT will be immediately despatched, with a copy to Wyman. Also, Dr. Henao is to keep in touch with Dr. Pinto so that the ICONTEC letter of application to represent Colombia in COPANT will be sent at the same time as the Ministry letter.

It is indeed fortunate to have Dr. Pinto, an engineer, in this important position at the Ministry, and also most significant that he has extended the complete cooperation of the Ministry.

ICONTEC will undoubtedly need some technical assistance in getting their organization, particularly the Technical Committees, into efficient operation.

17. Caracas, Venezuela, October 25-29, 1963

Mr. Eldon J. Cassoday	Commercial Attache
Mr. Charles K. Bevilacqua	Economic Officer
Dr. Carlos Pi Sunyer	Secy., Comission Venezolana de Normas Industriales (COVENIN)
Mr. Robert Eakin	Vice-President, Koppers de Venezuela
Ing. Carlos F. A. Blanco	Assistant to Vice-President, Koppers
Dr. Eduardo Blanco Uribe	Mgr., Sales Promotion Corporacion Venezolana de Guayana
Ing. Miguel A. Contreras C.	Chief, Sales Department Corporacion Venezolana de Guayana Met. Div.
Mr. Charles Urruela	Gen. Mgr., Siderurgica Venezolana, S.A. (SIVENSA)
Dr. Federico Rivero	Director, Instituto Venezolana de Investigaciones Tecnologicas y Industrias (INVESTI)
Dr. Luis Rolando	INVESTI Staff

17.1 U.S. Embassy

My late Friday arrival in Caracas permitted but a brief visit with Mr. Bevilacqua at the Embassy - and a round of phone calls for appointments for me.

On Monday I had a nice visit with Mr. Cassoday who brought me up to date on many of the activities concerning standards. In this, I find Mr. Cassoday's wide personal contacts and close association with industry to be most valuable.

17.2 Corporacion Venezolana de Guayana

On Saturday afternoon Mr. Eakin came to the hotel through a tropical cloud-burst, and we spent several hours in discussion.

He again expressed his appreciation for our help in getting the calibrated thread-dies to him in a hurry.

The Corporacion is slowly getting into production, and they are currently producing 30-35,000 tons of ingots and blooms per month.

In the standards area, one of the Corporacion men from the mill would be going to the Santiago seminar, and he would be the official representative of COVENIN.

Several days later I visited the Corporacion offices, and had a very pleasant chat with Ing. Blanco concerning standards. From him I learned that the Corporacion is now rolling structural shapes up to 14 cm. size, and the hope to be into production on "small pipe" by the end of the year.

One item of business news was the large order for steel just received from Ford Motor Company (U.S.A.). Concerning this, I was told that this would probably result in about 5,000 tons/month steady sale to Ford.

Before leaving, I had the opportunity of renewing acquaintance and brief chats with Dr. Blanco V. and Ing. Contreras C.

17.3 Instituto Venezolana de Investigaciones Tecnologicas y Industrias (INVESTI)

During my visit with Drs. Rivero and Rolando at INVESTI, I learned that the concrete pre-fabricated low-cost housing scheme which they had developed (See First Trip Report) was finally going to get an official try-out in the near future.

Most of INVESTI's other activities are centered on their studies of clays for ceramics application, and that they have but little resources for other activities. For example, COVENIN has the CPANT Secretariat for pre-fab windows, casements, etc., standards - and has requested INVESTI to handle this effort. However, it turns out that neither group has the resources to finance this, and there is a notable lack of industry support of both organizations.

They would need about $10,000 (U.S.) for this effort, and had so advised COVENIN.

17.4 Siderurgica Venezolana, S.A. (SIVENSA)

Mr. Urruela and his SIVENSA personnel have engaged in some standards work with COVENIN. However, inasmuch as this organization does not produce tubing they will not have a representative at the Santiago seminar.

In Venezuela, most of the pre-fab casements are made from aluminum, and while there had been some agreement within that trade group as to sizes of casements and of the extrusions from which they were made - there were no standards activities per se.

Nothing at all like this had been done in reference to steel casements.

17.5 Comission Venezolana de Normas Industriales (COVENIN)

It was indeed pleasant to again meet with Dr. Pi Sunyer and to be brought up to date on COVENIN activities.

There was a new president of the board for COVENIN, Dr. Porras Omana, and the organization was now in the consumer-goods approval field (previously reported in "International Commerce" by Mr. Bevilacqua). Approved items will carry a "NORVEN" stamp of acceptance.

With the new venture there would be added funds for COVENIN to employ one or two engineers for this test work.

In addition to this, the Ministry is calling a meeting of Camaras (trade association) next week in order to firm up this new program and to try for better industry support of COVENIN.

Dr. Pi Sunyer hopes that these activities and closer contacts will result in improving the industry support of COVENIN in its standards writing activities.

He had written Sra. Ciaburri concerning the inactivity in casement standards, and the necessity for raising the money to carry on this effort.

18. Santiago, Chile, October 30-November 23, 1963

Mr. Morris Allen	Commercial Attache
Mr. H. D. Swett	Economic Officer
Dr. Charles N. Martin	Controller, AID Mission
Mr. L. J. Horowitz	Program Officer, AID Mission
Mr. D. E. Harper	Chief Gen. Eng., AID Mission
Dr. Ing. Carlos Hoerning	Director, Instituto Nacional de Investigaciones Tecnologicas y Normalizacion (INDITECNOR)
Ing. Carlos Krumm	Technical Staff, INDITECNOR
Ing. Fernando Aguirre Tupper	Secy. General, Instituto Latin Americano de Fierro y el Acero (ILAFA)
Ing. Anibal Gomez	Technical Staff, ILAFA Director, Steel Products Seminar CPANT-ILAFA-OAS
Ing. Eduardo Gana	Assistant Mgr., Instituto Chileno del Acero (ICHA)
Ing. Arturo Yermoli	Field Director of Seminars, CPANT, Technical Director, Consultores Industriales Asociados, Buenos Aires, Argentina
Dr. Alberto Sinay Neves	President, CPANT General Electric S.A., Rio de Janeiro, Brazil
Mr. Cyril Ainsworth	Vice-President, CPANT Assistant Mg. Dir., American Standards Association (ASA)
Sra. Ing. Beatriz Ghirelli de Ciaburri	Prov. Secy. Gen., CPANT Mg. Dir., IRAM
Ing. Juan Molfino	Treasurer, CPANT Director, UNIT
Sr. Saul M. Arriola	Commercial Attache, Embassy of Mexico

18.1

Seminar on Tubular Steel Products
November 4-23, 1963
List of Participants

Argentina:

Luis A. Echeverria	IRAM - Chile 1192 Buenos Aires, Argentina
Ing. Pedro J. Panza	Yacimientos Petroliferos Fiscales Avda. Pte. Roque Saenz Pena 777 Of. 601 Buenos Aires, Argentina
Ing. Joaquin Rodriguez Garrido	DALMINE S.A.F.T.A. 25 de Mayo 386 Buenos Aires, Argentina

Brazil:

Eng. Arnaldo Correa	Forjas Nacionales S.A. FORNASA Volta Redonda, Brazil
Eng. Jamil Hallage	Mineracao Geral do Brasil Ltda. Caixa Postal, 71-Telef. 450 Mogi das Cruzes, Sao Paulo, Brasil
Ing. Horia Kiritescu	Cia. Siderurgica Mannesmann Caixa Postal 2153 Belo Horizonte, Brasil
Ing. Fernando D'Avila Miranda	Cia. Brasileira de Productos de Aco S.A. Rua Senador Dantes 84- 6° Rio de Janeiro, Brasil
Ing. Paulo Mauricio Pereira	Associacao Brasileira de Normas Tecnicas Av. Almirante Barroso 54 p. 1505 Rio de Janeiro, Brasil

Chile:

Ing. Hugo Brangier	Compania de Acero del Pacifico, S.A. CAP - Bandera 84 Santiago, Chile
Pedro Calderon	Compania de Productos de Acero, S.A. COMPAC - Av. Las Americas 1022 Santiago, Chile
Ing. Campos Rademacher	ILAFA - Casilla 13810 Santiago, Chile
Ing. Fernando Cisternas	COMPAC - Av. Las Americas 1022 Santiago, Chile
Ing. Ruben Gallequillos	Compania Petroleos de Chile COMPEC Chile
Ing. Anibal Gomez G.	ILAFA - Casilla 13810 Santiago, Chile

Mexico:

Ing. Samuel Alazraki T.	Camas y Tubos S.A. Apartado Postal 11 Sta. Clara, Edo. de Mexico, Mexico
Ing. Arturo Bernal S.	Hojalata y Lamina S.A. Apartado Postal 996 Monterrey, N.L., Mexico
Ing. Francisco de la Concha R.	Refineria "18 de Marzo" Petroleos Mexicanos, Departamento de Fabricacion Nacional Mexico 16, D.F., Mexico
Ing. Manuel Marin Gonzalez	Direccion General de Normas Departamento de Normalizacion Cuauhtemoc 80. - 1er. piso Mexico, D.F., Mexico
Ing. Rafael Monroy Campos	TAMSA - Paris N° 15, 5° piso Mexico, D.F., Mexico
Manuel Quiroz T.	DGN - Mexico

Peru:

Ing. Sta. Beatriz Sotelo W.	INANTIC - Peru

Uruguay:

Ing. Quim. Omar J. Rosselli	C.I.N.O.C.A. S.A. Cno. Coronel Raiz 949-Telf. 33334 Montevideo, Uruguay

U.S.A.:

LeRoy L. Wyman	National Bureau of Standards Washington, D.C. 20234 U.S.A. (Repr. ASA)

Venezuela:

Ing. Angel G. Barreto	Planta Siderurgica del Orinoco Laboratorio Central Matanzas, Edo. Bolivar, Venezuela

18.2 U.S. Embassy

Although the plane was two hours late, I arrived in Santiago, checked in at the Carrere, and had time for a brief chat with Mr. Swett at the Embassy before it closed for the day.

The President of the U.S. Chamber of Commerce was due to visit Santiago over the week-end, so Mr. Swett and other Embassy officials were in the throes of making all the red-carpet arrangements. Because of this, I kept away from there on Thursday - spending that day to visit ILAFA and INDITECNOR.

18.3 Instituto Latin Americano de Fierro y el Acero (ILAFA)

At ILAFA I was warmly welcomed by Ings. Aguirre T. and Anibal Gomez, and learned that everything was in readiness for the opening of the seminar on Monday, and that a number of the participants would be arriving over the week-end.

Ing. Aguirre T. was winding up ILAFA affairs in preparation for his next-week departure for a steel conference in Czechoslovakia, and that Charles Urruela, SIVENSA, Caracas, Venezuela, would also be attending the meeting.

We discussed steel standards at quite some length, and I became aware that the future of the steel seminar program was of appreciable concern here. That is, if the CPANT-OAS sponsorship (cost underwriting) must be withdrawn and subsequently devoted to other CPANT needs, then the steel standards-writing program would most likely fall apart.

Though ILAFA has a vital interest in this program, it has neither the right nor the money to solely sponsor the program.

18.4 Instituto Nacional de Investigaciones Tecnologicas y Normalizacion (INDITECNOR)

It was indeed a pleasure to meet with Dr. Hoerning at the INDITECNOR offices inasmuch as my last visit to him was at his home just prior to his operation for detached retina. His recovery has been excellent and he is "getting use to" his new vision.

The seminar programs for the writing of CPANT standards, and possible operations improvements occupied much of our conversation.

INDITECNOR will play host to the meeting of the CPANT Council on November 18-20. A good attendance is expected, including Messrs. Gay and Ainsworth (ASA) to represent the U.S.

INDITECNOR operations are much the same as in the recent past; there still being but little support from industry for the standards program.

18.5 U.S. AID Mission

At the AID Headquarters I had a very pleasant visit with Dr. Martin in which we discussed the standards situation in general, and, in particular, the acquisition of a standards reference library.

The possibilities in this direction seemed quite favorable, and Dr. Martin suggested that I discuss this with Mr. Harper, Chief Engineer, who had joined the mission since my last visit.

I found Mr. Harper to welcome the idea of the standards library, and on my departure I left this matter to be agreed upon between Mr. Harper and Mr. Allen, Commercial Attache, as to the specific items that could be acquired. I also agreed to furnish a break-down on the costs of the several items to be included in the reference library.

This collaboration would seem to be particularly appropriate inasmuch as the Embassy facilities were being expanded and would include adequate space for a Commercial Library. Also, most of the top AID personnel would also be moving into these new facilities, thus both groups would have ready access to these standards.

18.6 Instituto Chileno del Acero (ICHA)

At ICHA I met with Ing. Gana, who was in charge during the absence of Ing. Llucht S., and we had a very interesting visit.

Standards were, of course, the principal topic of our conversation, and from this I learned that there was still much concern in Chilean industry concerning the need for more standards, and that the lack of sufficient and adequate standards was particularly noticeable to this steel-producers organization.

The formulation of CPANT standards for tubular steel products by the current seminar group would be of much help to this situation.

18.7 Social Functions

During the span of the seminar, there were three social functions which are worthy of comment.

The first of these was a luncheon at the Hotel Carrere Roof Garden at which the members of the Mexican delegation were the hosts. This was an excellent affair, and we heard a brief and interesting talk by Sr. Arriola, the Mexican Commercial Attache.

Sr. Arriola, as I learned during the luncheon, being seated next to him, had spent 37 years with the Braden Copper Company and we found that we had many friends in common.

On Monday, November 18, there was the "opening session" for the meetings of the CPANT Council, following which ILAFA played host at an excellent luncheon for the Council members and Seminar attendees.

On Wednesday evening, November 20, after the conclusion of the Council meetings, there was a formal dinner ("going-away" party) at the Union Club for the Council and Seminar attendees. The principal speaker was Dr. Neves, President of CPANT, who was followed by Ing. Gomez, representing ILAFA and the Seminar; then Dr. Hoerning spoke for INDITECNOR - host organization for the CPANT Council. Following this, Ing. de la Concha responded for the Seminar group.

During the visiting following this banquet I was very much pleased with the compliments I received from Dr. Hoerning concerning my standards efforts in Latin America, and particularly for my efforts in helping to clean up the situation in Colombia (ICONTEC). Dr. Neves, too, was very enthusiastic over this work, and Sra. Ing. Ciaburri also added more credit.

I had previously been informally advised that ICONTEC had been approved by the Council.

18.8 Visitations

During the course of the seminar, time was taken out from the daily grind of standards writing to make two plant visits.

18.8.1 Compania de Productos de Acero (COMPAC)

The first of these was to the COMPAC, which is a relatively new steel fabricating plant located in the outskirts of Santiago.

We left the seminar meeting rooms at ILAFA Headquarters in micro buses, and proceeded to the airport restaurant where we had an excellent luncheon as guests of COMPAC. Following this, we went to the COMPAC plant.

It is a modern plant, and is a major producer of welded steel pipe of excellent quality. Their steel is obtained from CAP.

In addition to this activity, they have recently contracted with Butler Mfg. Company, USA, to manufacture the full Butler line of steel grain elevators, storage bins, quonsets, etc. All the machinery for this was currently on the New York docks awaiting loading for shipment to COMPAC.

To house some of this work, COMPAC had built a large, high-overhead building, sheathed in galvanized iron; the structural components of the building consisting of a novel arch-type trusswork fabricated from steel tubing by welding.

This really amounts to a pre-fabricated factory building, and they may go into this as a production item.

18.8.2 Compania de Acero del Pacifico (CAP)

The second plant visit was by early morning flight to Concepcion, thence by car to the neighboring Hauchipato and to the CAP mill.

I had visited this mill, the only steel producer in Chile, a year ago (See First Trip Report, NBS #7793), so will not go into detail concerning the plant as it is covered in that report.

Our seminar people were quite outspoken concerning the cleanliness of this plant, and also that there was ample provision for work-space and for plant expansion.

The nominally rated 1100 ton blast furnace was consistently running beyond rated capacity, and had even exceeded 1300 tons on occasion.

This year marks the termination of U.S. participation in this steel mill project that has been going on for 15 years. The mill design, construction, and operation was on a contract with Koppers Company, and the few remaining Koppers men have moved into "advisory" positions for their last few months here - the mill now being completely operated by Chileans - and it is "publically owned".

At luncheon we were the guests of CAP at a delightful affair held at the Navy Officers Club overlooking the harbor. In this view, my attention was called to the presence of one of the two destroyers which we had given, and just delivered to Chile.

18.8.3 Instituto de Investigaciones Tecnologicas - University of Concepcion

During my visit with Professor Pizarro C. at Concepcion last year, he particularly requested that I lecture at the University on standards and on metallography. Because of this, and with the assistance of Ing. Brangier of CAP, I endeavored to make such arrangements in connection with the CAP plant visitation by remaining in Concepcion an additional day. Unfortunately, however, this was some kind of holiday - also providing a long week-end in spring time; thus proving to be unfeasible.

I met Professor Pizarro at the airport; both being enroute to Santiago, and we had a pleasant visit along the way. From this I learned that he is even more anxious for me to present these lectures, and asked if I could not arrange a special trip for this purpose.

Professor Pizarro would also like to have me lecture to the Inst. of Chemical Engineers in Santiago on standards.

The affairs of the Institute have improved appreciably since last year, due primarily to a "Special Fund" grant of approximately (U.S.) $1 million which has enabled the enlargement of facilities, purchase of more equipment, and the hiring of additional personnel - "a couple" from U.S.A.

18.9 CPANT-ILAFA-OAS Seminar on Tubular Steel Products

At this seminar I was acting as the duly authorized Delegate of ASA to represent the U.S.A.

In surveying the transcripts of my daily notes from this trip, I find that there are some 15 typewritten pages, to which may be added several pages of meeting minutes. All of these are replete with details of meeting discussion and would surfeit this report. Thus the following discussion will be devoted to the highlights of the seminar.

During the three-week session, the group prepared eight proposed specifications and a "classification" for tubular steel products. These are:

18.9.1 Accomplishments of Seminar

CPANT/Sc 13:3/1 Seamless Carbon- and Carbon-Molybdenum Steel Tubes for Refineries (Still Tubes)

CPANT/Sc 13:3/2 Seamless Chromium-Molybdenum and Chromium-Molybdenum-Silicon Steel Tubes for Refineries

CPANT/Sc 13:3/3 Seamless Chromium-Nickel Steel Tubes for Refineries

CPANT/Sc 13:5/1 Seamless Cold-finished Low-Carbon Steel Tubes for Condensors and Heat Exchangers

CPANT/Sc 13:5/2 Seamless Cold-finished Chromium-Molybdenum and Chromium-Molybdenum-Silicon Steel Tubes for Condensors and Heat Exchangers

CPANT/Sc 13:5/3 Welded Carbon Steel Tubes for Condensors and Heat Exchangers

CPANT/Sc 13:5/4 General Requirements for Carbon- and Ferritic- and Austenitic-Alloy Steel Tubes

CPANT/Sc 13:5/5 Seamless and Welded Steel Tubes for General Use

CPANT/Sc 13:5/6 Classification of Steel Tubes

It might be well to mention at this point that the discussion to set up the "classification" was only attained after considerable discussion as to the need for and the use of such a document. In essence, it was intended that this classification could serve a useful purpose in guiding this and other seminars in determining the standards "coverage" in respective areas.

On the other hand, as specification numbers are added to the list, there is the ever-present danger that some unwitting person may see this classification and interpret it to mean that these were recommendations - and thus get into trouble.

In recognition of this possible misuse, it was agreed that the use of this classification would be limited to its intended purpose.

18.9.2 Seminar Participants

From a perusal of the list of participants in the seminar, it is evident that the national delegates were:

		General Interest	Industry	Stds. Org.
Mexico	6	---	4	2
Brazil	5	---	4	1
Chile	4 + Director	1	4	---
Argentina	3	---	2	1
Peru	1	---	---	1
Uruguay	1	---	1	---
U.S.A.	1	1	---	---
Venezuela	1	---	1	---

To us in the U.S.A., it is essential that we pay attention to the Producer=Consumer- plus- General Interest balance. Thus a break-down of participants on this basis becomes:

	Producer	Consumer	General Interest
Mexico	3	1 (P)	2
Brazil	4	-----	1
Chile	3	1 (P)	1
Argentina	1	1	1
Peru	---	-----	1
Uruguay	---	1 (C)	---
U.S.A.	---	-----	1
Venezuela	1	-----	---

(P) = Petroleum Ind. (C) = Chemical Industry

18.9.3 Seminar Proceedings

The seminar was officially opened with adequate welcoming speeches and outline of objectives by Ing. Aguirre T. and Ing. Gomez; following which was distributed a "book" containing "first drafts" of proposed specifications.

It seems that these proposals had been available to many only about two weeks prior to the seminar meeting. However, upon the arrival of the first members of the Brazilian delegation, it was found that within this short time they had reviewed the proposals - and compiled their own book of comments and proposals, which they distributed.

With a group of men so widely separated; from different countries having different interests and "leanings", it is probably inevitable that the

respective groups would each take a defense attitude toward its own particular interests. In fact, such feelings were in evidence almost from the first day of the seminar. However, as we got into the second week of the meeting, the participants were beginning to get to know each other - and to learn to work together for their common interests in Latin America.

In general, it may be said that the Mexican contingent were devoted to U.S. practices, and the use of the English system of measurements; while the Brazilian group was largely dependent on DIN (German) and ISO recommendations - also urged by the now-enforced use of the metric system in Brazil; and the Argentine delegation had strong leanings toward ISO.

But very few of those in attendance had had any appreciable background in the writing of specifications, and thus were but slightly schooled in the entire concept of standards. Because of this there were repeated attempts to "open up" the requirements of reference specifications to suit their own manufacturing convenience.

This can best be illustrated in connection with one proposal which was based entirely on an ASTM specification for refinery tube, wherein there were several suggestions for "opening-up". However, it was not until I was called upon and had to emphatically point out that this specification - while issued by ASTM - actually represented complete collaboration with the American Petroleum Institute (API) and the American Society of Mechanical Engineers (ASME). Also, this ASTM specification was accepted and used world-wide in the petroleum industry; thus if they wanted a CPANT specification to cover this material - then that specification must be identical in every respect to the ASTM requirements! In other words, unless the products of Latin American steel mills, made to conform to National or CPANT specifications, meet the ASTM specs in every respect - they would not be acceptable.

It may be added that the Mexican delegation was particularly insistent in this matter, resulting from their long association with the U.S.

An excellent example of the proposed solution to some of these difficulties is exemplified in CPANT/Sc 13:5/5 where both the ASTM A120 and ISO-R65 requirements are included in this one document as types CA and CI, respectively.

Also, it may be noted in the first column of Table I of this proposal that there is a listing of sizes which simplifies the matching of the English and the metric schedules.

There were a number of instances where proposed changes - to suit the conveniences of the producers - were discussed, and it was repeatedly necessary to point out to the group that this seminar group was in no respect entitled to make such changes inasmuch as these were consumer demands - and one could be assured of the usual correctness of the old phrase about the customer always being right.

It was in connection with such polemic discussions that the consumer-members always presented a united front in their own defense.

One particular item of new proposals was that of statistical sampling for test specimens, and this was discussed on several occasions - without a decision as to its acceptability. However, on returning to the Seminar after a conference with AID officials one afternoon, I noted that this method had attained a majority vote. As a consequence, one may note the inclusion of this sampling method. Furthermore, the use and approval of this method will bear a lot of study before it is found to be acceptable to both producers and consumers.

Language difficulties frequently give rise to prolonged discussion; this being due to the fact that Spanish terminology varies between countries because of foreign influence in these countries. Also, we are concerned with three languages - English, Spanish, and Portugese.

For example, there was prolonged discussion on the acceptable term for a (pipe) coupling - couple, coupler, coupling? In fact, in one country there is no differentiation in terminology between a "coupling" and a "union", I was told.

Another facet of the language problem is that of the translation of existing specifications which are used as reference in writing the CPANT proposals. This is in large part due to the fact that when we of the U.S. write our own specifications we try to be as brief and concise as possible; this being particularly true when we concoct a "Note".

The translation of these statements becomes most difficult, and frequently comes out about as well as the multi-lingual joke translations on the Jack Paar program. As the result - an appreciable amount of my time was spent in "explaining" and helping to translate such statements.

Permissible or acceptable tolerances were a constant source of discussion because into this area there enters the matter of the capability of many of the Latin American producers to meet the tolerances which have proven to be acceptable in the U.S. and in Europe.

After the first couple of days of the seminar I became aware of the fact that the ASTM specs which were the principal or sole items of reference in some of the proposals were based on the '58 Book of Standards and some of the other references were even much older. So I called attention to this fact and offered to obtain the very latest ASTM specs and new proposals if they wanted them. So, the group insisted that I cable ASTM and get these - at once.

Well, due to the idiosyncrasies of Chilean mail it was over a week until I finally received all of this material from Mr. Caum of ASTM. Following this, I spent the entire week-end in scrutinizing the new ones for even the smallest changes. Then on Monday we had an interesting session on catching-up.

During the course of the seminar there were two "review sessions" where the "official delegates" met to discuss and decide upon the many comments that had been received from various countries after having reviewed the proposed specifications on flat steel products that resulted from the seminar session in May (See Second Trip Report, NBS #8072).

By the beginning of the last week of the seminar one could readily sense the fact that we now had a real working group, the participants had learned to know each other; to respect the others opinion and reasons; and come to the realization that we were working in the common interest. In fact, the desire to get these jobs done was so strong that the group decided to decline the invitation of the CPANT Council to attend the opening ceremonies at the University of Chile - the group preferring to keep at work on standards.

The subsequent luncheon was not declined!

Rather early in the seminar proceedings there was a discussion of the uniform specification format recommended by CPANT, and it was decided that this suggested format was unsuitable for the tubular steel products and that CPANT should be so informed.

This same subject came up at the "review sessions" on the flat-products proposals - and with the same decision.

On the last day of the seminar there came the report of the Task Group that had been given the job of formulating the work-load for the next tubular steel seminar. This international group met, decided on (1) what specs were needed, (2) order of preference, (3) the country that should work-up the initial draft, and (4) the pre-seminar program of proposal circulation. This program is as follows:

Program for 1964 Seminar on Tubes and Pipe

New Proposals Preference List and Sponsor Country

1. Preferred Diameters and Thicknesses (Chile)

2. Threads for Steel Tubes (Chile)

3. Couplings, Steel, Threaded and Non-Threaded (Chile)

4. Couplings, Malleable Iron, Threaded (Uruguay)

5. Steel Tubes for Protection of Electrical Conductors (Mexico)

6. Steel Tubes, Seamless, for High Pressure Boilers (Brazil)
   (ASTM A192, A209, and A210; DIN 17175)

7. Steel Tubes, Seamless, for Low Pressure Boilers (Brazil)
   (ASTM A83 and DIN 17175)

8. Steel Tubes, Welded, for Boilers (Mexico)
   (ASTM A178 and A226)

9. Steel Tubes, Seamless, for High Temperatures (Argentina)
   (ASTM A106 and DIN 1629)

10. Steel Tubes for Transmission (Mexico)
    (ASTM A53)

11. Steel Tubes for Structural Uses (Argentina)

Schedule of Procedure

By March 31, 1964 - Size Series to be reported to ILAFA, Santiago

May 30, 1964 - Deadline for other proposals

June 15, 1964 - Official proposals issued by ILAFA

Sept. 15, 1964 - Deadline for comments on proposals

Seminar - Begin last week of October and first two weeks of November, 1964

It was fully agreed that this was the established program and agenda, and it was NOT to be changed by anyone.

I was told that these points were all decided without an argument - thus further revealing the necessity for people to get to know each other in order to be able to work together most effectively.

At the closing session I was somewhat embarrassed by Ing. Gomez compliments for ILAFA and for the group for my constant help - particularly in the rough places. Also, he specifically invited me, and insisted that I attend, the two seminars to be held during 1964.

19. Standards: Broad Significance

This report and its two predecessors cover a period of somewhat over 13 months, during which there has been a noticeable increase in the awareness of the significance of standards in the development of the Latin American countries; and also a marked increase in standards activities. However, these activities must be considered to be indicative of a good beginning rather than a job partly completed.

A major factor in this increasing awareness of the role of standards has been the position that ALALC has taken; most particularly in the recognition of the standards program (See Appendix I). Also, much credit for this action on the part of ALALC is due to the "crash presentation" in Montevideo (See 7.2).

There is no doubt concerning the fact that the delegates to the ALALC meetings have returned to their own countries and have subsequently emphasized the need for standards.

In addition to this, our own efforts with and for the standards groups in many of the Latin American countries, supported by the interests of our commercial representatives and by the interests and activities of our AID missions which we have been able to correlate with the standards program, have also contributed materially to the awareness of the need for standards.

19.1 Standards Promotion

The greatest need in the whole standards program in Latin America is to somehow completely convince the industrial leaders in each country of the role of and the necessity for standards. And too, that standards activities must be considered as a part of their doing business - and that its support should come from industry because it directly benefits industry.

The technical people of industry are aware of the need for standards, but they do not dictate the policies nor control the purse-strings. The missionary work must be done at the business executive level through trade associations, industrial chambers, management organizations, development corporations, etc. Furthermore, it can be effectively accomplished only by those who are thoroughly knowledgeable with all aspects of standards and who are capable of adequately meeting the barrages of pointed questions which are always raised.

19.2 Standards Assistance

The assistance which is needed in order to foster the standards program in Latin America is of several kinds, as may have become evident in the text of this report. In essence, it can be reduced to four categories.

1. Indoctrination (Education)
2. Organization
3. Operation
4. Technical

19.2.1 Indoctrination

In the first category, indoctrination, there lies the necessity for providing a large amount of assistance which can best be provided by those well experienced in standards work; that is, to do the missionary work necessary to create a high level of standards consciousness in technical, educational, business, and consumer areas.

Ranging from the impact on productivity in the technical and manufacturing areas to the guarantee of quality of the trade item in the economic area, all of the Latin America countries feel the need of our help in educating their students, engineers, scientists, producers, business executives, and consumers concerning the broad significance of standards. Thus, while it is true that most of these standards groups do <u>try</u> to do this, they are most fully aware of the fact that when this kind of missionary work comes from capable U.S. representatives who reflect a long and successful history of standards accomplishment - THEN the message becomes more impressive.

As a consequence, we should make every effort to render assistance in this area because this builds the need and the support of standards.

Also, by enhancing support at the national level, it will immediately reflect at the international (CPANT) level.

19.2.2 Organization

There are three areas in which organizational assistance is needed by the standards groups in Latin American countries:

1. In countries such as Bolivia (See 11.), Ecuador (14.), and Paraguay (10.) where standards efforts are just beginning, we would do well to heed their requests for assistance by personally visiting these places at frequent enough intervals to be sure that their activities do not lag, and to assist them in their organizing. This is quite significant because if they lack the know-how to organize - and help is not at hand - then activity will die off.

2. With newly formed groups such as ICONTEC in Colombia (See 16.) there will be many problems encountered in getting the working committees moulded into competent and effective units. Such assistance must, of course, come from those who have had wide experience in our own standards committee work.

3. Several of the existing standards groups are in need of assistance for one reason or another. On one hand, it is needed in order to expand presently successful operations into other materials categories. On the other hand, there are instances wherein almost complete rehabilitation of the present organization seems to be necessary.

19.2.3 Operation

Although there are these previously mentioned instances of organizational difficulties, some of these are undoubtedly due to inability to operate satisfactorily within an organization structure which in itself is satisfactory. For example, the lack of adequate financing may be the cause, hence assistance is necessary in this direction.

In any event, the reasons for ineffectual operation may be many, and impartial "outside" assistance can go far to pin-point the difficulties - and may materially assist in their correction.

19.2.4 Technical

It has become abundantly clear during the past year that we must expand our activities in technical assistance to both the over-all standards situation in Latin America and to the participation in standards writing.

Several aspects of the former have been cited in the preceding paragraphs of this section, and it now becomes necessary to emphasize the fact that it is absolutely essential that we have adequate U.S. representation in PASC standards activities.

"Adequate" representation must encompass two areas; the technical and the economic. Furthermore, it must encompass two sources of interests; those of our industry and those of our government. As a consequence, we must adopt the firm policy that adequate representation by the U.S. will be a team-work job which will be accomplished by ever-present technical and economic experts from industry and from government.

20. Translations

The most critical point with regard to translations is due to the necessity of translating proposed specifications into English so that they may be distributed to the proper groups for study and for the return of comments to PASC within the 4-month statutory limit.

In 18.9.3 it was mentioned that there had been two books of "proposals" at the Santiago seminar - one sent out just prior to the meeting; the other distributed at the meeting. Of course, this obviated any pre-seminar study of these proposals.

Looking forward to the next tubular products seminar, it may be noted (18.9.3) that the plans call for the circulation of proposals and the receipt of comments prior to the seminar. As a consequence, we of the U.S. (and now our Canadian friends) are confronted with a second rush job of translating.

Furthermore, it is probable that this procedure must likewise be applied to all CPANT seminars.

This is a big job, and an expensive one. Also, it is beyond the capabilities of our standards organizations to cope with this situation. As a consequence, it is essential that there be established and funded a permanent translation service which can meet these post-seminar requirements as well as a normal load of standards translations.

A glossary of terms and multi-lingual equivalents is sorely needed. It would be of major assistance to the seminar groups, and be a valuable reference for anyone interested in PASC or ISO standards (See NBS #7793 - 21.).

21. The English-Metric Problem

Insofar as iron and steel specifications are concerned, reference was made in 18.9 to the fact that in one of the proposals written by the recent seminar there were two "Types" specified; one the ASTM, the other ISO; English and metric respectively.

In addition to this, in some of the property- or tolerance-tables in this proposal (Sc. 13:5/5) both types are referred to a numerical size schedule so selected that the 1, 2, etc., inch sizes occur at 25, 50, 100, etc. - these being approximate millimeter equivalents.

Due to the fact that so many U.S. specifications are used world-wide, and in permanent installations, it is evident that the use of English measurements for these items will persist for many years to come.

In contrast to this, in Brazil there is a rigid enforcement campaign now being conducted by the weights and measures authority of that country. This will, of course, be reflected in the attitude taken by Brazilian representatives in PASC seminars.

It was reported that in Brazil it was now illegal to even advertize the sale of items defined in English measurements. However, a current ad in a Sao Paulo paper bespoke the availability of 1/4" and 1/2" pipe!

22. Testing Facilities

There is a marked increase in the demand for materials testing facilities, and this has rather broad ramifications. In the first place, testing facilities are a necessary requisite to standards for compliance testing. Then, given such facilities, they are available for research for industrial development.

On the other hand, several research organizations in Latin America make their facilities available to industry - and there are current proposals for new "institutes" to provide applied research and testing facilities for industry. Additionally, there is a move afoot to enhance applied research for industrial development through cooperative regional efforts of such institutes in several countries.

The whole picture then becomes one in which research, materials, production, quality control and standards all find a common focal point in testing facilities.

The need is therefore obvious - as is the dearth of these facilities in Latin America.

23. Embassy

The increased cooperation from our Embassy staffs and AID missions is notably increased on each succeeding visit. In addition, there has been a notable increase in the amount of liaison which has been going on between these visits, and there have also been many more requests for publications, standards, etc., which have been forwarded to us through Embassy channels.

Doing this standards business through Embassy channels and know-how has many advantages; it is invaluable, and indispensable.

24. Weights and Measures Programs

The increased demand for testing facilities and their use for compliance testing for materials makes it essential that these testing facilities be calibrated against recognized standards by approved methods.

From an entirely different source, that of free-market international trade, there now arises the necessity of measuring as others do.

As a consequence of such pressures, there is much more thought and consideration being given to measurement standards. This is particularly true in the countries that are just initiating a standards program.

Unfortunately, the cost of an adequate program is high; in fact, prohibitively high for most of the Latin American countries. The will is there, but the dollars are not. However, if we have an adequate presentation in Latin America of the Weights and Measures prototypes made for AID, as well as their proper use, this should create enough incentive to institute an intensive search for funds to establish a measurements program in each Latin American country now without such facilities.

25. Recommendations

In the two previous trip reports certain recommendations were made, and most of these can be repeated. However, in the interest of brevity, these recommendations as well as a few which can be derived from this report are briefly noted in the following:

1. Immediate efforts should be made to establish a permanent headquarters for CPANT, with a full-time Secretary and staff, preferably adjacent LAFTA (ALALC) in Montevideo. The growth and future of CPANT require this.

2. U.S. representation in all CPANT standards-writing activities should always include technical and economic representatives of government in addition to those from industry.

3. U.S. industry must be urged to greater participation in CPANT standards activities.

4. We should be prepared to render much more technical assistance to national standards bodies in Latin America to increase their effectiveness.

5. The development of a multi-lingual glossary of materials and testing terms should be supported.

6. An adequate translation service should be established forthwith.

7. There should be increased cooperation with the AID missions and development corporations in each of the Latin American countries.

APPENDIX I

C.P.A.N.T.

Comite Panamericano de Normas Tecnicas
Pan American Standards Committee

Provisional General Secretariat

CHILE 1192 - BUENOS AIRES

REPORT FROM THE GENERAL SECRETARIAT

C.P.A.N.T.

Comite Panamericano de Normas Tecnicas
Pan American Standards Committee

Provisional General Secretariat

CHILE 1192 - BUENOS AIRES

S.G. Doc. No. 10

REPORT FROM THE GENERAL SECRETARIAT

September 1963

I - ACTION

Steps taken in order to obtain the official recognition by ALALC (Latin American Association for Free Trade) were continued, results of which have been positive, since that body in note of the 22nd May last, recognizes CPANT as an advisory body, on a Secretariat level, in the matters of its concern.

The Convention of Business Men participating in ALALC's commercial exchange, on occasion of their first meeting, officially invited CPANT to attend it.

With the President's authorization and in view of the Treasurer's report, the Secretary General attended the meeting and was able to establish that, for the first time in an Interamerican body, a Committee (No. 4) was included in the working plan exclusively with the object of considering the Standardization problem.

This Committee presided by Eng. Molfino, President of UNIT and Treasurer of CPANT, produced the following despatch which was unanimously approved:

In view of the necessity that every product offered within the Latin American Common Market should be defined in its characteristics and qualities,

A. IT IS RECOMMENDED THAT THE CHARACTERISTICS OF THE PRODUCTS OFFERED WITHIN THE LATIN AMERICAN MARKET SHOULD BE DEFINED BY SPECIFIC STANDARDS.

Considering that the commercial exchange is activated by facilitating an agreement between the sides,

B. IT IS RECOMMENDED THAT THE STANDARDS EMPLOYED SHOULD BE THOSE LARGELY ACCEPTED IN THE ZONE AND TO THAT RESPECT A VOTE OF SUPPORT IS GIVEN TO THE WORK CARRIED OUT BY C.P.A.N.T.

Considering that certification of a product's compliance with a specific standard requires a series of inspections, verifications and tests,

C. IT IS RECOMMENDED THAT THE PRODUCTS OFFERED WITHIN THE LATIN AMERICAN MARKET SHOULD BE PROVIDED WITH A CERTIFICATION OF QUALITY ASSURING THEY COMPLY WITH A SPECIFIC STANDARD.

Since the standardization work which is considered basic for the qualification of a product, requires the earnest support of the public bodies, producers, consumers, etc.,

D. IT IS RECOMMENDED TO ALL INDUSTRIALISTS OF THE ZONE INTERESTED IN THE INTERZONAL EXCHANGE TO UNDERTAKE, BY MEANS OF THE STANDARDIZATION INSTITUTIONS OF EACH COUNTRY, THE PREPARATION OF STANDARDS WHICH SHALL SPECIFICALLY DEFINE THE CHARACTERISTICS AND QUALITIES OF SUCH PRODUCTS.

Considering that in several countries of the ALALC, Standards Institutions do not, as yet function regularly,

E. IT IS RECOMMENDED THAT BUSINESS MEN OF COUNTRIES MEMBERS OF ALALC WHICH DO NOT AS YET POSSESS STANDARDIZATION BODIES, SHOULD PROMOTE THEIR FOUNDATION AND AFFILIATION TO C.P.A.N.T.

Recognizing the importance of a previous inter-zonal understanding as regards the requirements established and recognizing as well the importance of the work being carried out by C.P.A.N.T. with the support and collaboration of OAS,

F. IT IS RECOMMENDED THAT ALL ALALC'S BODIES COORDINATING THEIR WORK WITH CPANT SHOULD COLLABORATE IN THE PROMOTION OF AN ADEQUATE STANDARDIZATION.

Eng. Molfino, besides, representing the Uruguayan Engineers Center lectured on the importance of standardization in the national and Pan American field and, through his mediation, the Secretary General was able to explain amply the aims of CPANT, its origins and future.

Steps are being taken in order to obtain the recognition by CEPAL of the Pan American Standards Committee as the only body in America, able to establish standards on the Pan American level. (CEPAL - Central American Common Market).