this is on a percentage per annum—that the output per man hour in the steel industry was 2.8, and comparing it with all other manufacturing, was 3.6. All other manufacturing was 3.6.

The compensation per man hour was 3.4 as compared to 3.8.

Unit labor cost was 0.6 compared with 0.2. Prices were comparable, 0.7 to 0.7, and the output in steel was 3.4 versus 5.0 compared with all manufacturing.

Then he went on to give us his idea of what the solution was to the steel problem.

I would like to ask questions concerning the three points.

One, increased expenditures of research and development on new products in order to step up the rate of cost reducing innovations. The steel industry spent only .60 cents for every $100 of sales in research and development, compared with $1.90 for all other manufacturing.

Only the textile and wood products industries spent less on research and development.

Mr. PATTON. I will be glad to comment on that. If you will compare steel with any steel industry elsewhere in the world, you will find that we are far, far greater in research expenditures than any other steel industry in other places in the world. That is number one.

Number two, if you compare the research expenditures of the steel industry in the United States with the basic metals companies, I think you will find that we compare very favorably.

True enough, our research budget does not compare with that of a drug company, for instance, or some sophisticated industry of that kind.

But we are spending millions of dollars on research, and we are spending millions more than any other steel industry in the world, and the fact that we have made these discoveries in this country that other companies all over the world are desirous of licensing, indicates that we are well ahead in research in the world steel industry.

Mr. BATTIN. As a matter of fact, many of the competitive countries who have, since World War II, actually gotten back into the steel producing business, aren't they using United States licenses in the manufacture of their steel?

Mr. PATTON. Yes; they are. You will recall that it was the policy of this Government at the end of World War II to ask the American steel industry to give their know-how and knowledge and ability to produce steel and make available to these foreign countries the equipment we had available in this country to make steel, so that the basis for the world steel industry today is American know-how and American equipment.

Mr. BATTIN. That generosity is coming back to haunt us now; isn't it.

Another point you made, which I thought was rather unique, is that to maintain the present high level of investment over the next decade, this requires greater use of outside financing. The steel industry itself financed 85 percent of its investment expenditures—almost 100 percent of working capital is included—compared to the 61-percent figure for all other manufacturing companies.

In other words, the professor is suggesting, as I understand it, that, rather than use your own capital in financing expansion that you go into the market and borrow this money from whatever sources that might be available, as some of the other industries have done.