

This is going to allow us to come very close to moving these stages up and meeting the required dates. With extraordinary effort, if it is indeed necessary, I think we'll probably meet them all as a result of the incentive schedule.

Mr. PETTIS. Is there a lot of thievery of technical people in this business here in southern California?

Mr. SMITH. Proselyting you mean?

Mr. PETTIS. Maybe there is a better word which might have some relativeness to phrasing or slowing one program down in one company. Highly qualified people say, "Well, there is no future here" and they go somewhere else to work.

Mr. SMITH. I don't really believe it happens too much. If anything, it affects people who are not so highly qualified as some others.

Mr. PETTIS. Oh, it does?

Mr. SMITH. If the newspapers start saying that a given program is having funds withdrawn, or slowing down, then the lower echelons of technical people who think their jobs might be in jeopardy sometimes start looking elsewhere. But, I don't think that it is a serious factor at all.

Mr. ABLE. I believe that we actually have one of the lowest turnover rates in the industry, it's so minor.

Mr. DOUGLAS. On the other hand, according to popular consensus, if there is a great big rhubarb and lots of discussion that there are going to be big cuts in a program, then you're going to lose some men.

Mr. SMITH. That's when we start losing them—these younger engineers who are not confident of their positions in the company, start to look around.

Mr. TEAGUE. They wouldn't be human if they weren't trying to improve the situation.

Mr. SMITH. These charts we have shown you before. As you notice, on one side (figure 7), we have graphically depicted the various major structures of the S-IVB: the lox tank; the forward dome; the tank cylinder, which is consolidated; the full tankage; the thrust structure; and so forth. The first third of our program is complete. These stages are built, checked out, test fired, awaiting launch. When some of you were here last August, we were at this point (fig. 8) in the middle third of the program. Since last August, we have completed that phase. In other words, the 6 months, we have made about four to five of every major structure. We are working on a rate of somewhere close to 8 to 9 per year. And this is what we offer on our program additions in the future (fig. 9). So, as you can see, the hardware is roughly 60 percent concluded.

The 212 stage, the final uprated Saturn I stage under the present contract—you saw the last of it in the shop this morning. Unless there is a follow-on order from here on out, we are talking only about Saturn V. These (figs. 10, 11, and 12) are the structural components, the black boxes, the wires, the tubes, the valves, the instrumentation and the purchased parts. This shows about the same picture—the first third of the program is complete; we are about through with the Saturn I. About 60 percent of the overall program is complete. The manufacturing performance (fig. 13)—I think the learning curve on