

2018 Co-study Program Report

Project title

Search other side of Shinkansen

Concept of the project

Japanese Shinkansen have wonderful safety, speed, and accuracy. Moreover, they are designed with many field of engineering, so people who learn mechanic must have interest to it. Then, by holding the program to visit JR west, and by carrying its report to the WEB, we think it is possible to appeal to people who are learning engineering to come to Doshisha University.

Contents

We conducted a Shinkansen train lecture and tour program for three consecutive days in late March. Each day, 10 to 20 Japanese students and foreign students participated, and it felt like they were generally satisfied after the completion. The outline of the implementation on each day is shown below.

On the first day, we invited a lecturer from the JR West Japan Vehicle Design Office to give a lecture on the outline of the Shinkansen and the technical issues involved in its design. We heard valuable stories from those who are designing vehicles, such as technological progress from Series 0 to the current N700 series, and an effort to maintain the ride comfort even while driving at high speeds. Especially in the question and answer session, the questions fought frequently, and new findings were obtained.



On the second day, we visited the Kinki Car manufacturing plant in Tokushu. On the day of the tour, JR conventional lines and private railway vehicles were being manufactured, and we were overwhelmed by the fact that there were too many types of vehicles. In addition, there were a huge amount of parts in the part that is usually invisible, assembly and painting that did not feel that welding was done, and there were many surprises. Also, we could see the structure that combines the lightness and robustness of the vehicle we learned in the previous day's lecture.

On the final day, we visited the JR Tokai Hamamatsu Plant in Hamamatsu City, Shizuoka Prefecture. We looked at the inspection and inspection of the Shinkansen body. The factory was renewed several years ago, so we were able to see the structure and production of the Shinkansen, which we cannot usually see. It was a meaningful time for all participants interested in railways, not just electrical and mechanical ones.

