Editorially Speaking--

It has been more than a year since those Japanese air squadrons attacked the Pacific possessions of the United States, since the Congress of the United States declared a state of war between this country and the Empire of Japan.

Since that memorable day at Pearl Harbor, industrial production has increased by leaps and bounds. Industry has responded to the increased demands of a nation at war, even in the face of shortage both of raw materials and of manpower.

Whether this first year of total war has been a military success, or whether our armed forces have suffered great defeats is not too clear. On the other hand, there is no doubt of the production victory that is ours. Production is our second line, and as it moves to the front in the coming months the tide will turn!

Mr. Donald Nelson has done a most commendable job as chairman of the War Production Board. He has directed the diversified war industries in the most concentrated and coordinated effort the world has ever seen. Mr. Nelson is an engineer. Much of the success on the production front is due to this engineer and to the thousands of other trained engineers who have planned and directed war-time conversions, and have made it possible for the armies of the United Nations to go into battle equipped to fight.

To continue the winning trend of production and to turn the tide on the battle fields, there must be a continual supply of trained men.

If one could be sure that this was to be a short war, it would be wise to induct all college men into the army and serve the knockout blow to the enemy. But all indications point toward a long war—a war which will be won by the side which can hold out the longest on the battlefield and on the production line.

It is the duty of every engineering student in the country to remain in school as long as possible, and to put forth his best efforts to get the most from his educational opportunities. He must realize that this is the best way that he can serve his country.

AROUND AND ABOUT

Lewis C. Hullinger

The State of Kentucky is building the highest highway bridge east of the Mississippi, relates an article in the **Kentucky Engineer.** The bridge will be a part of U. S. 25 on the Lexington to Richmond highway, and will cross the Kentucky River at Cleveland, better known as Clay's Ferry. The new structure will replace an old existing wrought iron bridge built in 1869, and will eliminate the present old road, with its long steep grades and dangerous winding hairpin curves.

That the significance of airplane performance is being realized, is indicated by the development of aeronautical engineering courses in several of the technical schools of the country. Princeton's department of aeronautical engineering will soon be one year old. Featured courses include aerodynamics, airplane structures, airplane design, engine design, and instrument laboratory. Penn State College has authorized a two year aeronautical engineering option for junior students. A similar option has been established at Virginia Tech, where a survey of 400 freshmen, enrolled in engineering, found twenty percent had aspirations for careers as aeronautical engineers.

A novel laboratory has been "discovered" by the mining engineering students at the University of Alabama. In past years the miners gained experience in underground surveying operations in the working coal mines in the vicinity. All-out production has caused suspension of these treks, so they were forced to search for a new surveying lab. The answer turned out to be a spacious basement, 70 by 300 feet, located beneath one of the campus buildings. The darkness of the basement necessitates the use of miner's lamps, thus simulating actual conditions.

Three methods of stress analysis are being studied by civil engineers at Oregon State College. Classical methods of structural analysis involving the use of calculus, which consumes days, are being replaced or supplemented by the use of such devices as photo-elasticity, the Beggs deformeter, and wire models. The basic instrument in photo-elasticity is the polariscope. The Beggs deformeter is based on the fundamental principles of mathematical methods. The use of wire models is less accurate, but shows how structures will deform under stress.

An article in the **Northwestern Engineer** tells of the cooperative training course conducted by Allis-Chalmers. During planned training period of twenty-four months, the student becomes acquainted with production methods, as well as the operation and performance of products ranging from steam and hydraulic turbines, and power transformers, to motors, pumps, industrial machinery, and all of the associated switch gear and controls. Upon completion of the course, he is aware of the opportunities in power engineering and can decide upon the phase of this field in which he can best progress.