

Car manufacturing plant

Jaguar Land Rover Nitra (SK)

Building site report Gravel columns »SYSTEM TERRA-MIX«TM

**_Building site
report**

- _Execution: **December 2015 to March 2016 and
December 2016 to June 2017**
- _Project: **New construction of a car manufacturing plant**
- _Prime contractor: **Strabag**
- _Impulse compaction: **247.605 m²**



_Building site report

Job description:

In order to achieve an optimal ground improvement different systems were tested for the new construction of a car manufacturing plant. For time reasons the complete area was finally divided between several companies, whereby the gravel column „**System TERRA-MIX**“TM was granted a higher priority due to it's excellent test results. A special challenge was the execution during the winter months with extreme sub-zero temperatures. This could be mastered by the use of a specially developed ice breaker.

Solution:

After removing the surface layer an even working plane was constructed. Drill holes with a diameter of 60cm were pre-drilled and was then filled up by means of a specially constructed funnel. As fill material gravel with grain size of 0/110mm was used. This material was easily available in large quantities. Impulse compaction followed using the compaction foot DN1500 in several steps, whereby the hence created compaction crater were again filled up with the same material. Hereby, as a final state, this resulted in a column expansion from 60cm to 150cm in the area below the baseplate.

Results:

A total of 38544 gravel columns were implemented. Based on numerous pressure probes the successful execution of the ground works could be confirmed.

