# President's Report Explains Policies of Institute

*(Editor's note: The Armour Tech News at this time presents the first portion of the first general report presented by Dr. Willard E. Hotchkiss to the Board of Trustees since he took office in January, 1933. This portion of the report covers the legal steps taken in the reorganization of the Institute, the findings of the McKinsey Study of Armour's problems, and the changes in curriculum and personnel which were an outgrowth of this study. In next week's issue, we will present the second half of the president's report, which deals with the financial standing of the Institute, the plans for a future site and plant, the future position of the institution in the Chicago area, and the administration's policy of student loans and scholarships.)*

The constitution and by-laws adopted on June 1, 1934, provide that the President shall make an Annual Report to the Board of Trustees.

The present administration of the Institute took office in January, 1933. The legal, educational, administrative, and financial developments since that time constitute an interwoven sequence. This report, therefore, will cover the whole period from January, 1933, to the end of the academic and fiscal year just closed.

**Mission, Institute Consolidated**

The legal status of the Institute and its properties has been greatly clarified during this time. Able and untiring efforts of the late Lester L. Falk so far untangled a maze of legal relationships between Armour Mission and Armour Institute of Technology that on October 25, 1933, the two Boards of Trustees were in a position to vote a merger of the corporations under the name of Armour Institute of Technology. On April 6, 1934, after some unavoidable delay, the merger was finally consummated.

When it appeared early in 1934 that the operating deficit in last year's budget would not be met by contributions it became imperative to release trust funds for this purpose. Conference was had with Mr. John E. MacLeish and Mr. Homer H. Cooper of Scott, MacLeish and Falk, of which firm Mr. Falk had been a partner, and the services of Mr. Cooper as general counsel were generously made available without cost to the Institute. As such, he at once undertook a comprehensive legal analysis of all the properties which the present Armour Institute of Technology had acquired through the merger with Armour Mission and otherwise. His findings were embodied in an extensive brief upon the basis of which Judge Hugo Friend of the Circuit Court of Cook County entered a favorable decree on August 9, 1934. This decree accomplished the following results:

1. It confirmed the acts of the Boards of Trustees of Armour Mission and Armour Institute of Technology, and the consolidation of those two corporations.
2. It authorized the new corporation to negotiate for disposition of and give clear title to certain real estate under the direction of the court.
3. It permitted the sale or hypothecation of securities in restricted endowment funds up to $100,000 for the purpose of meeting the uncovered deficit in the 1933-34 budget under the Institute's undertaking to restore the fund when able.

## Contributions

These proceedings, in which the heirs of the late Philip D. Armour co-operated generously, enabled the Institute to meet a current emergency and to carry on while bringing operating income and expense more nearly into balance. The vast amount of legal detail involved in preparing the brief and carrying the suit through the court and the extraordinary wisdom with which Mr. Cooper handled the whole proceedings places his contribution, together with that of the late Mr. Falk, in a unique position and makes it in both dollars and moral value easily the outstanding contribution of the academic year just closed.

Another contribution of exceptional value to the Institute during the past fiscal year was the gift of $2500 from a friend of long standing to cover the cost of the Survey by James O. McKinsey and Company, authorized soon after the present administration assumed office. Due to the fact that Mr. McKinsey contributed his own services to the value of several thousand dollars there was a residue of some $800 from this gift available for general expenses. There were also several contributions of $1000 and a considerable number of $500 but as indicated above, the total fell far short of meeting the need.

Since this report covers the period from January, 1933, payments of some $45,000, made between January and June, 1933, in fulfillment of previous pledges, should also be recorded. These payments were applied to the operating deficit of the year 1932-33. Further discussion of finances will follow references to certain educational and administrative changes.

## Survey Findings

In January, 1933, when the new administration took up its duties the Development Committee, created and given large powers by resolution of the Board of Trustees on September 4, 1931, had just completed an extensive survey of Engineering Education. This study out of which had evolved the so-called Armour Development Plan had not concerned itself primarily with internal conditions at Armour. The McKinsey Study, of which mention has just been made, constituted among other things, a re-examination of the Armour Plan directed especially toward the solution of pressing problems with which the Institute was immediately confronted. The Study was carried on in close co-operation with the administration and the staff.

**Study Covers Personnel, Curriculum**

It was obvious that any approach to practical measures would have to take account of the historical background of the Institute and of the nature and quality of the service which it had rendered in the past. Out of this background there has come an accumulated good-will reflected in a flow of qualified applicants for admission from year to year which has meant an actual attendance of upwards of 800 students and an unquestioned potential attendance considerably greater. The Survey naturally explored ways and means of consolidating this good-will.

Without arrogating to itself the wisdom required to define, much less to standardize, the art of good teaching or even good administration, the Survey considered man by man the personnel of the teaching and administrative staffs, primarily from the standpoint of the service which each person was in a position to render the Institute, both individually and as a member of a working team. Similar consideration was given to questions of curriculum.

Although there were several features of the so-called Development Plan which were based upon an abstract approach considerably different from the path of Armour's past development, the present administration proceeded from the premise that for some time to come the Institute will continue in all essentials to be the same type of school it has been heretofore. This premise assumes a four-year undergraduate College of Engineering and Architecture in which students are given opportunity to qualify as beginning practitioners in their professions, and at the same time are able to secure such fundamental education as will promote their growth and aid them in discharging whatever responsibilities their native talents, training and opportunities may bring.

**Study Shows Over-Specialization**

From the standpoint of the type of school Armour is and has been, and of necessary financial and time limitations, it appears that Armour in common with many other engineering schools has had a tendency to overload some of its curricula with useful but somewhat specialized subjects which are expensive to maintain. Besides being expensive, too many such subjects limit unduly the time available for basic subects, which in all competent discussion of engineering education are recognized as indispensable. For the most part, specialization can be more profitably carried on either as graduate work or in industrial and engineering research laboratories.

**Some Subjects Substandard**

Another weakness which the Survey revealed was also one widely prevalent in American education. It arose from the fact that the organization and teaching of certain important subjects had not kept pace with the times, nor with standards recognized as essential for an outstanding engineering school. Without implication of criticising individuals, this appeared to be notably true in English, in the Social Sciences and in Shop Courses. Considering the question of teaching as a whole it is believed that our discoveries also ran true to form for colleges generally. Some teaching of exceptionally high order was found, a preponderance of good teaching, and some very poor teaching. Substantially the same thing can be said in respect to internal administration.

In addition to the problems directly connected with teaching, administrative personnel and curriculum, the new administration found it necessary to consider almost immediately a closely related question arising out of the research and testing carried on by certain members of the faculty with the use of Institute equipment. It is the policy of the Institute to encourage its teaching staff to undertake research for industry and for the advance of engineering science, and there is no occasion to define research in a narrow or highly restricted sense. It is, however, highly essential that any pecuniary features of work done for industry be not permitted to dominate the teacher's interests nor to conflict directly or indirectly with his teaching obligations. It is also of course axiomatic from a business standpoint that the school in all such cases receive adequate consideration for the wear and tear on its equipment. If work that is not strictly research is done, prices charged for it should, in fairness, be higher than commercial prices.

**Sound Teaching is First Thought**

While Armour has much important research to its credit, its immediate contribution must lie first in the soundness of its curriculum, the quality of its teaching, and in the effectiveness of its administration. Its present task is to maintain excellence in these lines without easy access to great resources. Armour's problem now, its problem during all the period covered by this report, and for some time prior thereto, has been one of crisis, and crisis forces retrenchment. But here again our situation differs from that of most American colleges, if at all, only in degree and not in kind, and retrenchment frequently becomes a stimulus to improvement.

## Curriculum and Personnel Adjustments

From this background it is possible to take stock of the various adjustments in curriculum and personnel that have taken place since January, 1933. The first major adjustment was assumption of jurisdiction by the Institute over all research and testing activity in which Institute equipment is employed. This action of course had the effect of abrogating contracts and undertakings based on any different concept. The change affected both the relationships between the Institute and faculty members who do work of this kind and the mutual relationships between such faculty members themselves. There are a number of details in connection with previous arrangements which it is not necessary to rehearse, but the principal effect of the change was to place a new emphasis upon the obligations to the Institute which faculty members assume in carrying on engineering work for industry with Institute equipment.

**Finnegan to Coordinate Research**

In order to make a consistent policy effective, Professor Joseph B. Finnegan was appointed Director of Research and Testing, and given specific instructions including the following items:

1. All arrangements concerning research, testing and consulting activity by members of the faculty, in which the use of Institute equipment is a factor, are to be made a matter of record with the Director of Research and Testing.
2. The Director of Research and Testing is responsible for insuring payment to the Institute of an amount adequate to cover the wear and tear on Institute equipment in connection with such activities.
3. The Director of Research and testing, the Dean, and the Directors and Chairmen of departments are jointly responsible for scheduling research and testing activity by members of the faculty so as to avoid conflict with teaching and other obligations to the Institute.
4. The Director is advised that it is the policy of the Institute, in harmony with the above provisions, to encourage members of the faculty to carry on research in cooperation with industry.
5. The Director is instructed to cooperate with members of the faculty and with industry in enlarging the scope of the industrial research program, always in harmony with the policies set forth in paragraphs one, two and three, above.

**Research to be Increasingly Vital**

Experience of more than a year under the new orientation has amply justified the present approach to this subject both from an educational and a financial piont of view. With the revival of industry it is believed that a program of engineering research in cooperation with industry will become an increasingly important part of Institute activity.

**Conduct Survey of Shop Courses**

The second major adjustment of the new administration was a temporary suspension of Shop Courses. While this action was taken under the pressure of financial necessity and reduced immediate expenses nearly $20,000, its justification rests primarily upon educational grounds.

Looking toward early re-establishment of Shop Courses, a comprehensive investigation to ascertain the most advantageous set-up of such courses was at once undertaken by a faculty committee with Professor Joseph B. Finnegan as chairman and Professor Philip C. Huntly as vice-chairman. The report of this committee is a document of which the Institute has reason to be proud; its publication at an early date is contemplated. Shop courses in conformity with the recommendations of this report will be started as soon as the exigencies of the budget permit; provision for them is the next item in our educational program. It is to be hoped that the new courses can be instituted early enough so that no student will have graduated from Armour without having the benefit of shop work.

**Enlarge English Department**

It will be recalled that English was also mentioned as a subject in which the McKinsey Report report revealed that instruction was not up-to-date. Much of the English offered was estimable but it was not well articulated nor was the required work adequate in amount. Although one member of the English staff was retired last year and one this year, a third member has had the scope for his talents enlarged and two highly competent instructors have been added to the staff with a net saving of $2600. The organization and content of the work has been improved and made more pertinent to student need and its amount nearly doubled. Even the present amount is close to the minimum recognized by the Society for the Promotion of Engineering Education.

**Correlate Business, Engineering**

In Social Sciences the problem was more complex. Difficulty arose in part from a tendency of engineering students to regard non-engineering work lightly, in part from heavy schedules and in part from the rather casual way in which Social Science courses had previously been embodied in the curriculum. Prolonged deliberation led to the present organization of work in this field. Instruction now aims to emphasize the relationship of subject-matter to the actual work of an engineer. To this end, the courses start with business and engineering problems and proceed in the senior year to a study of business policy and public policy as they affect the engineer. In the course of this study, the student is introduced to such subjects as accounting and cost finding, principles of industrial management, and elements of economics and finance. After a careful survey of results in numerous engineering schools the traditional course in general economics has been omitted.

**Social Science Study Increased**

While work in the Social Sciences as now offered is of such a nature that no thoughtful engineer or engineering student can fail to recognize its necessary place in engineering education, it has not been the purpose to set up the Social Science courses on any narrow bread-and-butter basis any more than the fundamental science and engineering courses are on that basis. Elective courses in History and Political Science have been retained, and other elective courses will be offered to as great an extent as budget and schedule limitations permit. The total amount of required work in the Social Sciences is fifteen semester hours, or roughly double the number prior to the academic year 1933-34.

In the case of Social Sciences it has not been possible as it was in Shop Courses and English to realize any immediate or ultimate saving. On the contrary, there was an increase of some $8500 in the cost of instruction in this field, which amount has been materially reduced by changes this year.

**Faculty Changes Made**

The faculty as a whole has undergone considerable change during the past two years.

At the beginning of the present school year it lost one of its highly esteemed members, Professor Van Bauman Teach of the Department of Mathematics, who was taken by death on September 8, 1934.

Dr. George L. Scherger, whose cosmopolitan versatility has made him a prominent figure in Chicago life, has been granted a leave of absence from his service as Chaplain and Professor of History and Political Science, in order that he may devote his full time during the current year to the pastorate of St. Paul's Church with which he has been long associated.

Professor Charles W. Leigh, whose fine culture, comradeship and distinction as teacher and scholar have made him beloved by students, alumni and colleagues alike, has had to be retired for disability.

Two members of the faculty have gone to better paying positions, six teachers were released by suspension of Shop Courses, and readjustments following the McKinsey Study displaced fifteen others. Five men previously on full time are now on part time. The reduction in pay roll from the above changes is $86,615. Eight full-time and five part-time men have been added to the

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