

- Akzo Nobel, 2015. Bitumen Emulsion. *Akzo Nobel Surface Chemistry*.
- Al-Qadi, I.L., Carpenter, S.H., Leng, Z., Ozer, H., dan Trepanier, J.S., 2008. Tack Coat Optimization for HMA Overlays : Laboratory Testing. *Civil Engineering Studies Illinois Center for Transportation*, (08).
- Amelian, S. dan Kim, Y.R., 2018. Performance assessment of interlayers with different tack coats by considering loading types and failure modes. *Transportation Research Record*, 2672 (28), 1–9.
- Ananda, F., 2020. Kuat Geser Antar Lapis AC-WC dan AC-BC yang Menggunakan Tack Coat Tipe CRS- 1 dan CSS-1. Universitas Gadjah Mada.
- Asphalt Institute, 1997. *MS-19 A Basic Asphalt Emulsion Manual*. 3 ed. Lexington: Asphalt Institute.
- Asphalt Institute, 2007. *The Asphalt Handbook - MS-4*. 7 ed. Lexington: Asphalt Institute.
- Asphalt Institute, 2015a. *The Bitumen Industry A Global Perspective*. 3 ed. Asphalt Insitute Eurobitume.
- Asphalt Institute, 2015b. *MS-2 Asphalt Mix Design Methods (7th Edition)*. Asphalt Institute.
- Austrroads, 2017. *Guide to Pavement Technology Part 4F: Bituminous Binders*. 2 ed. Sydney: Austrroads Ltd. Level 9, 287 Elizabeth Street Sydney NSW 2000 Australia Phone:
- Austrroads, 2018. *Guide to Pavement Technology Part 4J: Aggregate and Source Rock*. 1.1. Sydney: Austrroads Ltd. Level 9, 287 Elizabeth Street Sydney NSW 2000 Australia.
- Bae, A., Mohammad, L.N., Elseifi, M.A., Button, J., dan Patel, N., 2010. Effects of temperature on interface shear strength of emulsified tack coats and its relationship to rheological properties. *Transportation Research Record*, (2180), 102–109.
- Bellanger, J. dan Duriez, M., 1957. La rupture des émulsions de bitume et l'adhévisité des résidus. *Rev. Générale des Routes des Aérodomes*, 41–55.
- Bina Marga, D.J., 2017. *Manual Desain Perkerasan Jalan (REVISI Juni 2017)*. 2 ed. Jakarta: Direktorat Jenderal Bina Marga.
- Bina Marga, D.J., 2020. *Spesifikasi Umum Untuk Pekerjaan Konstruksi Jalan dan Jembatan (Revisi 2)*.
- Buchanan, M.S. dan Woods, M.E., 2004. Field Tack Coat Evaluator (ATAckEr). *Report No. FHWA/MS-DOT-RD-04-168*, 124.
- Buntara Megah Inti, 2011. Brosur Aspal PEN 6070 Bag Buntara Megah Inti.pdf.
- Canestrari, F., Ferrotti, G., Lu, X., Millien, A., Partl, M.N., Petit, C., Phelipot-Mardelé, A., Piber, H., dan Raab, C., 2013. Mechanical Testing of Interlayer Bonding in Asphalt Pavements. In: M.N. Partl, H.U. Bahia, F. Canestrari, C. de la Roche, H.

- Canestrari, F., Ferrotti, G., Partl, M.N., dan Santagata, E., 2005. Advanced testing and characterization of interlayer shear resistance. *Transportation Research Record*, (1929), 69–78.
- Canestrari, F. dan Santagata, E., 2005. Temperature effects on the shear behaviour of tack coat emulsions used in flexible pavements. *International Journal of Pavement Engineering*, 6 (1), 39–46.
- Chen, J.-S., Chang, M.K., dan Lin, K.Y., 2005. Influence of Coarse Aggregate Shape on the Strength of Asphalt Concrete Mixtures. *Journal of the Eastern Asia Society for Transportation Studies*, 6, 1062–1075.
- Chen, J.-S. dan Huang, C.-C., 2010. Effect of Surface Characteristics on Bonding Properties of Bituminous Tack Coat. *Transportation Research Record*, 2180 (1), 142–149.
- Chen, Y., Tebaldi, G., Roque, R., dan Lopp, G., 2012. Effects of Trackless Tack Interface on Pavement Top-down Cracking Performance. *Procedia - Social and Behavioral Sciences*, 53, 432–439.
- Collop, A.C., Sutanto, M.H., Airey, G.D., dan Elliott, R.C., 2009. Shear bond strength between asphalt layers for laboratory prepared samples and field cores. *Construction and Building Materials*, 23 (6), 2251–2258.
- Collop, A.C., Sutanto, M.H., Airey, G.D., dan Elliott, R.C., 2011. Development of an automatic torque test to measure the shear bond strength between asphalt. *Construction and Building Materials*, 25 (2), 623–629.
- Covey, D., Coleri, E., dan Mahmoud, A., 2017. Tack Coat Rheological Properties and the Effects on Interlayer Shear Strength. *Journal of Materials in Civil Engineering*, 29 (11).
- Cross, S., 2005. Guidelines For Using Prime And Tack Coats. *FHWA-CFL/TD-05-002*, (July).
- Curtis, W. dan Epps, J., 1993. Fundamental Properties of Asphalt- Aggregate Interactions Including Adhesion and Absorption (Report No. SHRP-A-341). *Strategic Highway Research Program*.
- D’Andrea, A., Russo, S., dan Tozzo, C., 2013. Interlayer Shear Testing under Combined State of Stress. *Advanced Materials Research*, 723, 381–388.
- Destrée, A., De Visscher, J., Piérard, N., dan Vanelstraete, A., 2016. Field Study to Investigate the Impact of Conditions of Application of Tack Coats on the Interlayer Bond Strength. In: F. Canestrari dan M.N. Partl, ed. *8th RILEM International Symposium on Testing and Characterization of Sustainable and Innovative Bituminous Materials*. Dordrecht: Springer Netherlands, 347–358.
- Diakhate, M., Petit, C., Millien, A., Phelipot-Mardelé, A., Pouteau, B., dan Goacolou, H., 2007. Comparison of direct shear and torque tests for determining viscoelastic shear behavior of tack coats. 281–290.

- Diakhate, M., Petit, C., Millien, A., Phelipot-Mardelé, A., Pouteau, B., dan Goacolou, H., 2008. Interface fatigue cracking in multilayered pavements: Experimental analysis. *In: Pavement Cracking: Mechanisms, Modeling, Detection, Testing and Case Histories*.
- Fadhilah, M.R., 2022. Analisis Kuat Geser antara Lapisan AC-WC dan AC-BC Terhadap Pengaruh Curing Time dan Takaran Tack Coat Tipe CRS-1P dan CRS-1. Universitas Gadjah Mada.
- FDOT, 2007. Standard specifications for road and bridge construction.
- Federal Highway Administration, 2006. *Geotechnical Aspects of Pavements Reference Manual / Participant Workbook*. Minnesota.
- Floragusmia, 2021. Analisis Pengaruh Variasi Tack Coat CRS-1 Dan CSS-1 Pada Kuat Geser Antara Rigid Pavement Dan Lapisan AC-WC. Universitas Gadjah Mada.
- Ganesan, K., Budtova, T., Ratke, L., Gurikov, P., Baudron, V., Preibisch, I., Niemeyer, P., Smirnova, I., dan Milow, B., 2018. Review on the production of polysaccharide aerogel particles. *Materials*, 11 (11).
- Ghaly, N.F., Ibrahim, I.M., dan Noamy, E.M., 2014. Tack coats for asphalt paving. *Egyptian Journal of Petroleum*, 23 (1), 61–65.
- Girdler, R.B., 1965. Constitution Of Asphaltenes And Related Studies. *In: Proceedings of the Association of Asphalt Paving Technologists*.
- Goodman, P.D., Skipper, R., dan Aitken, N., 2015. 4 - Modern instruments for characterizing degradation in electrical and electronic equipment. *In: J. Swingler, ed. Reliability Characterisation of Electrical and Electronic Systems*. Oxford: Woodhead Publishing, 43–62.
- Goodman, S., 2002. Rapid In-Situ Shear Testing Of Asphalt Pavements For Runway Construction Quality Control And Assurance. *2002 FEDERAL AVIATION ADMINISTRATION AIRPORT TECHNOLOGY TRANSFER CONFERENCE*.
- Hakimzadeh, S., Kebede, N., Buttlar, W., Ahmed, S., dan Exline, M., 2012. Development of fracture-energy based Interface Bond Test for asphalt concrete. *Road Materials and Pavement Design*, 13, 1–12.
- Hamdani, F., 2020. Analisis Laboratorium Interface Shear Strength Antar Lapisan AC-BC Dengan Menggunakan CRS-1 Dan CSS Sebagai Tack Coat. Universitas Gadjah Mada.
- Hardiyatmo, H.C., 2019. *Perancangan Perkerasan Jalan dan Penyelidikan Tanah*. 3 ed. Yogyakarta: Gadjah Mada University Press.
- Hasiba, K.I.Q., 2012. Development Of A Testing Approach For Tack Coat Application Rate At Pavement Layer Interfaces.
- Hefer, A. dan Little, D.N., 2005. Adhesion in bitumen–aggregate systems and quantification of the effects of water on the adhesive bond, 208.
- Hristov, B., 2018. Influence of Different Interface Properties on the Interlayer Bond Shear Stiffness. *IOP Conference Series: Materials Science and Engineering*, 365 (3).

Hunter, R.N., Self, A., dan Read, J., 2015. *The Shell Bitumen Handbook*. 6 ed. London: ICE Publishing.

Ignatavicius, S., Kavanagh, A., Collieran, D., Brennan, M., dan Newell, S., 2021. The use Anionic Bitumen Emulsions in Pavements – A state of the art review. *7th Eurasphalt and Eurobitume Congress*, (June 2021), 0–16.

Jaskuła, P., 2014. Influence of compaction effectiveness on interlayer bonding of asphalt layers. *9th International Conference on Environmental Engineering, ICEE 2014*, (May).

Johnsson, A., 2011. *On the Electrolyte Induced Aggregation of Concentrated Silica Dispersions*.

Kondo, T., Moriyoshi, A., Yoshida, T., dan Takahashi, S., 2003. Movement characteristics of aggregates in asphalt mixtures during the wheel tracking test. *Journal of the Japan Petroleum Institute*, 46 (3), 172–180.

Kruntcheva, M., Collop, A., dan Thom, N., 2006. Properties of Asphalt Concrete Layer Interfaces. *Journal of Materials in Civil Engineering*, 18, 467–471.

Kumar, V.V. dan Saride, S., 2018. Evaluation of cracking resistance potential of geosynthetic reinforced asphalt overlays using direct tensile strength test. *Construction and Building Materials*, 162, 37–47.

Kurniawan, C.D., 2022. Analisis Kuat Geser Interface Antara AC-WC dan AC-BC Yang Menggunakan Serbuk Ban Karet. Universitas Gadjah Mada.

Lavin, 2003. *Asphalt Pavements*. Spon Press. New York.

Lee, J. dan Ahn, H., 2016. Effect of electrical surface charge on seal coat curing and aggregate loss performance. *Journal of Testing and Evaluation*, 44 (4), 1661–1670.

Li, S., Huang, Y., dan Liu, Z.H., 2016. Experimental evaluation of asphalt material for interlayer in rigid-flexible composite pavement. *Construction and Building Materials*, 102, 699–705.

Lysenko, J.E., 2006. Development of shear testing of a bond coat emulsion. *Proceedings CME Congress*.

Mallick, R.B. dan El-Korchi, T., 2013. *Pavement engineering: Principles and practice*. 2 ed. Pavement Engineering: Principles and Practice. Florida: Taylor & Francis Group, LLC.

Malvern Instruments Ltd., 2003. *Zetasizer Nano Series User Manual*. Zetasizer Nano Series User Manual.

Marsela, P.D., 2021. Analisis Pengaruh Variasi Mutu Beton pada Kuat Geser Antara Rigid Pavement dan Flexible Pavement (AC-WC). Universitas Gadjah Mada.

Medeiros, M., Chehab, G., dan Solaimanian, M., 2012. *Investigation of Ultra-Rapid-Setting Emulsion for Tack Coat Applications*. Transportation Research Record: Journal of the Transportation Research Board.

Mertens, E.W. dan Wright, J.R., 1959. Cationic Asphalt Emulsions: How They Differ from Conventional Emulsions in Theory and Practice. *Highway Research Board*,

- Miró Recasens, R., Martinez, A., dan Pérez Jiménez, F., 2005. Assessing heat-adhesive emulsions for tack coats. *Proceedings of the Institution of Civil Engineers - Transport*, 158 (1), 45–51.
- Mohammad, L., Bae, A., Elseifi, M., Button, J., dan Patel, N., 2010. Effects of Pavement Surface Type and Sample Preparation Method on Tack Coat Interface Shear Strength. *Transportation Research Record: Journal of the Transportation Research Board*, 2180, 93–101.
- Mohammad, L., Hassan, M., dan Patel, N., 2011. Effects of shear bond characteristics of tack coats on pavement performance at the interface. *Transportation Research Record*, (2209), 1–8.
- Mohammad, L.N., 2005. Investigation of the Behavior of Asphalt Tack Coat Interface Layer. *FHWA/LA.04/394*.
- Mohammad, L.N., Bae, A., Elseifi, M.A., Button, J., dan Scherocman, J.A., 2009. Interface shear strength characteristics of emulsified tack coats. *Asphalt Paving Technology: Association of Asphalt Paving Technologists-Proceedings of the Technical Sessions*, 78 (March), 249–276.
- Mohammad, L.N., Raqib, M.A., dan Huang, B., 2002. Influence of asphalt tack coat materials on interface shear strength. *Transportation Research Record*, (1789), 56–65.
- Muench, S.T., Moomaw, T., dan Hall, M., 2008. De-Bonding of Hot Mix Asphalt Pavements in Washington State: An Initial Investigation. *Security*, (61).
- Nasrazadani, S. dan Hassani, S., 2016. Chapter 2 - Modern analytical techniques in failure analysis of aerospace, chemical, and oil and gas industries. In: A.S.H. Makhoulouf dan M. Aliofkhazraei, ed. *Handbook of Materials Failure Analysis with Case Studies from the Oil and Gas Industry*. Butterworth-Heinemann, 39–54.
- Oeser, M., Pellinen, T., Scarpas, T., dan Kasbergen, C., 2008. Studies on creep and recovery of rheological bodies based upon conventional and fractional formulations and their application on asphalt mixture. *International Journal of Pavement Engineering*, 9 (5), 373–386.
- Paul, H.R. dan Scherocman, J.A., 1998. Friction Testing of Tack Coat Surfaces. *Transportation Research Record*, 1616 (1), 6–12.
- Pei, J., Bi, Y., Zhang, J., Li, R., dan Liu, G., 2016. Impacts of aggregate geometrical features on the rheological properties of asphalt mixtures during compaction and service stage. *Construction and Building Materials*, 126, 165–171.
- Peltonen, P. V, 1992. Road Aggregate Choice Based on Silicate Quality and Bitumen Adhesion. *Journal of Transportation Engineering*, 118 (1), 50–61.
- Raab, C., 2011. *Development of a Framework for Standardisation of Interlayer Bond of Asphalt Pavements*.
- Raab, C., Abd El Halim, A.O., dan Partl, M.N., 2012. Interlayer bond testing using a model material. *Construction and Building Materials*, 26 (1), 190–199.



- Raab, C., Grenfell, A.O.A.E.H., dan Partl, M.N., 2015. The influence of age on interlayer shear properties. *International Journal of Pavement Engineering*, 16 (6), 559–569.
- Raab, C., Grenfell, J., Halim, A.O., dan Partl, M., 2016. Comparison of Interlayer Bond Behavior Due to Ageing, 11, 323–334.
- Raab, C., El Halim, A.E.H.O.A., dan Partl, M.N., 2013. Utilisation Of Artificial Neural Network For The Analysis Of Interlayer Shear Properties. *Baltic Journal of Road and Bridge Engineering*, 8 (2), 107–116.
- Raab, C. dan Partl, M.N., 2004a. Effect of tack coats on interlayer shear bond of pavements. *8th Conference On Asphalt Pavements For Southern Africa*, (September), 9.
- Raab, C. dan Partl, M.N., 2004b. Interlayer shear performance: experience with different pavement structures.
- Raab, C. dan Partl, M.N., 2008. Investigation into a long-term interlayer bonding of asphalt pavements. *Baltic Journal of Road and Bridge Engineering*, 3 (2), 65–70.
- Raab, C. dan Partl, M.N., 2009. Interlayer bonding of binder, base and subbase layers of asphalt pavements: Long-term performance. *Construction and Building Materials*, 23 (8), 2926–2931.
- Rahman, T., Dawson, A., Thom, N., Ahmed, I., dan Carvajal-Munoz, J.S., 2022. Determining the allowable opening-to-traffic asphalt temperature for airport pavements. *International Journal of Pavement Engineering*, 23 (7), 2351–2369.
- Raposeiras, A.C., Vega-Zamanillo, Á., Calzada-Pérez, M.Á., dan Castro-Fresno, D., 2012. Influence of surface macro-texture and binder dosage on the adhesion between bituminous pavement layers. *Construction and Building Materials*, 28 (1), 187–192.
- Recasens, R.M., Martínez, A., dan Jiménez, F.P., 2006. Evaluation of effect of heat-adhesive emulsions for tack coats with shear test: From the road research laboratory of Barcelona. *Transportation Research Record*, (1970), 64–70.
- Romanoschi, S. dan Metcalf, J., 2001. Characterization of Asphalt Concrete Layer Interfaces. *Transportation Research Record*, 1778, 132–139.
- Salinas, A., Al-Qadi, I.L., Hasiba, K.I., Ozer, H., Leng, Z., dan Parish, D.C., 2013. Interface Layer Tack Coat Optimization. *Transportation Research Record*, 2372 (1), 53–60.
- Salomon, D.R., 2006. *Asphalt emulsion technology*. Transportation research board.
- Sangiorgi, C., Collop, A.C., dan Thom, N.H., 2003. Assessment of bond condition using the Leutner shear test. *Proceedings of the Institution of Civil Engineers: Transport*, 156 (4), 211–217.
- Santagata, F.A., Ferrotti, G., Partl, M.N., dan Canestrari, F., 2009. Statistical investigation of two different interlayer shear test methods. *Materials and Structures/Materiaux et Constructions*, 42 (6), 705–714.
- Schilling, P. dan Schreuders, H.G., 1988. Improved quick-set slurry seal emulsifiers

- Sholar, G.A., Page, G.C., Musselman, J.A., Upshaw, P.B., dan Moseley, H.L., 2004. Preliminary investigation of a test method to evaluate bond strength of bituminous tack coats.
- Siregar, M.F.P.S., 2020. Analisis Interface Shear Bond Strength antara Lapisan AC-WC dan AC-BC Menggunakan Tack Coat Jenis CRS-1 Dan CRS-1P. Universitas Gadjah Mada.
- SNI 06-2489-1991, 1991. Metode Pengujian Campuran Aspal dengan Alat Marshall. *Badan Standardisasi Nasional*, (1), 7.
- Song, W., Shu, X., Huang, B., dan Woods, M., 2015. Factors affecting shear strength between open-graded friction course and underlying layer. *Construction and Building Materials*, 101, 527–535.
- Tarrer, A.R. dan Wagh, V., 1994. Factors Influencing Mix Setting Characteristics and Tests to Predict Mix Setting Characteristics.
- Tashman, L., Nam, K., dan Papagiannakis, T., 2006. Evaluation Of The Influence Of Tack Coat Construction Factors On The Bond Strength Between Pavement Layers, (August).
- Tashman, L., Nam, K., Papagiannakis, T., Willoughby, K., Pierce, L., dan Baker, T., 2008. Evaluation of Construction Practices That Influence the Bond Strength at the Interface between Pavement Layers. *Journal of Performance of Constructed Facilities*, 22 (3), 154–161.
- Tayebali, A.A., of Transportation. Research, N.C.D., Group, A., dan of Civil Engineering, N.C.S.U.D., 2004. *A Mechanistic Approach to Evaluate Contribution of Prime and Tack Coat in Composite Asphalt Pavements*. North Carolina Department of Transportation.
- Tran, N., Willis, R., dan Julian, G., 2012. NCAT Report No . 12-04 Refinement Of The Bond Strength Procedure And Investigation Of A Specification, (June 2012).
- TRB, 2012. *Optimization of Tack Coat for HMA Placement (NCHRP Report 712)*. NCHRP Report 712.
- Uzan, J., Livneh, M., dan Eshed, Y., 1978. Investigation of Adhesion Properties Between Asphaltic-Concrete Layers. *Asphalt Paving Technol*, 47 (November), 495–521.
- Vaitkus, A., Čygas, D., Laurinavičius, A., Vorobjovas, V., dan Kleizienė, R., 2012. Research of asphalt layer bonding in Lithuanian pavement structures. *Gradjevinar*, 64 (11), 915–921.
- Vasconcelos, K.L., Bernucci, L.L.B., Takahashi, M.M., dan Castelo-Branco, V.T.F., 2017. Rheological characterization of asphalt binders used in strain relief asphalt mixtures (SRAM)1. *Dyna*, 84 (200), 90–96.
- Wang, J., Xiao, F., Chen, Z., Li, X., dan Amirkhanian, S., 2017. Application of tack coat in pavement engineering. *Construction and Building Materials*, 152, 856–871.
- Wang, M., Li, R., Wen, Y., Pei, J., Xing, X., dan Chen, Z., 2019. Rheological and aging

West, R.C., 2005. Evaluation Of Bond Strength Between Pavement Layers. *NCAT Report 05-08*, (December).

Wheat, M., 2007. Evaluation of Bond Strength at Asphalt Interfaces. *Kansas State University*.

White, G., 2017. State of the art: interface shear resistance of asphalt surface layers. *International Journal of Pavement Engineering*, 18 (10), 887–901.

Yang, K. dan Li, R., 2021. Characterization of bonding property in asphalt pavement interlayer: A review. *Journal of Traffic and Transportation Engineering (English Edition)*, 8 (3), 374–387.

Zaman, M., Ghabchi, R., dan Rani, S., 2018. Development of Guidelines for Selection and Evaluation of Tack, (March).

Zhang, W., 2017. Effect of tack coat application on interlayer shear strength of asphalt pavement: A state-of-the-art review based on application in the United States. *International Journal of Pavement Research and Technology*, 10 (5), 434–445.

Zhen, L., Al-Qadi, I.L., dan Carpenter, S.H., 2009. Interface bonding between hot-mix asphalt and various Portland cement concrete surfaces laboratory assessment. *Journal of the Transportation Research Board*, 2057 (1), 46 – 53.