

DAFTAR PUSTAKA

- Ahmad, H., Elnemr, A., Ali, N., Hussain, Q., Chaiyasarn, K., & Joyklad, P. (2021). *Finite Element Analysis of Glass Fiber-Reinforced Polymer- (GFRP) Reinforced Continuous Concrete Beams*.
- Alsuhailani, A. (2025). *Experimental Study on Hybrid Steel – GFRP Reinforced Concrete Beams with Different Stirrup Types and Spacings*. 1–20.
- Al-Ziady, A. C., & Al-Thairy, H. (2023). *Torsional behaviour of RC beams strengthened by NSM GFRP bars*. IOP Conference Series: Earth and Environmental Science, 1232(1), 012037. <https://doi.org/10.1088/1755-1315/1232/1/012037>.
- Badan Standardisasi Nasional. (1998). *SNI 03-4804-1998: Metode pengujian berat isi dan rongga udara dalam agregat*. Badan Standardisasi Nasional.
- Badan Standardisasi Nasional. (2017). *SNI 2052:2017 Baja tulangan beton*. Badan Standardisasi Nasional.
- Badan Standardisasi Nasional. (2019). *SNI 2847:2019 Persyaratan beton struktural untuk bangunan gedung dan penjelasan*. Badan Standardisasi Nasional.
- Departemen Pekerjaan Umum. (1990). *SNI 03-1968-1990: Metode pengujian tentang analisis saringan agregat halus dan kasar*. Departemen Pekerjaan Umum.
- Departemen Pekerjaan Umum. (1990). *SNI 03-1969-1990: Metode pengujian berat jenis dan penyerapan air agregat kasar*. Departemen Pekerjaan Umum.
- Departemen Pekerjaan Umum. (1990). *SNI 03-1970-1990: Metode pengujian berat jenis dan penyerapan air agregat halus*. Departemen Pekerjaan Umum.
- Departemen Pekerjaan Umum. (1990). *SNI 03-1971-1990: Tata cara pengujian kadar air agregat*. Departemen Pekerjaan Umum.
- Departemen Pekerjaan Umum. (1990). *SNI 03-1974-1990: Metode pengujian kuat tekan beton*. Departemen Pekerjaan Umum.
- Departemen Pekerjaan Umum. (2000). *SNI 03-2834-2000: Tata cara pembuatan rencana campuran beton normal*. Departemen Pekerjaan Umum.
- DETECH Material Testing Laboratory. (2024). *Testing report: FRP Rebar diameter 8 mm (Report No. DE.12040038)*. PT Detch Profesional Indonesia.
- Gooranorimi, O., Ph, D., Nanni, A., Ph, D., & Asce, F. (2015). *GFRP Reinforcement in Concrete after 15 Years of Service*. 1–9. [https://doi.org/10.1061/\(ASCE\)CC.1943-5614.0000806](https://doi.org/10.1061/(ASCE)CC.1943-5614.0000806).
- Hamed, S. (2025). *Shear Strength and Serviceability of GFRP-Reinforced Concrete*

Beams : A Study on Varying Reinforcement Ratios. 11(03), 857–883.

- Issa, M. A., Allawi, A. A., & Oukaili, N. (2024). *Effects of GFRP Stirrup Spacing on the Behavior of Doubly GFRP-Reinforced Concrete Beams. 10(02), 502–520.*
- Malla, P., Saman, S., Dolati, K., Ortiz, J. D., Mehrabi, A. B., Nanni, A., & Ding, J. (2024). *Damage Detection in FRP-Reinforced Concrete Elements.*
- Mistretta, Puppio, Camata, N. (2023). Analytical and experimental shear evaluation of GFRP- reinforced concrete beams. *Materials and Structures, 56(10), 1–21.* <https://doi.org/10.1617/s11527-023-02256-z>
- Ortiz, D., Saman, S., Dolati, K., Malla, P., Nanni, A., & Mehrabi, A. (2023). *Review on Durability and Mechanical Effects. 1–30.*
- Oukaili, N. (2025). *On the effectiveness of shear reinforcement type in GFRP-reinforced concrete beams : Experimental study. July 2024, 6547–6575.* <https://doi.org/10.1002/suco.70114>
- Puluhulawa, I., Alamsyah, Fahrudin, M., Muklis, M., Karia, R., & Sugara, R. R. (2026). *Karakteristik lekatan material GFRP pada beton mutu normal.* PT Pena Persada Kerta Utama.
- PT Kuria Komposit Teknologi Indonesia. (2024). *Laporan hasil uji tarik tulangan komposit 10 mm (Laporan No. 64503/FNBPAR).* PT SUCOFINDO (Persero).
- Ramadhani, K. D., Sabrina, A. R., & Bachtiar, M. V. R. (2026). *Studi Perbandingan Perilaku Balok Beton Tulangan Baja Konvensional dan Balok Beton Tulangan Glass Fiber Reinforced Polymer. 8(01), 25–40.*
- Wang, C. K., Salmon, C. G., & Pincheira, J. A. (2007). *Reinforced concrete design* (7th ed.). John Wiley & Sons.
- Zhao, J., Bao, X., Yang, S., Wang, Z., He, H., & Xu, X. (2024). *Experimental and Theoretical Studies on the Shear Performance of Concrete Beams Reinforced with Fiber-Reinforced Polymer Stirrups.*