ENGINEERING NEEDS AT THE CALIFORNIA INSTITUTE OF TECHNOLOGY

By Herbert B. Holt, '15
Member, California Institute Associates

In 1921 the trustees of the Institute adopted a statement of educational policies for the Institute which among other things said the following:

1. The Institute shall offer two four-year undergraduate courses, one in engineering and one in science.

2. The four year undergraduate course in engineering shall be of a general fundamental character with a minimum of specialization in the separate branches of engineering. It shall include an unusually thorough training on the basic sciences of physics, chemistry and mathematics and a large proportion of cultural studies as well as the professional subjects common to all branches of engineering.

3. The four year undergraduate course in science shall afford even more fully than is possible in the engineering course an intensive training in physics, chemistry and mathematics. In its third and fourth years groups of optional studies shall be included which will permit some measure of specialization, which will most effectively fit able students for positions in the research and development departments of manufacturing and transportation enterprises.

Thus early in its history, the Institute made a partial segregation of its undergraduate students between the fields of engineering and science. I say partial because the two courses of studies must necessarily overlap to a considerable degree.

The consistent adherence to high scholastic standards in both these departments of education is too well known to Caltech alumni to need any comment. Facilities and personnel necessary to properly present the courses have kept pace with the ideals outlined in the educational policies as enumerated above and as outlined more fully in the catalogue of the Institute.

It has been recognized that the development of facilities in connection with the engineering course at the present time is somewhat behind that of the science course, and with a view to studying this situation, Doctor Millikan appointed some months ago a committee to investigate the conditions. It has been found that an acute need exists for modern and more ample equipment for materials testing and an up to date study of strength of materials, internal combustion and steam engineer-