

NATIONAL BUREAU OF STANDARDS REPORT

8564

REPORT ON LATIN AMERICA TRAVEL (IV)
CONCERNING
LATIN AMERICAN STANDARDS (COLOMBIA)
AND
ANNUAL MEETING OF THE
LATIN AMERICAN IRON & STEEL INSTITUTE
July 4 - 25, 1964

by

LeRoy L. Wyman
Consultant, Metallurgy Division



U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS

THE NATIONAL BUREAU OF STANDARDS

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Institute for Applied Technology. Textiles and Apparel Technology Center. Building Research. Industrial Equipment. Information Technology. Performance Test Development. Instrumentation. Transport Systems. Office of Technical Services. Office of Weights and Measures. Office of Engineering Standards. Office of Industrial Services.

* NBS Group, Joint Institute for Laboratory Astrophysics at the University of Colorado.

** Located at Boulder, Colorado.

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1. ABSTRACT:

This report covers visits to the recently formed standards organization, the Instituto Colombiana de Normas Technicas (ICONTEC) for technical assistance, and with the Commercial Attache and AID Officials concerning collaboration with ICONTEC.

Additionally, a resume and comments are made on the Annual Meeting of ILAFA, where the author was invited by its president and Board of Directors as an "Observatone Invitudo".

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 is a member of its USA national committees for International Standards in the categories of steel, wrought copper products, light metals, and electrical conductors (bone).

3. OBJECTIVES OF TRIP:

In continuation of the Latin American standards activities in which the author has participated on three previous trips, the need for the establishment of a competent standards organization in Colombia has been essential, and the author has played a significant role in this matter. The establishment, by official decree, having been accomplished, the next objective becomes the effective operation of the organization, the purpose of this trip.

On previous trips, the author has represented the U. S., via the American Standards Association, as delegate to Pan American Standards Committee steel specification writing seminars, held under the auspices and at the headquarters of the Instituto LatinoAmericano del Fierro y el Acero (ILAFa) in Santiago, Chile. This collaboration resulted in the author being honored by an invitation from the President and Board of ILAFa to attend their annual meeting in Mexico City as an "Observatine Invitado".

4.0 BOGOTA, COLOMBIA, July 5-17, 1964:

Mr. Charles Kotun, Acting Commercial Attache (for Mr. George Ellsworth)
Mr. Milton Drexler, Chile Urban and Industrial Development, AID Mission
Mr. Theodore Markow, Industry Officer, AID Mission
Mr. George Fitch, Industry Officer, AID Mission
Dr. Alberto Combariza, President, ICONTEC
Dr. Javier Henao L., Executive Director, ICONTEC
Dr. Gomez, Technical Director, ICONTEC
Ing. Fernando Ospina H, B/D, ICONTEC
Dr. Luis Pinto B., Chief, Rama Tecnica, Min. de Fomento
Mr. William V. Goucher, President, General Electric, S. A.
Mr. H. C. Gardiner, Executive Director, International Petroleum (Col.) Ltd.
Mr. Pasburg, Vice President, Icollantes
Mr. Ernest Massimine, Vice President, Texas Petroleum
Sr. Misael Pastrana Borrero, Vice President, Celanese Colombiana, S.A.

4.1 U. S. Embassy, Bogota, Colombia

From earlier correspondence with Mr. Ellsworth, when he requested that I soon make a return trip to Bogota, I was aware that he would be in the States on home leave. Thus, substituting for him, I found Mr. Kotun, whom I had met on previous trips.

Others also had this same idea of making the Embassy the first stop on their visit, for the office was soon filled with U. S. representatives who were attending one or the other of two conventions starting that day; one being the Interamerican Association of Sanitary Engineers at which Mr. K. L. Kollar, BDSA, was a representative along with several men from U. S. Public Health; the other was concerned with "industrial proprietaries" wherein the Dept. of Commerce was represented by Messrs. K. F. McClure and J. H. Lightman, along with Mr. H. J. Winter of PHS.

I had brought down with me 300 copies, in Spanish of the speech which Mr. Kollar was to deliver to the Sanitary Engineers, and I turned these over to Mr. Kollar.

After visiting briefly with Mr. Kotun concerning recent developments, I decided to visit the AID Mission for further fact-finding.

4.2 U. S. AID Mission

Again meeting Messrs. Drexler and Markow at AID, I found that the latter would soon be leaving Bogota for reassignment in Washington, and would be replaced by Mr. George Fitch, who I soon met.

We immediately proceeded to discuss the problems at hand, the most pressing one being concerned with the formation of the program and budget for the assistance which AID was prepared to render ICONTEC in order to insure its effectiveness in producing standards which would materially assist the development and hence economy of Colombia.

After learning what the requirements of this job would be - and that the dead-line was but a few days away - I immediately proceeded with a study of the files in order to catch up on happenings since my last visit, and to arrange a meeting with ICONTEC personnel.

Because of a Board of Directors current meeting of ICONTEC, this meeting was arranged for the next day in Mr. Markow's office.

4.3 ICONTEC-AID Meeting

Dr. Henao and Ing. Ospina H. of ICONTEC met with Messrs. Markow, Fitch, and myself and discussed the immediate problems of ICONTEC and its plans and needs: -

1. They sorely need a complete reference library of U. S. standards. They know they should have those of the American Standards Association (ASA) "American Standards", those of ASTM, Petroleum Institute (API), Concrete Institute (ACI) etc., but are not familiar with what others they should have.

2. They need technical assistance in the organization and operation of ICONTEC and its committees.

3. They need training for their top operating officials.

4. They need the assistance of technical experts to guide their committees on steel, textiles, pesticides, electrical materials, concrete, leather, etc.

5. They need more support from individual companies - both in participation in the working committees, and financially.

The current program of ICONTEC is as a busy one for the next few weeks inasmuch as it included the first general meeting of ICONTEC and the conducting of a Seminar on Alcoholic Beverages to formulate standards and test methods for the Pan American Standards Committee (PASC).

This assignment has been accepted by ICONTEC, even though it is understood that IRAM (Standards group in Argentina) is suppose to hold this Secretariat.

ICONTEC is most anxious to participate in the proposed Weights and Measures activity for Latin America, and proposes that Bogota be set up as the demonstration and training center for all L. A. In this they have the assured support of the University for space, facilities, testing, etc.

This desire was indicated in the official airgram reply to Dr. McPherson's questionnaire on this subject.

At this meeting, it was agreed that I would immediately work with ICONTEC personnel to draw up a program which was acceptable to ICONTEC in terms of the assistance which was needed, as well as being suitable for program presentation by the AID group.

4.4 ICONTEC Meetings

Since my last visit, ICONTEC had moved from their down-town offices to a slightly removed location where they had taken over a former residence to use as their headquarters.

The first floor had been converted for general - and executive - office use, and on the second floor the former bedrooms had become committee rooms, three of which were equipped with large conference tables, etc. and a fourth

was being readied for similar use. Additionally, what had probably been the maid's quarters had become the library - and was already supplied with a set of British standards.

According to the June "Bulletin" of ICONTEC, they had also received sets of standards from Argentina and Chile, and were expecting sets from Mexico, Venezuela, and Brazil.

4. 4.1 ICONTEC Committees

On my last visit (See NBS Report No. 8182), I had outlined a 'working-committee' plan for ICONTEC, and it was a pleasure to learn how much had been accomplished in but a few months. For example, the following schedule was for the meeting programs of the working committees for the current month: -

<u>SUB-COMMITTEE</u>	<u>No. ICONTEC</u>	<u>DAY</u>	<u>HOOR</u>	<u>DATE</u>	<u>ROOM</u>
Physical Tests	C2.1	Friday	14.30	3-10-17-24-31	2
Chemical Tests	C2.2	Friday	14.30	3-10-17-24-31	3
Wire & Wire Products	C3.3	Monday	14.30	6-13-27 (1)	2
Bars & Shapes	C3.4	Thursday	14.30	2-9-16-23-30	3
Cement	C4.1	Wednesday	14.30	1-8-15-22-29 (3)	2
Petroleum Products	C4.2	Wednesday	9.00	1-8-15-22-(3)	3
Asbestos Cement	C4.3	Thursday	14.30	2-9-16-23-30	2
Modular Construction	C4.4	Tuesday	14.30	7-14-21-28	2
Brake Liquids & Access.	C5.1	Thursday	8.30	2-9 (2) 16-23-30	3
Fertilizers	C7.1	Thursday	8.30	2-9-16-23-30	1
Pesticides	C7.2	Friday	8.30	3-10-17-24-31	1
Analytical Methods	C7.3	Friday	14.30	3-10-17-24-31	1
Beers	C8.1	Tuesday	8.30	7-14-21-28	1
Wines	C8.2	Tuesday	8.30	7-14-21	2
Liquors	C8.3	Tuesday	8.30	7-14-21	3

COMMITTEE

Iron & Steel	C3.0	Monday	14.30	27	1
Construction	C4.0	Wednesday	14.30	29	1
Automotive	C5.0	Thursday	8.30	9	3
Weights & Measures	C6.0	Tuesday	14.30	7-14-21-28	1
Electrical	C9.0	Wednesday	14.30	8-15-22-29	1

4. 4.2 Government Collaboration

Most of these groups are working on PASC Standards to adopt them for Colombia, and there are already 26 proposals which are out for "public discussion".

At the request of the government Consejo, ICONTEC is working up 6 "Emergency Specifications", of which the one on hydraulic brake fluids and its testing is most urgent. The reason for this became quite evident when

I was informed that some of these fluids which had been marketed in Colombia resembled brake fluid only by smell!

I was told that Wagner-Lockheed collaborated by donating testing equipment and know-how to the testing institute (Inst. de Investigaciones Tecnologicas (IIT), and all brake-fluid would be tested, certified, and sold in sealed contains - the seals being the ICONTEC certification, and providing a small financial return to ICONTEC.

I had a very brief meeting with Dr. Pinto at an ICONTEC BID meeting and we later had a luncheon meeting arranged - but this fell through due to urgencies of the brake-fluid problem; so we have a rain-check.

4. 4.3 Assistance Program

4. 4.3.1 Headquarters Assistance

In formulating the assistance program, the initial point of discussion concerned their desire to have an expert work with them for a six-month period in order to insure the proper functioning of ICONTEC. From the standpoint of the availability of a competent person as well as that of the apparent current functioning of the organization, this concept seemed to be over-emphasized. As a consequence it was agreed that several shorter periods of assistance would be more effective.

While this assistance to ICONTEC as a whole will involve organization and management within the headquarters, it must also involve an appreciable measure of training concerning the fundamental concept of standards and their formulation, as well as the influence of standards in other than the technical areas - for example, as the mark of quality in the open market.

These aspects of standards must be thoroughly understood throughout all of ICONTEC.

Also, ICONTEC management must not only be fully aware of the fact, but must have a progressive program of meeting and acquainting the top-level executives of Colombian business organizations in order to "sell" standards and to obtain adequate support - because such support, particularly the financial aspects thereof, are decided at the executive level; not at the technical level!

4. 4.3.2 Technical Committee Assistance

For this phase of the assistance program, the individual technical committees need the guidance of individuals who are not only technical experts in the particular discipline, but persons who have practical experience and know-how in committee administration and operation. For example, NBS personnel who have been attending PASC Seminars are uniquely qualified from these stand-points. In addition, they have become familiar with Latin American needs, customs, etc. As a consequence, it was concluded that this was the kind of

specialized assistance that was needed, and preferably be combined in connection with L. A. trips of NBS (or other) personnel to seminars.

As of the present, it was agreed that such technical assistance was needed in the following categories: -

Iron and Steel	}	{ Railroad Equipment
Non-ferrous Metals		
Cement and Concrete		
Textiles		
Petroleum Products		
Fertilizers and Pesticides		
Plastics		
Hides and Leather		
Paper and Products		

4. 4.3.3 Standards Library

In addition to the ASTM Standards which that Society is donating to ICONTEC, it was agreed that U. S. standards in the following categories should be made available: -

American Standards	ASA
Automotive Standards	SAE
U. S. Government, Federal Mil., and Coml.	D/C, D/D, GSA
Department Labor Safety	D/L
Waterworks	AWWA
Petroleum, etc.	API
Cement	ACI
Plastics	SPI
Paper	TAPPI
Food and Drugs	FDA

4. 4.3.4 Technical and Administrative Indoctrination

In order to gain first-hand knowledge and experience, a member of the ICONTEC staff should make a U. S. visit planned along the following lines: -

ASTM Steel Comm. Meetings in Mexico City, week of January 25, 1965

ASTM Committee Week, Cleveland, week of February 8, 1965

Visits to American Standards Association, New York; Consumers Union on Research, New York; A. S. T. M., Philadelphia; NBS and others, Washington.

4.5 ICONTEC Operations

4.5.1 Standards Origin

Although the original concept of ICONTEC organization and operation was directly comparable to that of ASTM, it turns out that in stimulating ASTM regulations, etc. into ICONTEC "Articles" much has been altered unintentionally - mostly due to lack of familiarity with ASTM operation. For example, as presently stipulated in the ICONTEC Articles, any action toward originating standards must come from headquarters which, on this basis, effectively makes the decision as to "need" and "use". Such is quite contrary to ASTM procedure.

The progress, or path, of a proposed standards in ICONTEC is circuitous - almost to re-circling, and should be streamlined.

4.5.2 Industry Support

ICONTEC has, for so young an organization, a surprisingly large and variegated array of member organizations. However, there is a noticeable lack of real support, both technical and financial. In fact, as I was told, some organizations seem to take the attitude that standardization is O.K., but let's see what you can do before we invest in this thing!

This is unfortunate - and not uncommon in Latin America. Also, it clearly shows that top management of these business enterprises has not been educated concerning the role of standards.

In this connection, ICONTEC requested that I contact several organizations in Bogota in order to get their reactions.

4.6 Industrial Visits

The primary objectives of these visits was to assure that business executives were aware of the existence of ICONTEC, knew of its objectives, realized the significance of standards to their business - from manufacturing through marketing, - and to enlist their technical and financial support.

These visits were to the top executives of the following: -

Celanese Colombiana, S.A., - Dr. Pastrana Borrero

General Electric, S.A., - Mr. W. V. Gough

Icollantes, - Mr. Pasburg

International Petroleum (Colombia) Ltd.

Intercol (ESSO) - Mr. H. C. Gardiner

All of these companies are U. S. - descended, and in most of them a staff member knew of the standards effort, but were not active in ICONTEC.

In most cases these top executives were unaware of ICONTEC and its objectives. However, when I explained the potential effect of Colombian standards both on their product and on their procurement, they were most interested!

Probably the clinching item was that of ICONTEC certification of consumer goods - wherein I used the current brake-fluid problem as an example.

In all instances, I was assured that they would participate in and support ICONTEC.

Now, as I later pointed out to the Board of Directors of ICONTEC, I was dealing with four Colombian Branches of U. S. Companies that I personally know to be active in standards work in the U. S. Also, as I had expected, their technical people knew something about ICONTEC (in 2 instances). However, top management was, in general, unfamiliar with the movement. But on explanation, readily agreed that participation was essential to their business. Thus, one can but conclude that ICONTEC must immediately adopt a program of educating top business executives to the significance of standards in order to assure both participation and support by top-level decision.

4.7 Weights and Measures

ICONTEC has a Committee on Weights and Measures, for it is fully realized that the country must have and use such basic standards.

As a consequence, ICONTEC is most anxious to participate in the AID-sponsored W & M demonstration - even to the extent of collaboration with the Physics Department of the University in order to offer facilities in Bogota as a demonstration and training center for W & M for Latin America. This is the intent of the official reply to the airmail questionnaire on this subject.

It must be admitted, however, that no one in the group was aware of the magnitude of establishing, utilizing, and enforcing a W & M program. As a consequence, I spent most of one afternoon in discussing these aspects with the committee.

At present, the committee is devoting most of its efforts toward the adoption of recognized definitions, values, etc. by ICONTEC.

4.8 Sanitary Engineers Meeting

At this convention, Mr. Kollar (BDSA) was presenting a paper which was primarily concerned with standards as they applied in this particular

discipline. Also, we at NBS had been of some help to Mr. Kollar in the preparation of his paper. As a consequence, and because of the inter-relation to ICONTEC, Mr. Kotun and I took Drs. Henao and Gomez to this meeting as guests of Mr. Kollar.

Being bilingual, Mr. Kollar had copies of and delivered his speech in Spanish; during the course of which he introduced Drs. Henao and Gomez.

The speech was very well delivered and very well received by an attentive and interested audience.

One of the resolutions passed at this convention emphasizes the need for governments, standards institutes, and producers to cooperate in developing national and international standards based on resources now available in water supply programs.

4.9 General Comments

ICONTEC had no experience in administering a PASC Seminar, nor had there even been any participation in such. As a consequence, I spent an appreciable amount of time in advising them on all aspects of such a venture, varying from what local dignitaries to invite - on through to a ladies program.

Adequate meeting notices, program, reservation requests, etc., were sent out, and hotel and meeting accommodations arranged.

I was later advised that the Seminar was most successful - there being representatives from 14 countries, and 50 proposed standards and test methods were initiated.

It is anticipated that the technical assistance program, etc., will become effective by mid-September.

Meeting Mr. Lightman (BIC) in Bogota was quite fortunate in that it enabled us to compare notes, interests, and objectives in finding out that our respective missions in the international area had many factors in common and that there should be much closer liaison between our groups in Washington.

5.0 MEXICO CITY, JULY 17-25, 1964

Mr. Gilbert Larson, Commercial Attache

Mr. Paul Flores, Commercial Attache

Dr. Donald A. Fink, OAS, PAU, Washington

Mr. Thomas S. Patton, President, American Iron and Steel Institute

Mr. George Rose, Vice Pres. & Secretary, American Iron and Steel Institute

Ing. Fernando Aquirre Tupper, Secretary General, Latin-American

Iron and Steel Institute (ILAFA)

Ing. Anibal Gomez, Seminar Director, ILAFA

Ing. Marcelo Ducrey, ILAFA Staff

Dr. Lic. Leopoldo Baeza y Acevez, Manager, Mexican Iron and Steel

Institute, Regional Secretary, ILAFA

Ing. Salvador E. Casanova, Vice President, Mexican Iron and Steel Institute

Sr. Don Lic. Carlos Prieto, President, ILAFA and President, Fundidora

de Fierro y Acero de Monterrey, S. A.

Sr. Enrique Ayala Medina, Director, Fundidora de Fierro y Acero de

Monterrey, S. A.

Sr. Camilo G. Sada, Director General, Hojalata y Lamina, S. A.

Ing. Arturo Bernal S., Hojalata y Lamina, S. A.

Ing. Francisco Indaco, Vice President, Tubos de Acero de Mexico, S. A.

Sr. Victor Felix, Manager of Sales, Tubos de Acero de Mexico, S. A. (TAMSA)

Ing. Abr. Chavez Vigil, (TAMSA) President, Mexican Dist. ASTM

Ing. Rafael Monroy Campos, TAMSA

Ing. Samuel Alazraki, Camas y Tubos, S. A.

Ing. Francisco de la Concha R. Petroleos Mexicanos

Ing. Mario Vasquez Reyna, Sub-Director, Mexican Standards Organization (DGN)

Ing. Manuel Marin Gonzales, DGN Staff

5.1 Mexico City

On my arrival in Mexico City, I was greeted by Mr. Flores of the Embassy Staff and also by Ings. Alazraki, de la Concha, and Monroy who were Seminar Delegates with me in Santiago last November.

It was a real welcome!

The next day I had a long telephone conversation with Sr. Baeza y Acevez, who posted me on the initial stages of the meeting. Formally, this is the Fifth General Assembly of ILAFA, and its Fourth "Congress": that is, meetings for presentation of papers, panel discussions, etc.

Sunday had been scheduled as initial registration at the Hotel Mania Isabel - next door to the new U. S. Embassy, which I now saw in completed form.

The hotel set-up was an information and transportation center rather than registration, but, encountering Sr. Ducrey (ILAFA, Santiago) who told me Ing. Aquirre T. was holding forth at the Medical Center where all meetings would be held.

So I went there, and was astounded by this large and structurally beautiful complex of buildings which constitute the Mexican Social Security Hospital Center.

Here I renewed acquaintance with Sr. Lic Baeza and with Sr. Ayala Medina, both of them being busily engaged in final preparation for the opening on the morrow. I also found that Ing. Aquirre T. was in conference with two Russian visitors, so I could but have but a few words with him - we agreeing to get together at the Reception in the evening.

The Reception for delegates (and wives), given by Don and Sra. Carlos Prieto was held at the noted San Angel Inn, formerly an early 18th century monastery, and was a gorgeous affair with several hundred guests in attendance.

Among the many delegates that I first met at this reception was Mr. Donald Fink, who, I found, was very much interested and concerned about steel standards in Latin America.

5.1.1 ILAFA Sessions

The Monday morning opening session was a quite formalized affair, being opened by Sr. Camilo Sada who was the general chairman of the Congress. He gave way to the President, Don Carlos Prieto who spoke at some length and then introduced Sr. Lic. Raul Salinas Lozano, Secretary of Industry and Commerce of Mexico who was representing the President of Mexico in welcoming ILAFA.

In addition to these gentlemen and other officers of ILAFA on the dais there were: -

Mr. Thomas F. Patton, President, American Iron and Steel Institute

Dr. Frank H. Samter, President, British Iron and Steel Institute

Mr. Kenkichi Toshima, representing the President, Japanese Iron and Steel Institute

Minister Roger Reynaud, High Authority, European Coal and Steel Community

Messrs. Patton and Samter were made Honorary Members of ILAFA and responded with appropriate speeches. Mr. Toshima presented a speech for the President of the Japanese Iron and Steel Institute, and Minister Reynaud gave a lengthy dissertation during which it was most interesting to note that Latin American steel men were being invited to the High Authority in Luxemburg for training, and that CECA was enhancing their relations with Latin American steel interests by opening a branch office in Mexico which would be in operation within two weeks.

Following this session the delegates were transported to the headquarters of the Mexican Iron and Steel Institute where we were the guests of the "Camara" (Chamber) at an impressive garden-party buffet luncheon.

Even before we went through the buffet line, I had learned from the inquiries made of me by several top steel executives that there was an appreciable concern among Mexican steel men concerning the status of steel standards in Mexico, the promulgation of Latin American standards for steel (PASC), and what was going to happen to the Mexican standards organization after the forthcoming election because all of the top-level positions were "politically sensitive".

At this luncheon, I was glad to again see Ing. Bernal of H y L, Monterrey, who was one of last year's delegates at the Santiago meeting - through him, to again meet and talk with Sr. Sada.

The Tuesday morning session was concerned primarily with the development of the Latin American steel industry to 1970, and, more particularly, to the financing thereof. This is where Messrs. Cass (EXIMBANK) and Mendivil (BID) were in the forefront.

The major points of financial discussion centered about two factors:

- 1 - Availability of financing for the anticipated industry expansion.
- 2 - Financing of associated costs.

To the first of these, it would seem that adequate financing could be expected.

To the second factor evolved a considerable amount of discussion because of the fact that the financing of these steel mills is confined to that of the mill per se, and all such factors as transportation facilities, employee housing, docks, etc., must be paid for by other means.

This is most significant, inasmuch as these costs may represent a dollar value which is 1/3 or more of the mill cost.

While not specifically answered, it seemed that there might be some possibility of bank-financing of these costs.

After a "Vino de Honor" (luncheon) where the delegates were the guests of the Secretary of Industry and Commerce, the Congress resumed session on the subject of the continuous casting of steel and its development in Latin America.

The principal speakers were Messrs. Malcor (France) and Boitchenko (Russia).

As a pioneer in continuous casting, the latter really had the limelight, and was both quick and clever in his replies to inquiries - despite the necessity of the double - and triple - translation necessary for communication.

It was quite significant to learn that, this year, Russia would have a continuous cast mill in operation that would produce 2,000,000 tons/year of sheet for automotive use. Boitchenko mentioned this sheet-use for auto tops, hoods, and trunk-lids. He made no mention of fenders, etc. that require good deep-drawing properties of the steel - and it was quite interesting that no one raised this question.

Boitchenko offered technical assistance to Latin American steel companies interested in using continuous casting.

In Latin America, this method is being used in steel companies in Mexico, Venezuela, Brazil, and Argentina - with another unit being installed in Peru.

On Wednesday I paid a visit to the Mexican standards organization (DGN), but did not get to renew acquaintance with Dr. Garcia Ramos, Director (See NBS Report 7793) as he was suddenly called to the office of the Minister and left his apologies. However, I had an interesting visit with Ing. Vasques Reyna, Sub-Director, and Ing. Marin G. who was with us at Santiago.

I learned that the Director was planning to attend the ISO meetings in New Delhi, India, in November - but that otherwise he was busy "finishing up" as he was through with his job after the election. It was also surprising to learn that the Sub-Director was also leaving - and many others. As it was put to me - 'all the top goes and nothing is left.'

The next three sessions consisted of a variety of papers covering many aspects of the steel industry, from mining through production - most of them being of specific interest to certain elements of the delegates.

The closing session held several interesting items: - First, there was no U. S. A. representative on the dais. Although Mr. Fink was there, and spoke briefly, he was representing OAS. Second Mr. Mendiola gave a lengthy summary on steel financing. Third, Minister Reynaud again held the podium at length concerning CECA. Fourth, Pres. Prieto called attention to the fact that Brazil was again represented in ILAFA (See First Trip Report, NBS No. 7793). He introduced the Brazilian delegate and asked for a round of applause - which was given.

The finale of the congress took place at the Country Club where there must have been over a thousand guests in attendance.

As to attendance at the Congress itself, the affair had originally been planned for some 300 attendees, whereas the actual attendance was 500.

The simul-translation service was excellent; each set in each auditorium having a built in head-phone unit with 6-station selector switch for the language one wanted, and with volume control.

Each day there was available copies of papers presented and meeting minutes.

Attendance at this Congress of ILAFA was both highly interesting and instructive. Additionally, it provided the opportunity of making many new personal contacts that were - and will continue to be - of significant value in our Latin American standards work.

5.1.2 Plant Visitations

Friday was devoted to plant visitations both to local steel companies and also to the principal steel centers of Mexico. Having been to Monterrey on a previous trip, and also being scheduled to again visit there on the occasion of the meeting of the ASTM steel committees in Mexico next January, I begged off on the instances of my Monterrey friends and joined the group going to Vera Cruz by chartered plane to visit TAMSA.

TAMSA (Tubos de Acero de Mexico, S. A. - Steel Tubes of Mexico, Inc.) is one unit of the TECHNIT combine of seven groups, mostly centered in Vera Cruz. It is the seamless steel tube plant in Mexico, and uses the Mannesmann process of tube manufacture. They have an excellent, spacious, clean, up-to-date plant, with excellent inspection facilities - and turn out a really quality product.

Of other members of the combine located in the adjacent areas, we visited the unit devoted to the manufacture of oil drill rod and pipe, as well as the "forge" plant which not only provides a general forge shop service for TECHNIT units - but also manufactures rotary drill bits under license from Hughes Tool - USA.

Another unit of this combine - that devoted to fabrication - was of special interest to me because it recalled a visit I had made to a specification-writing committee of IRAM (Argentina) which was concerned with specifications for pressure vessels and compressed gas containers.

Well, for about 100 yards on either side of the road leading to the main fabricating building were lined up, ready for shipment, a continuous line of various sizes of pressure vessels for the Argentine petroleum industry.

I was told by a plant executive that "they" were "sole suppliers".

After progressing through the complete process line for the manufacture of compressed gas cylinders, I noted that all of the hundreds of finished tanks were all labelled "Buenos Aires".

Following the tour of steel complex, we stopped briefly at the aluminum plant - associated with Alcoa, U. S. which is devoted primarily in converting its raw electrolytic aluminum into alloy ingots to supply the Mexican aluminum casting and fabricating industries.

The only fabricated product in evidence was heavy aluminum wire made by continuous casting (Prosperzi), and intended for re-draw into smaller wire for aluminum conductors.

As the result of these plant visits, it is again most obvious that these new Latin American mills and plants reflect the best technologies and equipment from the USA and Europe - and that those that are properly operated can produce products which equal ours in quality, thus competition is only a matter of price.

