



I am Gantulga Nergui from Ulaanbaatar, Mongolia and I got my Bachelor degree in Civil Engineering from Middle East Technical University located in Ankara, Turkey. In Japan, I am currently a second-year master student in the Civil and Environmental Engineering Department of Saitama University. The reason why I chose to study in Japan is that before joining this program, I have been working in Japanese architectural firm named “Azusa Sekkei” for Ulaanbaatar city new airport construction project for 3 years. While I was

working as one of the structural engineers in that project with experienced Japanese engineers, I realized that how Japanese construction sector and technical level are high developed. Therefore, my goal and vision to study Japanese construction technical knowledge in detail were set during that period. With help of Saitama University and ADB’s support, that my vision and goal came true in April 2016.

After starting this wonderful program in Saitama University, I joined Structural Engineering, Mechanics and Material Group of International Graduate Program on Civil and Environmental Engineering under a supervision of Ass.Prof. Luan Yao. Due to my previous working experience with Japanese engineers in the airport project, high-performance concrete and its quality control were attracting my attention very much. Especially, in that project, Mongolia’s first ever self-compacting concrete was created and cast successfully with cooperation of Japanese engineers and in order to implement this kind of technology in Mongolia, I found that extensive technical knowledge and further studies were missing; therefore, I found myself choosing “Self-compacting concrete with fly ash at low ambient temperature” as my master thesis. Moreover, the biggest challenge of producing such a self-compacting concrete in Mongolia was its increased cost due to high cement content and advanced chemical admixtures which are usually not available or too expensive in the local market. Therefore, my aim was set to create affordable self-compacting concrete by locally available raw materials while its property shall be suitable for Mongolian cold weather. Currently, fly ash sample taken from one of the Mongolian major power plants was already brought to our laboratory and mix design mockup tests are ongoing at different low ambient temperatures. To illustrate, for every different mix designs and different ambient temperatures, flow test, v-funnel test, setting time test, air content test, and compressive strength test are being performed in order to set optimum value. For

further study, bleeding, shrinkage and hydration degree will be mirrored accordingly then cost estimation will be performed finally.

I strongly believe that my research on “Self-compacting concrete with fly ash at low ambient temperature” will not only contribute important role to develop construction sector of Mongolia but also decrease negative environmental impact caused by the unused bulk amount of fly ash. Finally, I would like to pass my heartfelt thanks to Japanese people for providing me such a precious opportunity and warm hospitality. They are greatly appreciated.

