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MACHINE TOOL PROBLEMS IN WARTIME

5 December 1946

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SUPPLEMENT TO ABOVE LECTURE BY MR. ALVIN B. EINIG
CARRYING DISCUSSION FOLLOWING MAIN TALK

THE INDUSTRIAL COLLEGE OF THE ARMED FORCES

WASHINGTON, D. C.

RESTRICTED

THE INDUSTRIAL COLLEGE OF THE ARMED FORCES

PUBLICATION NO. 147-47

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CAPTAIN WORTHINGTON:

We are now ready for a few questions, and there will be a seminar this afternoon at which time you will have another opportunity to ask questions.

A STUDENT OFFICER:

Is the machine tool industry now in a healthy condition due to the great production during the war? In other words, is there a surplus in the civilian market now to the extent that it will have a bad effect on the manufacturing industry?

MR. EINIG:

There are a number of things that happened to the machine tool industry as a result of the war. First of all, the Machine Tool Builders expanded their facilities tremendously, far beyond peacetime requirements. In the days when we were urging the use of the Certificate of Necessity or accelerated depreciation plan covering plant expansion programs, I would suggest that when expanding the plan, consideration be given to reducing it at the end of the war to peacetime requirements. However, that is not easily done. Whenever expansion occurs, taxes and depreciation can easily eat up the plant.

Renegotiation weighs heavily on the industry. The Price Adjustment Board expressed the opinion that there would be a great amount of prosperous business for the Machine Tool Industry after the war, and accordingly that the earnings during wartime could be reduced to a very small figure. Unfortunately, this postwar prosperity for the Machine Tool Industry has not generally occurred. The bulk of the business is enjoyed by relatively few plants. Perhaps 10 percent of the total number of plants in the industry are operating at a reasonable profit. The rest are operating under difficulties. These difficulties stem from a reduced demand and inroads made on the market by Government surpluses.

The Industry feels that there are two things that should happen to the surplus machine tools: First of all, the services should have an adequate reserve drawn from the Government owned surplus machine tools. The building up of this reserve can probably be accomplished at this time when the procedure is in the nature of a bookkeeping transaction and a congressional appropriation of funds is not required. Your experi-

ence proves that congressional appropriation of funds is a slow and difficult task. Secondly, the surplus tools should be placed in American industry to produce something for the benefit of the country, capital and consumer goods to raise the standard of living of our people and create wealth of taxable value.

During the war the Machine Tool Industry produced as many units as would normally be required over a ten year period, and in productive capacity I have heard a figure as high as forty years, so naturally that wartime production discounted in a large measure the future demand. Of course, not all the requirements for machine tools will be met efficiently by existing equipment. There will be a need for improved machine tools and special and semi-special machines to meet specific needs, but the surplus will be a problem for a long time.

A STUDENT OFFICER:

What is the relative importance or relative burden of local State taxes on plants against the maintenance cost in an ideal facility?

MR. EINIG:

I think that varies greatly in the different taxing districts. In Ohio, as I recall it, they have a tax rate that varies with the location. If you are in a city with high tax rates, it is one thing; and if you are on a farm, it is quite another thing. The difficulty is that you cannot write the equipment off at a high rate of depreciation. For example, with the Certificate of Necessity you take the depreciation over five years or for the duration of the war, but that is not true for local taxation. It is my impression that Ohio will not allow a depreciation below 25 percent of the acquisition price, if the equipment is still in use. If you are using the equipment the tax authority feels that the equipment is worth at least 25 percent of the original cost.

A STUDENT OFFICER:

I always understood that the Machine Tool Industry was dependent upon a very high degree of skill on the part of the personnel, and that the trend over the past several years has been constantly downward as far as the skill of the tool makers is concerned, and that in the production of the workers there has been a violent fluctuation in the quality of the work. How do you think that tendency will affect the machine tool business in the next ten or fifteen or twenty years?

MR. EINIG:

I presume the question refers to the mechanics who are engaged in the building of machine tools. I do not believe there has been any lessening in skill during the war period; as a matter of fact, a great

number of new employees have been trained in the Industry and have certainly acquired the fundamentals and in many cases a very decided amount of skill in the many processes involved in the production of machine tools.

Many new and novel machine tool applications were made during the war and the experience gained in meeting wartime requirements should be valuable in meeting the needs of a peacetime economy. The Machine Tool Industry should continue to develop, unless retarded by repressive legislation and general economic conditions.

A STUDENT OFFICER:

I will put it this way: How many young tool makers do you have in the Industry under 30 years of age?

MR. LINIG:

I do not have the figures on the ages of those employed in the Machine Tool Industry. I would assume that due to the requirements of the services during the war the average age of those engaged in the building of machine tools showed a very decided increase.

However, since the end of the war there is no scarcity of applicants, both skilled and unskilled, for positions in machine tool plants. Those concerns having well organized apprenticeship courses continue to have plenty of applications from promising young men.

Recently the Cleveland Trade School sent over about fifty boys (ex-service men) to visit our shop. Those men are in training as tool makers. The next day fifty more men, who are training as die makers, paid us a visit.

Perhaps there are some industries that pay better, but not many. According to a recent report covering average earnings in the metal working industries, the Machine Tool Industry ranked sixth out of 43 industries.

For a boy with a flair for mechanics, the machine tool plant has much to offer. There is a certain amount of artistry in the handling of machine tools and in the building of them and with that lure there should be no difficulty in keeping the Machine Tool Industry adequately staffed with capable people.

A STUDENT OFFICER:

You pointed out that in the interim period much of the increased amount of equipment has been absorbed by industry and that some of the increases will be absorbed also by deterioration. Do you think there will be any need for similar volume, we will say of facilities and tools, to meet any new emergency, or do you think we have enough now to meet that?

MR. EINIG:

If we take the record of history we find that the high point in annual production of machine tools during World War I was 220 million dollars and during World War II it was 1,320 million dollars, an increase of six hundred percent.

It would seem that with advances in science and industry the next war will increase the demand for machine tools over the last war.

While the insides of a V-I or V-II look much like the bowels of a brewery, and something that can be readily made in a sheet metal shop, it represents quite a lot of hours on metal working machinery and doubtless developments in that field will call for an increasing amount of machine work.

Perhaps steel production is a guide to machine tool requirements because in a large measure the steel must be fabricated into end products by means of machine tools and metal working equipment.

The peak of German steel production was an annual production of 22 million tons. Production in the United States was about 75 million tons.

If the next war is fought with artillery shells there will be little change in machine tool requirements; but if some improved type of destructive missile is used it will probably require more machine hours to build, all things considered, than the weapons of the past. That also seems to check with history from David and his sling to the Atom Bomb with an investment of a couple of billion dollars.

CAPTAIN WORTHINGTON:

Thank you very much, Mr. Einig, for your most instructive talk.

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