INSTRUMENTS.

DEPARTMENT LIBRARY

By HAROLD A. EVERETT.

The department library located as it is directly off from the professional drawing room, offers exceptional opportunities for study and reference. It contains some over 1,750 volumes devoted exclusively to Naval Architecture and Marine Engineering, including such allied subjects as Naval History, Steam Turbines, Docks, Cranes, Navigation, Ordnance, etc. It is, I believe, the most complete library for this branch of engineering in this country, and the attempt is made to keep the number of books down to a minimum by discarding editions superseded by later purchases and at the same time to acquire and retain all of the new publications of value. The proceedings of the world's important professional societies are taken, and also the leading professional magazines, and it is here that the great value of the accessibility of the library shows most, for in the intervals between recitation as well as when working in the drawing room, the time necessary to obtain books or periodicals for consultation is reduced to the minimum.

Several years ago the library received from the estate of Henry Bryant his collection of books on Naval Architecture and Marine Engineering, which contained many extremely old and rare volumes, several dating back as far as the 16th century, and these are segregated into a special case in one corner of the library.

Owing to the prevailing interest in air ships and aeronautics in general, the department has for the past few years been purchasing the works of the principal authorities along this line, and now has a considerable number of volumes and also subscribes to an American and a German periodical devoted to the interests of Aeronautics.

The following list of periodicals subscribed for may be of interest:

The Rudder; Yachting; Motor Boating; The Marine Review; Interantional Marine Engineering; The American Marine Engineer; The Marine Engineer; Journal of the American Society of Naval Engineers; United States Naval Institute Proceedings; The American Aeronaut; The Navy; The Shipbuilder; London Engineering; Power; Engineering Magazine; Schiffbau; Marine-Rundschau; Mitteilungen aus d. Gebiete des Seewesens; Zeitschrift des Vereins Deutscher Ingenieure; Zeitschrift fur Flugtechnik und Motorluftschiffahrt.

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The Department of Naval Architecture and Marine Engineering has an exceptional equipment of professional apparatus consisting, in part, of seventeen Amsler Integrators, three Fuller and two 20-inch Keuffel and Esser slide rules, two Coradi integraphs, a Denny and Johnson torsion meter, (for determining the power of ship's turbines) and has recently had built a device on the principal of the Chronograph for obtaining records of time, rev. per min., speed, etc., on a band of paper, for use on speed trials of ships. The Department also has a model-cutting machine and a frame marking machine for ship's models, two calculating machines, which will give from eight to ten significant figures, chronometers, steam engine indicators, sextant, planimeters, standary navy compass, etc.

Complete sets of drawings of ships and their machinery systematically arranged and catalogued are on file in the drawing room for reference and make it possible to illustrate current practice in the best manner in connection with the drawing room work.

GRADUATE LETTERS

The value of the training given any student during his college career will be appreciated by him to the extent that his market value has been enhanced over that of his fellows, who have not had the advantage of a college education. This may seem to be too strictly a utilitarian point of view, but for the young man thrown on his own resources, it is the only true one.

Until comparatively recent years the majority of ship yards in this country did not seem to be alive to the advantage of employing men with an education superior to that of the average schoolboy, but recently there has been a growing demand for highly trained men with a technical knowledge of their profession, such as any reputable college should give, and it is natural that there should have sprung up institutions to train men to fill the deman. Until 1883 the only school of Naval Architecture in this country was the Royal Naval College at Greenwich excepting the night schools held in winter for the benefit of shipyard employees, which are still doing excellent work. In that year, however, a chair of Naval Architecture was founded in Glasgow, followed some years ago by Armstreng College in Newcastle, and in the past few months a new centre for naval architecture training has been established in Liverpool.

I consider that the "sandwich system" gives excellent results, that is a system whereby six winter months are spent in college, and the rest of the year either outside in the Yard or in the drawing office, and most firms now allow the time spent by their apprentices in college to be included in the period of apprenticeship. The Tech man of course, who uses part or whole of his summer vacation in working in a shipyard, may regard his year as laid out to the best possible advantage.

Having satisfied himself that there exists a demand for the trained naval architect, it only remains for a young man to choose that institution where he considers he will receive the best instruction. The Tech has an international reputation, and I feel confi that very few men succeed in graduating without having acquired the faculty of straight thinking and such habits of thoroughness in their work as will stand them in good stead in business life.

As a graduate of Course XIII. I feel a little diffident in making any comments thereon, particularly as I suppose that even in the past five years there have been many changes. Have heard that the student today takes up Applied Mechanics in his second year. This I consider a very wise step, and my own experience leads me to believe that no subject yields the student a better return for his labors than th of Applied Mechanics.

I trust that a Transatlantic letter may interest those men who contemplate adopting Naval Architecture in the United States as a profession.

Yours Sincerely,
MAURICE E. DENNY,
Leven Ship Yard, Dumbarton, Scot.

The present condition of shipbuilding in America, or the immediate prospect of its revival is such that the opportunities offered to graduates of a Naval Architectural course are generally speaking, relatively few.

The one fact however which I wish to emphasize is that the general engineering training of Course XIII is excellent, and a person taking it from choice, even if unable to follow up Naval or Marine Engineering work after graduation, will find that he will have no particular difficulty in quickly working into other special lines of engineering work.

It is the training which the Institute gives, that to my mind is its source of strength. The fact of one line of special engineering offering fewer opportunities than another need not necessarily influence a man in selecting a course. The point I wish to make clear is this, the majority of graduates do not get settled for from three to five years after graduation. By settled, I mean in a position where there is something directly ahead and in work which is more nearly to be their life work than that in which they engage during the first few years after graduation. They also find that they have an immense amount to learn and "eternal vigilance" to pursue in keeping up to the times in their engineering work.

The training at the Institute gives a solid foundation upon which to commence work, and will be found of inestimable value.

Very truly yours,
W. S. NEWELL, '99,
Asst. to Superintending Engineer,
Bath Iron Works.

I consider the course given by the Institute in Naval Architecture to be the best course of its kind given in this country, and since graduating from the Institute I thoroughly agree with what Prof. Peabody has always said, and that is that what we want to get out of our work in college is the theory, that we can get the practice after graduation; but that theory cannot be gained after graduation.

In regard to opportunities for graduates, I wish to say that I have had several men working with me that have graduated in this course, and have found them thoroughly competent to do the work which they have undertaken. I am very glad indeed to have had this opportunity for expressing my views in regard to this.

Very truly yours,
R. B. WALLACE,
Gen. Mgr. American Ship Building Co.

There can be no question but that the training given to graduates of the M. I. T. in the course in Naval Architecture is far and away head of that given in similar courses in other technical schools. It has the great advantage of giving a much broader knowledge of the special subjects belonging to the science of Naval Architecture, and also gives a better basic and working knowledge of related engineering subjects, which is of as great value to the student as in the special training itself. Of the opportunities open to the graduates of the course, I can not say as much as I would like, but it seems almost certain that a change must soon come from the shortsightedness and disregard which has so crippled the ship building and ship owning interests of the country. The opportunities for graduates will then become correspondingly more numerous and valuable.

Very respectfully,
A. V. CURTIS,
Experimental Model Tank,
Washington, D. C.