Free discussion

QUESTIONS AFTER THE THEME III PRESENTATIONS

QUESTION by G. Grattesat (France): It has been pointed out that the very thin surfacings provide very little load distribution to the deck plate. If a thicker surfacing were used which would presumably afford a wider distribution of the load to the deck plate, would it not be possible to use a thinner deck plate and thereby offset the cost of the additional surfacing?

ANSWER (Elliott): The "footprint" of a tire distributes the load over quite an appreciable area of deck. This area might be in the nature of 16 or more inches long and 10 or more inches wide. If a thicker surfacing were used, it would be reasonable to expect only a 45° distribution slope through the surfacing material. If 1½ inches of surfacing were used the area over which the load would be distributed would be increased by only a small percentage. The increased distribution would not be enough to make it worthwhile to assume a thinner plate. Probably the design itself and the assumed distribution are not accurate enough to warrant this degree of refinement.

QUESTION by Dr. O. A. Kerensky (England): What tolerances in surfacing smoothness are allowed in California? What maximum deviation could we logically accept?

ANSWER (Elliott): In our contract work in California, we require that decks be finished with a smoothness deviation not to exceed 1/8 inch in ten feet. Now as to what tolerance one might be able to accept, this depends upon how high you want to set your sights. Maybe 1/8 inch in ten feet is better than is really needed. But if you do not aim high, you do not achieve a really excellent result. If you allow much more than 1/8 inch in ten feet, the riding surface is obviously going to be rougher but maybe the desirability of having a surfacing of this type would offset the inconvenience of some roughness. It is a compromise that would have to be decided for each situation.

We apparently still have a long way to go. These presentations today may be regarded as a progress report. We are working hard. We have a long way to go. But we have accomplished much. We are encouraged by the magnitude of the effort being put forth world-wide to reach some satisfactory answers. Certainly we feel that all of this research is going to lead to the results we seek.