

## References

1. Wu J T H, Lee K Z Z, Helwany S B, Ketchart K. *Design and Construction Guidelines for Geosynthetic Reinforced Soil Bridge Abutments with a Flexible Facing*. NCHRP REPORT 556. University of Colorado at Denver, Denver, CO. Transportation Research Board of the National Academies, Washington, D.C., 2006.
2. Adams M, Ketchart K, Ruckman A, Dimillio A F, Wu J, Satyanarayana R. *Reinforced Soil for Bridge Support Applications on Low-Volume Roads*. Transportation Research Record: Journal of the Transportation Research Board, Transportation Research Board of the National Academies, Washington, D.C., no. 1652, 150–160, 1999.
3. Nicks J E, Adams M, Wu J. A new approach to the design of closely spaced geosynthetic reinforced soil for load bearing applications. Transportation Research Board of the National Academies, *92th Annual Meeting*, Washington, D.C., 2013.
4. Chen Q, Abu-Farsakh M Y, Sharma R, Zhang X. Laboratory Investigation of the Behavior of Foundations on Geosynthetic Reinforced Clayey Soil. Transportation Research Record: Journal of the Transportation Research Board, Transportation Research Board of the National Academies, Washington, D.C., no. 2004, 28–38, 2007.
5. Górszczyk J, Gaca S. The influence of the carbo-glass geogrid-reinforcement on the fatigue life of the asphalt pavement structure, *Archives of Civil Engineering* 2012; 58, 1: 97-113.
6. Szydło A, Malicki K. Analysis of the correlation between the static and fatigue test results of the interlayer bondings of asphalt layers. *Archives of Civil Engineering* 2016; 62, 1: 83-98.
7. Judycki J, Jaskuła P, Pszczoła M, Dołycki B, Stienss M. New polish catalogue of typical flexible and semi-rigid pavements. *MATEC Web of Conferences* 2017; 122, 04002.
8. EN ISO 10319:2015 Geosynthetics, Wide-width tensile test (ISO 10319:2015). European Committee for Standardization.
9. Youngguk S, Kim Y R, Witczak M W, Bonaquist R. Application of Digital Image Correlation Method to Mechanical Testing of Asphalt–Aggregate Mixtures. Transportation Research Record: Journal of the Transportation Research Board, Transportation Research Board of the National Academies, Washington, D.C., no. 1789, 162–172, 2002.
10. Romeo E. Two-dimensional digital image correlation for asphalt mixture characterisation: interest and limitations. *Road Materials and Pavement Design* 2013; 14, 4, 747 – 763.
11. Romeo E, Montepara A. Characterization of reinforced asphalt pavement cracking behavior using flexural analysis. *SIIV - 5th International Congress -*

*Sustainability of Road Infrastructures, Procedia - Social and Behavioral Sciences* 2012, 53, 356 – 365.

12. Szymczak T, Grzywna P, Kowalewski Z L. Modern methods for determination of mechanical properties of engineering materials. *Transport samochodowy* 2013, 1: 79 – 104.
13. Siebert T, Crompton M J. Application of High Speed Digital Image Correlation for Vibration Mode Shape Analysis. *Proceedings of the SEM Annual Conference*, Indianapolis, Indiana USA ©2010 Society for Experimental Mechanics Inc, June 7-10, 2010.
14. Górszczyk J, Malicki K. Laboratory tests of the selected mechanical properties of the soil stabilized with a road binder. *17th International Multidisciplinary Scientific GeoConference SGEM 2017*, Conference Proceedings Vol. 17, Science and Technologies in Geology, Exploration and Mining, Issue 12, Albena, Bulgaria, 491–498, 2017.
15. Birgisson B, Montepara A, Napier J, Romeo E, Roncella R, Tebaldi G. Micromechanical Analyses for Measurement and Prediction of Hot-Mix Asphalt Fracture Energy. *Transportation Research Record: Journal of the Transportation Research Board*, Transportation Research Board of the National Academies, Washington, D.C., no. 1970, 186–195, 2006.
16. Safavizadeh S A, Wargo A, Guddati M, Kim Y R. Investigation of Reflective Cracking Mechanisms in Grid-Reinforced Asphalt Specimens Using Four-Point Bending Notched Beam Fatigue Tests and Digital Image Correlation. *Transportation Research Record: Journal of the Transportation Research Board*, Transportation Research Board of the National Academies, Washington, D.C., no. 2507, 29–38, 2015.
17. Oats R C, Harris D K, Ahlborn T M, de Melo e Silva H A. “Evaluation of the Digital Image Correlation Method As a Structural Damage Assessment and Management Tool”. *Transportation Research Board of the National Academies, 92th Annual Meeting*, Washington, D.C., 2013.
18. Digital Image Correlation for Deformation Measurement. Dantec Dynamics. <http://www.dantecdynamics.com>.
19. Sutton M A, Orteu J, Schreier H W. Image Correlation for Shape, Motion and Deformation Measurements. *Springer Science+Business Media*, LLC, New York, 2009.
20. Huang YH, Liu L, Sham F C, Chan Y S, Ng S P. Optical strain gauge vs. traditional strain gauges for concrete elasticity modulus determination. *Optik - International Journal for Light and Electron Optics* 2010; 121: 18.
21. Fortrac - Immensely Versatile Solutions for Reinforced Soil, 11/15 B HUESKER Synthetic GmbH, Gescher 2015. <http://www.huesker.com>, <http://www.huesker.pl>.
22. Fortrac geogrids in geosynthetic reinforced soil systems, (in Polish). Przedsiębiorstwo realizacyjne Inora Sp. z o. o. 2nd edition. <http://www.inora.pl>.
23. Górszczyk J, Malicki K. Study of the mechanical properties of a hexagonal geogrid using the digital image correlation method. *17th International*

- Multidisciplinary Scientific Conference on Earth & Geosciences SGEM 2017*. Conference Proceedings Vol. 17, Science and Technologies in Geology, Exploration and Mining, Issue 12, Albena, Bulgaria, pp. 809–816, 2017.
24. Górszczyk J, Malicki K. Three-dimensional finite element analysis of geocell-reinforced granular soil. *18th International Multidisciplinary Scientific GeoConference SGEM 2018*, Conference Proceedings Vol. 18, Science and Technologies in Geology, Exploration and Mining, Issue 1.2, Albena, Bulgaria, 735–742, 2018.
25. Górszczyk J, Malicki K, Sławińska M. Structural analysis of soil reinforced by geocell system using analytical-empirical method. *18th International Multidisciplinary Scientific GeoConference SGEM 2018*. Conference Proceedings Vol. 18, Science and Technologies in Geology, Exploration and Mining, Issue 1.2, Albena, Bulgaria, 669–676, 2018.
26. Grygierek M, Kawalec J. Selected laboratory research on geogrid impact on stabilization of unbound aggregate layer. *Procedia Engineering* 2017; 189: 484–491.
27. Technical Data Sheet S&P Glasphalt G, S&P Clever Reinforcement Company AG, Seewernstr. 127 CH-5423 Seewen, VER07/15\_HUM, <http://www.sp-reinforcement.eu>.
28. ANSYS Inc. Documentation for ANSYS 10.0. 2005 SAS IP.
29. Górszczyk J. Influence of the geosynthetic reinforcement on fatigue life of the asphalt pavement. PhD dissertation, Cracow University of Technology, 2010.