

Manufacturing Chemists' Association, Inc.

(FOUNDED 1872)

1825 CONNECTICUT AVENUE, N. W. - -
WASHINGTON, D. C. 20009

MINUTES OF MEETING

PLASTICS COMMITTEE
Oyster Harbors Club
Osterville, Massachusetts
September 9, 1965

PRESENT: Messrs.

Werner C. Brown (Chairman), Hercules Powder Company
Richard G. Askew, Phillips Petroleum Company
H. Harold Bible, Monsanto Company
Earle S. Ebers, U. S. Rubber Company
James W. Ferguson, Hooker Chemical Corporation
William C. Goggin, The Dow Chemical Company
George M. Hale, Shawinigan Chemicals Limited
Carl A. Setterstrom (for R. M. Knight) Rexall Chemical Co.
L. B. Kuhn, Firestone Plastics Company
Thomas B. Nantz, B. F. Goodrich Chemical Company
Frank M. Norton, Allied Chemical Corporation
Glenn L. Pitzer, Union Carbide Corporation
Frank Cameron (for R. G. Richards), Celanese Plastics Co.
Harry B. Warner (Board Liaison), B. F. Goodrich Company
F. H. Carman, MCA

The Chairman, on his own behalf and for the Committee, expressed appreciation to Mr. Glenn L. Pitzer for the fine arrangements set up for this conference, particularly the excellent speakers obtained. On question as to the availability of the Club in the future, MCA has been assured the Clubhouse would be available in 1966 and 1967. Consideration is now being given to reburbing the Clubhouse rather than tearing down this facility.

SPI Construction Council

The Chairman advised that he thought it appropriate to give a capsule report to the full membership on the status of the SPI Construction Council and future plans of that group. Through last minute changes, T. T. Miller, Chairman of the Board of the SPI, had arranged to attend and had been invited to make this presentation in the general business meeting. A copy of his remarks with the accompanying charts is included as Appendix A.

SOCMA Task Force for GATT Information

The Chairman had been contacted by William F. Christopher of Hooker, Chairman of the SOCMA Plastics and Resins Task Force,

and was supplied general details of the activities of that group in obtaining foreign and domestic information on the industry to aid the technical advisors to the Office of the Chief Trade Negotiator, Mr. Herter. Since the general meeting agenda would not allow time for a report of this nature to the entire group, the work of the Task Force was well under way, and it was not a Committee of the MCA, Chairman Brown commented at length from the memorandum supplied by Mr. Christopher in this meeting per Appendix B.

Mr. Brown then stated that meetings of various task groups were scheduled in the coming week to review results of surveys to date, and the work on plastics and resins which had been undertaken by Horace J. De Podwin Associates Inc. Since this was financed only by SOCMA, it was concluded that no action on the part of the Plastics Committee was necessary at this time.

Weatherability Project

The Secretary commented very briefly on progress and some of the problems confronting the Research Associates at the National Bureau of Standards. Appendix C constitutes a report covering this in greater detail. A meeting of the full Steering Committee is scheduled for September 30 at the Bureau.

Several technical representatives working on this research project and one interested member company research director had commented on the need for qualified industry technical direction of the work at the Bureau of Standards and that Dr. Warren F. Busse, du Pont, and Chairman of the Liaison Committee had very adequately filled this spot to date. Because of Dr. Bussee's pending retirement January 1, 1966, it had been proposed that some arrangements be made for him to be retained on a part-time basis to continue direction of this program. Following a short discussion on this, the Washington office was authorized to negotiate with Dr. Busse to work out a mutually agreeable plan for such consultation beginning January 1, 1966.

MCA Semi-Annual Meeting

Chairman Werner C. Brown commented briefly on Committee members' reaction to the panel proposal for plastics in construction or other plastics oriented subject to be considered in the meeting program November 23. Since a heavy majority were of the opinion this would not be proper in 1965, it was concluded that the Committee should keep this in mind for the 1966 November meeting and that it be given consideration well in advance of the usual program planning during July and August.

Underwriters Labeling Program

A new UL "yellow card" rating is being used for approval of certain materials. This prompted technical representatives to investigate the Laboratories' criteria for thermal aging of plastics to assist in providing data for individual member laboratories for advisory service to fabricators and end users. The former UL Advisory Subcommittee for the appliance project at UL was reactivated and will meet with UL representatives at Melville, Long Island, September 16.

Vice Chairman Nomination

The Committee approved the suggestion of Chairman Brown that a Nominating Committee for Vice Chairman be composed of William C. Goggin, Thomas B. Nantz, and Earle S. Ebers. Subsequently, W. C. Goggin, reporting for this Committee, nominated Glenn L. Pitzer for Vice Chairman of the Plastics Committee. On motion, duly seconded, Mr. Pitzer was unanimously elected.

Plastics Financial Package

An interim report had been included with the Agenda. Estimates based on first three months operations were well within the budget, although it was explained that it is a little early to determine costs of the Weatherability Project Program, particularly on the equipment that may be needed. Assessments are in keeping with the forecast.

Next Meeting

The next meeting of the Committee was scheduled for a luncheon at 12:30 p.m. at the New York Hilton Hotel on November 22. Also, the Secretary was authorized to arrange for the group dinner meeting at the New York Hilton Hotel on the evening of November 22 with an informal program as in the past.

Respectfully submitted,

F. H. Carman

F. H. Carman, Secretary
Plastics Committee

FHC/bk

Enclosures

CC: Plastics Committee, Members and Alternates

Mr. Lloyd Symington

Mr. Harry B. Warner, Board Liaison

September 15, 1965



THE SOCIETY OF THE PLASTICS INDUSTRY, INC.

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HOW THE PLASTICS INDUSTRY
IS ORGANIZED TO REACH THE CONSTRUCTION MARKET

by T. T. Miller
Chairman of the Board
The Society of the Plastics Industry, Inc.

Presented at MCA Meeting of September 9, 1965

HOW THE PLASTICS INDUSTRY IS ORGANIZED TO REACH THE CONSTRUCTION MARKET

by T. T. Miller, Chairman of the Board
The Society of the Plastics Industry, Inc.

Most of you will recall the Yankelovich and Kinsella reports which the Manufacturing Chemists' Association authorized several years ago. Some considerable progress has been made since the reports were prepared.

After these surveys were evaluated, MCA and The Society of the Plastics Industry reviewed the findings to determine what action the industry should take.

It was recognized that the proper relationship between MCA and SPI was for MCA to support the more or less basic research projects as to the properties of plastics materials in relation to the requirements for their performance in construction applications. SPI comprising, as it does, both the materials manufacturers and also practically all responsible fabricators of plastics, would continue to be the sponsor for fabricated plastics to the construction industry. SPI undertook to expand its programs in this field.

Since no across-the-board organization was in being within SPI to undertake certain of the suggested activities, it was decided to establish within the framework of SPI the Plastics in Construction Council. (Chart 1, attached)

The Council has four working committees:

- ... Code Advisory
- ... Research
- ... Standards and Certification
- ... Education

The chairmen of these four committees, together with the chairman of the Construction Council, constitute a planning committee. Affairs of the Council and its policies and programs are supervised by a Policy Committee of twenty members who meet several times a year.

SPI's Code Advisory Committee has been in operation since March of 1955. For organizational purposes, it is assigned to the Plastics in Construction Council. The members of this committee are men who have a knowledge of plastics suited for the construction market and who are familiar with building codes. In addition, code consultants are retained on the West Coast and in the East. Our attached Chart 2 shows the areas on which it will program its code activities in the future.

The Research Committee has as its main objective the investigation of environmental performance criteria for plastics in construction. In studying the total fire hazard, as distinguished from such individual factors as smoke density, toxicity, etc., the committee hopes to determine scientifically the proportionate amounts of different types of combustible materials that could reasonably safely be used in buildings depending on their design, type of occupancy, ventilation, escape avenues, etc. The committee has contracted

for Phase One of this study with the Illinois Institute of Technology's Research Institute, which will hold seminars on the subject with an Advisory Board consisting of eminent authorities in the fields of code work, fire safety, building design, etc. Out of this may evolve a series of testing programs to be conducted at various institutions under SPI auspices.

The Standards and Certification Committee concerns itself with successful ways of initiating standards programs and with evaluating segments of plastics in construction which could use standardization and, ultimately, certification programs.

And finally, the Education Committee is primarily interested in the means and media by which the many different groups concerned with building construction, including architects, builders, engineers, housing and code authorities, fire and safety authorities, home and building owners, can better be informed of the desirability of plastics in building construction.

The Education Committee has contracted with the Opinion Research Corporation of Princeton, New Jersey, to undertake an opinion survey of the design profession in greater depth than was possible in the Yankelovich study to acquire valuable data for the direction of its efforts in public relations and education programs. This data will also be available to individual member companies who support the budget financially and who may find the data very valuable as a guide to their publicity and programs for their own individual products entering the construction field.

The first summer session at the Massachusetts Institute of Technology, arranged and partially financed by this Education Committee, entitled "Plastics in Architecture" was successfully completed in June. The course was directed toward the faculties of accredited architectural schools in the United States as well as to the practicing architect.

A seminar for practicing architects is scheduled for later this month at the University of Michigan, jointly sponsored by the Cellular Plastics Division of SPI and the American Institute of Architects.

To summarize at this point the functions of the SPI Plastics in Construction Council, I think it is by now evident to you that its activities and those of its four standing committees are designed to serve the interested and to cut across the lines and coordinate the work of twelve divisions of SPI which are concerned in one way or another with promoting applications for plastics in construction.

Companies which are members of SPI include not only practically all the materials producers who are members of MCA, but also a very wide list of fabricators. Any of these two categories of companies who are interested in applications for plastics in construction can become active in the appropriate divisions

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of SPI and can also join and support the Plastics in Construction Council, which acts as the unifying front for all possible applications for plastics in construction.

The Plastics in Construction Council has its own budget. As initially proposed, the 1965 budget for the operation of the Council was \$150,000. To date, thirty-one companies have contributed \$124,000 to support its work. Even though the amount of the original budget was not fulfilled, it has been possible for the Council to undertake most of its 1965 programs.

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The four working committees of the Plastics in Construction Council have all been hard at work recently preparing their programs and budgets for 1966. These are to be coordinated into a comprehensive total program and presented to the Policy Committee of the Construction Council at a meeting in New York on September 28. The 1966 program and budget will then be communicated to SPI company members which are actual or prospective members of the Construction Council. It is felt that by presenting the 1966 budget in the early fall, the company members will be able to schedule their own contributions to the Council's budget at the time of preparing their own company budgets for 1966. This should enable the Plastics in Construction Council to have completed its financing for 1966 and to embark upon its 1966 program in the smoothest possible way.

Next, we come to the SPI Plastics Pipe Institute. Its general objectives are to promote standards of quality, to establish recognized hallmarks bespeaking compliance with the established standards, and to advance, by all lawful means, the interests of the plastics pipe industry.

Now that standards have been promulgated for many classes of plastic pipe, code bodies are showing willingness to change codes to permit the use of plastic pipe in services where they are appropriate. Concurrently with the promulgation of the standard on ABS pipe, the manufacturers of ABS materials and pipe made from such materials decided that it would be advantageous to establish an ABS Council to aggressively promote code changes which would provide for the use of plastic pipe and fittings in drain, waste and vent applications. The ABS Council was established in mid-1964. It has been successful in having the Western Plumbing Officials Association approve pipe and fittings for DWV services and has met with similar success in other jurisdictions.

In other areas of plastics pipe and fittings, i.e., PVC, polyethylene, polypropylene and polyacetals, manufacturers are also aware of the need for a comprehensive plumbing code effort. As a result, SPI has agreed to organize a Plastic Piping Systems Code Committee. This committee will represent all classes of plastics pipe and fittings. The proposed annual budget for this undertaking is \$184,000 with twenty-four companies agreeing to give their support. Others indicate they will likely do so. The Copper Development

Association operates its field force of piping system code experts on a budget of \$225,000, and the Cast Iron Soil Pipe Institute operates on a budget of \$325,000. To compete against these other materials, the plastics pipe and fittings industry must support the programs and the budgets of SPI.

Now let me outline what MCA has done and is doing to back up SPI in its Plastics in Construction activities. Years ago, MCA supported a fundamental plastics research project at Massachusetts Institute of Technology. A strong plastics program was developed, which has served the plastics industry and the design engineer and architect usefully. And most important in this program, a number of architects acquired training -- a knowledge of plastics and where and how they could be used in the construction market. The result of this being that these "experts" have been used time and again in providing consultant engineering service to architects and builders. A fine example of one such service provided was in the valuable advice Professor Albert G. H. Dietz gave to the architects who designed the U.S. Pavilion at the Brussels World's Fair in 1958.

MCA financed the smoke test development research program at Underwriters' Laboratories which the SPI Code Committee made good use of in the code proceedings in San Francisco. This ultimately led to the San Francisco Board of Examiners establishing "livable" smoke density numbers.

The literature research at Southwest Research Institute which MCA underwrote relating to toxicity was helpful in the San Francisco proceedings, and it has served well in other instances.

At present, MCA is sponsoring a weatherability research project at the National Bureau of Standards and an evaluation of the fundamental properties of polymers at Case Institute of Technology and at MIT.

The results of these research activities will serve the plastics industry's interest in construction as well as the SPI committees. In practice then, MCA has undertaken principally basic research to support the field activity of the several SPI councils, institutes, divisions and committees.

In a manner of speaking, this is somewhat of a progress report for it highlights the major organized activities that have been established to deal with code and related problems bearing upon the future progress which the industry is going to make in penetrating the construction market.

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HOW THE PLASTICS INDUSTRY IS ORGANIZED TO REACH THE CONSTRUCTION MARKET

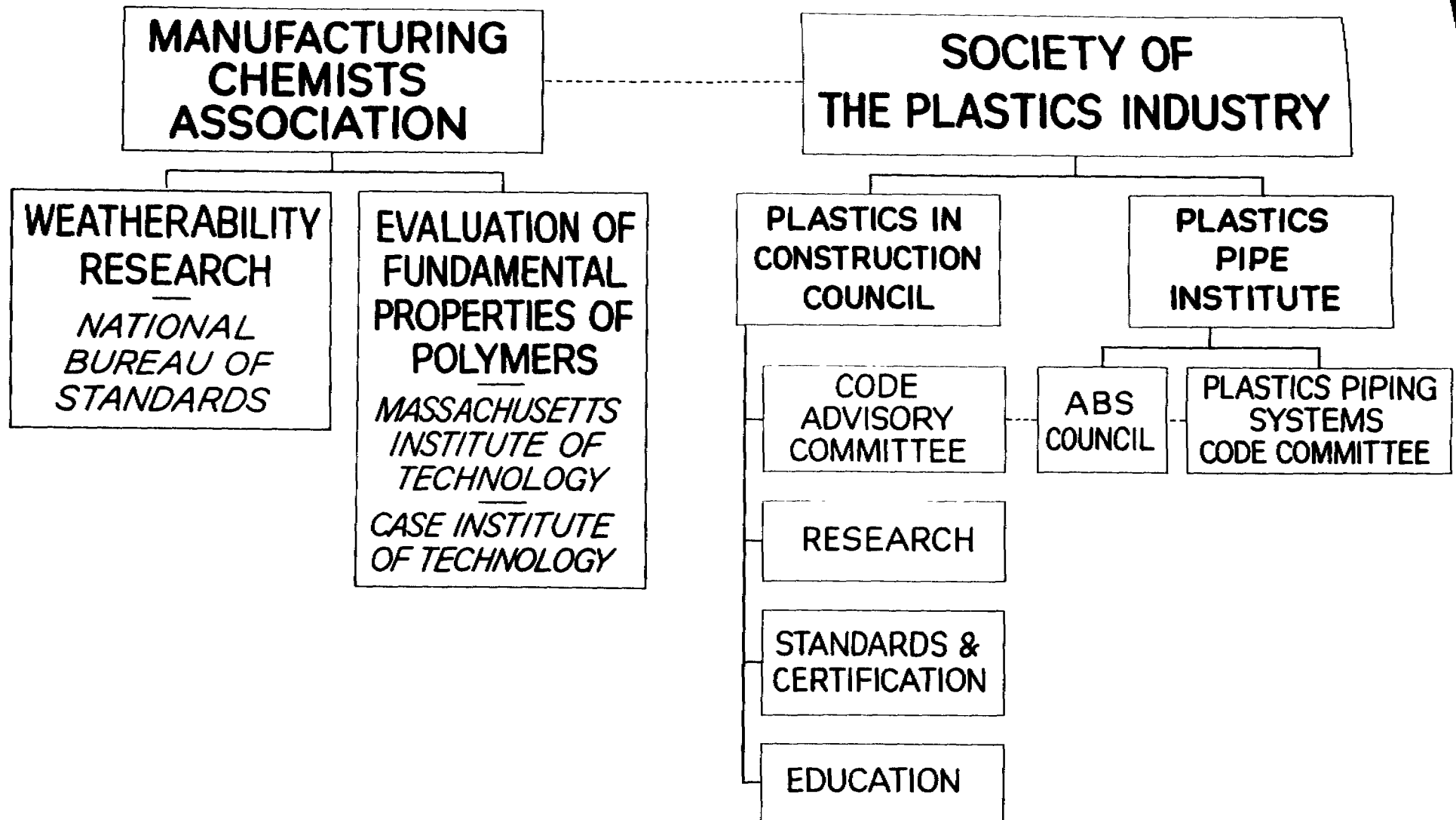
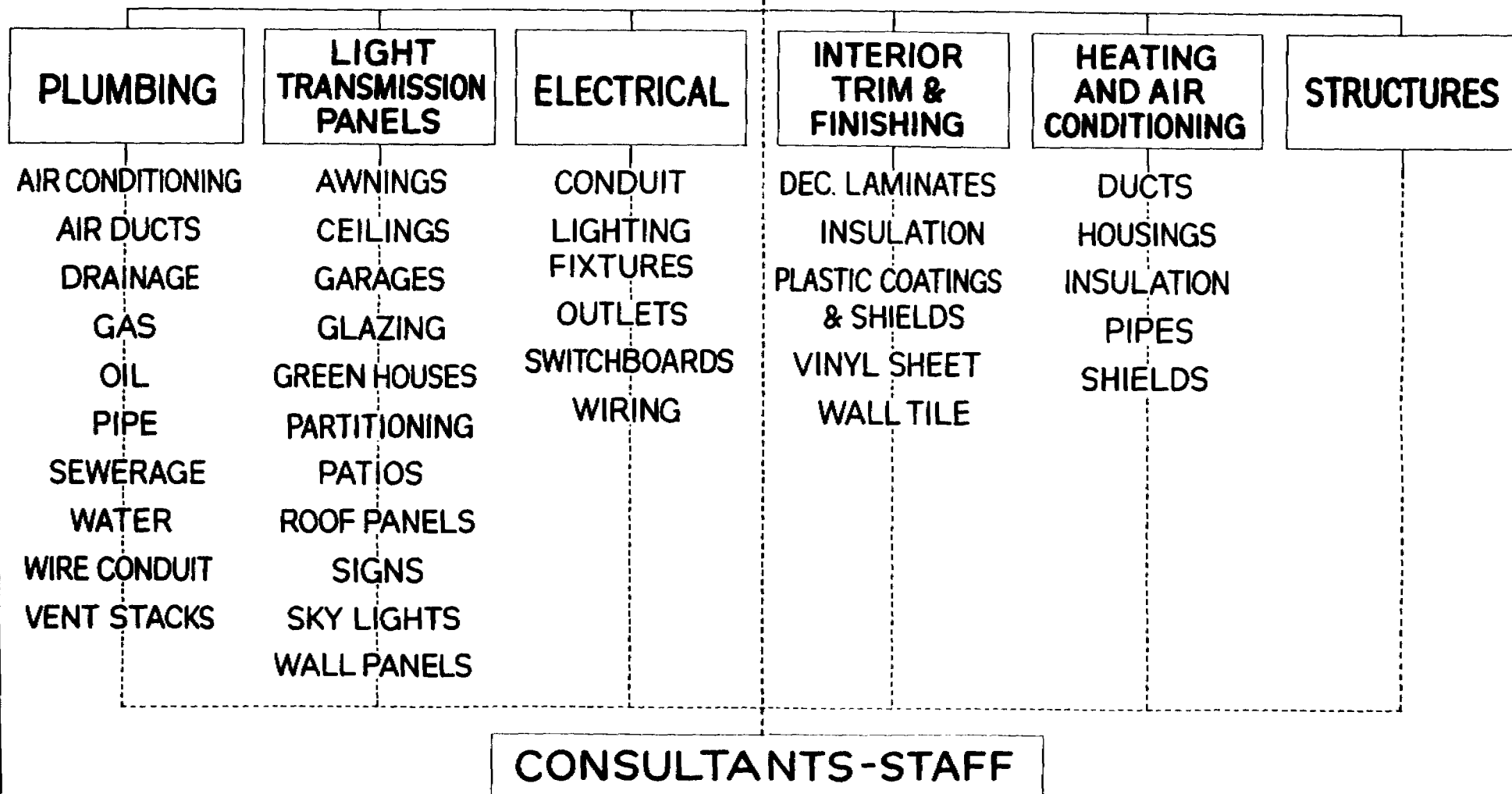


CHART 1

SPI CODE ADVISORY COMMITTEE

EXECUTIVE COMMITTEE



CONSULTANTS-STAFF

PLASTICS AND RESINS TASK FORCE

The Plastics and Resins Task Force was organized by SOCMA in 1962 to prepare industry data for presentation to Government agencies concerned with trade and tariff negotiations. The Task Force has conducted studies and presented three formal reports:

BDSA	April 26, 1963
Tariff Commission	January 29, 1964
Gov. Herter's Office	January 28, 1965

The Task Force has also submitted information and served as a source for industry information for The Office of the Chief Trade Negotiator.

From the start our Task Force has included representatives of SOCMA, MCA, and SPI, and information on our work has been furnished to the headquarters of all three organizations. This has helped to assure coordination within the industry.

In our present work, the Task Force is doing two important jobs for the plastics materials industry: (1) answering questions on trade, tariffs, and international competition as requested by Government agencies, and (2) organizing and presenting, on our own initiative, industry information and points of view on matters relating to trade and tariff policy. In our work we help keep individual companies informed on trade negotiation matters and encourage participation both through the Task Force and as individual companies. Present membership of the Task Force is listed below:

Ralph G. Biondi, W. R. Grace & Co.
 B. P. Dahlstrom, Rohm & Haas Company
 George Flanagan, B. F. Goodrich Chemical Co.
 Richard T. Clark, Monsanto Company
 Edwin Hallberg, Jr., Union Carbide Corp.
 George Harrington, E. I. du Pont de Nemours & Co., Inc.
 Frederick L. Lawton, Allied Chemical Corp.
 R. A. Leonard, Hercules Powder Company
 Joseph D. Madden, SPI
 W. S. Sloatman, American Cyanamid Co.
 Clifford F. Thompson, The Dow Chemical Co.
 R. L. Van Boskirk, Modern Plastics Magazine
 Wolfgang Schoellkopf, The Chase Manhattan Bank
 James W. Flynn, Celanese Plastics
 William F. Christopher (Chairman), Hooker Chemical Corporation

The Task Force is now working on a major study which is, in effect, an economic evaluation of the plastics industry world-wide. This study is being done to assist our negotiators in Geneva in conducting the "sector bargaining" that is scheduled to begin this fall. The chemical industry is one of five basic industries

selected by the GATT negotiators to be discussed on an industry basis, world-wide. It is therefore most important for our U.S. negotiators to be well-informed on competitive economics and trends, the problems that can be expected from reductions in U.S. tariffs, and the opportunities that can result from tariff reductions abroad. The question is complex since we are judging the probable future effect (1970 and beyond) of tariff reductions negotiated in 1965-1966 and going into effect in stages over a four-year period. Our present study will provide information on which such decisions can be based.

Our study takes the form of an industry "facts book" giving data for U.S.A., U.K., Japan, Germany, France, Italy, Netherlands, and Belgium-Luxemburg on each of fourteen major plastics materials. The following data is included in the Facts Book:

- Annual production, for the past several years
- Imports, in units and dollars, for several years
- Exports, in units and dollars, for several years
- Derived consumption, in units and dollars, for several years
- Present capacity, by individual producer
- Present tariff rates

In addition to the Facts Book, we have information obtained by questionnaire to plastics producers giving us information on the competitive strengths and weaknesses of each of the above-listed producing countries and anticipated trends.

From this data, subcommittees of our Task Force are now preparing evaluations of each of the fourteen plastic materials. It is most important that all interested producing companies participate in preparing these evaluation reports. Any companies that have not already done so may name representatives to our Task Force for this purpose.

William F. Christopher, Chairman
SOCMA Plastics and Resins Task Force

August 16, 1965

REPORT OF THE LIAISON COMMITTEE

TO THE

STEERING COMMITTEE

OF THE

MCA PROJECT:

"TESTING THE WEATHERABILITY OF PLASTICS"

This cooperative research project on methods of predicting weatherability got under way last April, when Drs. W. F. Brucksch and J. E. Clark started working as MCA Research Associates at the National Bureau of Standards. They will report in some detail on their accomplishments over the last six months, but we thought it might be well to give you a survey of the results from the perspective of the Liaison Committee.

Year: The excellent cooperative efforts of Bill Brucksch, Joe Clark, and the member company representatives to collect the available information on weatherability testing turned up some unexpected and potentially large fringe benefits. The member companies' representatives contributed weathered samples showing various types of deterioration, and reported unusual effects they had observed in outdoor or accelerated weathering tests. Some of these results were only items of curiosity by themselves, but together with items contributed by others, they became very significant and helpful leads for our project. The members have also cooperated in showing their methods of testing weatherability to the Research Associates.

Bill Brucksch and Joe Clark found that some of the information we need (e.g., concentration of O_3 , NO_2 , SO_2 in the atmosphere) was already being obtained by U.S. Public Health Service (Cincinnati Air Pollution Lab) in several cities. Other needed information (UV content, integrated temperature, etc.) is not being obtained, but they are exploring the possibility of getting such measurements made by the Environmental Science Service Administration (ESSA).

People who have solar simulators (developed for the NASA space program) or other products of potential use in weatherability testing are coming to the N.B.S. to discuss these problems, and Bill Brucksch and Joe Clark are stimulating these new developments. New ideas and competition in the field of such test equipment will be good for all concerned.

Another important phase of the work has been to reanalyze the whole process of deterioration of plastics during weathering to recognize the individual factors in the weather that were involved, and the various types of reaction they produce in different plastics. This analysis helped to classify and organize

available weathering information, and to show what measurements should be made now that hadn't been made in the past to give us better means of predicting weatherability.

Among the new things we recognize that need to be done are: measurements of UV content of sunlight, and the integrated effective temperature at various places (hopefully, to be done by the U.S. Government), and the development of a graded system of exposures and sensitive tests for initial stages of degradation (by MCA project). Perhaps the greatest single limitation to many previous studies of weatherability was the assumption (or wishful thinking) that it was possible to develop a single test that could be used to predict the weatherability of all plastics in all climates.

Members' representatives have agreed on the composition of model rigid PVC compositions that should be used for the comparison of the effects of outdoor exposure tests and experimental accelerated indoor tests. Facilities for mixing and molding these compositions are being explored. Various compositions of other plastics are also being obtained for this purpose. This testing program will soon involve so much routine work that some non-technical help should be provided.

The time is also approaching when we will be ready to have a symposium on "Testing the Weatherability of Plastics", with contributions from our Research Associates, member companies, Government organizations, and members of our Advisory Committee.

These industry-wide contacts by the Research Associates are of great value to the project, and to the men, and also to the companies the men will return to after their term on the project. For this reason, other companies undoubtedly will want to have men from their organizations put on leave to join this effort at Washington. We believe that the project will soon be organized well enough to justify such an expansion.

Liaison Committee

W. F. Busse
F. H. Carman
W. W. Walton

Prepared by W. F. Busse
August 31, 1965

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