Machine translation (MT) using deep sentence analysis is not as widespread as other MT methods, however we believe that some of its aspects can contribute to the overall translation quality. It is also important to try out deep MT methods with various language pairs. In our case, we experiment with the language pair Japanese-Czech. As a part of this task, we also had to collect and process necessary parallel data. Due to a very small amount of such data being available, we were forced to devise approaches tackling this problem. Our system is based on the same principles as the TectoMT translation system, therefore it was implemented within the same platform. In the process, we tried to capture at least some basic linguistic phenomena characteristic for Japanese. As a part of our research, we also compared our system with a simple phrase-based baseline.