

REFERENCES

1. Abdel Aleem, M., Abdel Razik, M., Ibrahim, M. & Hussein, H., 2019. Pipe Materials Selection for Water Networks. *International Research Journal of Advanced Engineering and Science*, 4(3), pp. 488-493.
2. Andienggara, Y., Gunawan, R. & Aldya, A., 2019. DeDecision Support System with Simple Additive Weighting (SAW) Method for Predicting Tourism Budget. *Innovation in Research of Informatics (INNOVATICS)*, 1(1), pp. 35-42.
3. Arsyah, U. et al., 2021. Analysis of the Simple Additive Weighting Method in Educational Aid Decision Making. *Turkish Journal of Computer and Mathematics Education*, 12(14), p. 2389– 2396.
4. Arthur, E. et al., 2020. Material Selection for Water Pipes by the Multi-Objective Decision-Making Method: The Case of Alternative Materials for PVC Pipes. *Journal of Science and Technology*, 5(1), pp. 29-42.
5. Brans, J., Vincke, P. & Mareschal, B., 1986. How to select and how to rank projects: The PROMETHEE method. *European Journal of Operational Research*, Volume 24, pp. 228-238.
6. Buchanan, J., Sheppard, P. & Vanderpoorten, D., 1998. Ranking projects using the ELECTRE method. *In Proceedings of the 33rd Annual Conference Operational Research Society of New Zealand*, , 30 August-1 September .
7. Canfield, R. et al., 2003. Intellectual impairment in children with blood lead concentrations below 10 μg per decilite. *New England Journal of Medicine*, 348(16), pp. 1517-1526.
8. Choon, T., Aik, L., Aik, L. & Hin, T., 2012. Investigation of Water Hammer Effect Through Pipeline System. *International Journal on Advanced Science Engineering and Information Technology* , 2(3), pp. 48-53.
9. Clark, R., 1976. Water Supply Economics. *JOURNAL OF THE URBAN PLANNING AND DEVELOPMENT DIVISION, ASCE*, 102(UP1), pp. 213-224.
10. Covas, D. et al., 2004. Water hammer in pressurized polyethylene pipes: conceptual model and experimental analysis. *Urban Water Journal*, Volume 1, pp. 177-197.
11. Deb, A., Grablutz, F. & Hasit, y., 2002. *Prioritizing Water Main Replacement and Rehabilitation*, American Water Works Association.
12. Deng, Y. & Edwards, K., 2007. The role of materials identification and selection in engineering design. *Materials and Design* , Volume 28, pp. 131-139.
13. Ding, T., Liang, L., Yang, M. & Wu, H., 2016. *Multiple Attribute Decision Making Based on Cross-Evaluation with Uncertain Decision Parameters*, Anhui : Hindawi Publishing Corporation.

14. Edwards , K., 2003. Design of engineering components for optimal. *Mater Des*, Volume 24, pp. 355-366.
15. Edwards, K., 2005. Selecting materials for optimum use in engineering components. *Materials and Design* , Volume 26, pp. 469-473.
16. Emovon, I. & Oghenenyeroovwho, O., 2020. Application of MCDM method in material selection for optimal design: A review. *Results in Materials*, Issue 100115.
17. Fan, M., 2015. *Sri Lanka 's Water Supply and Sanitation Sector: Achievements and A Way Forward*, Philippines.: Asian Development Bank.
18. Forman, E. & Gass, S., 2001. THE ANALYTIC HIERARCHY PROCESS—AN EXPOSITION. *Operations Research* , pp. 469-486.
19. Fuente, A. d. I., Pons, O., Josa, A. & Aguado, A., 2016. Multi-Criteria Decision Making in the sustainability assessment of sewerage pipe systems. *Journal of Cleaner Production* , Volume 112, pp. 4762-4770.
20. Georgiou, D., Mohammed, E. & Rozakis, S., 2015. Multi-criteria decision making on the energy supply configuration of autonomous desalination units. *Renewable Energy*, Volume 75, pp. 459-467.
21. Goepel, K., 2013. *Implementing the Analytic Hierarchy Process as a Standard Method for MultiCriteria Decision Making in Corporate Enterprises – a New AHP Excel Template with Multiple Inputs*. Kuala Lumpur, Proceedings of the International Symposium on the Analytic Hierarchy Process.
22. Gump, B. et al., 2007. Low level prenatal and postnatal blood lead exposure and adrenocortical responses to acute stress in children. *Environmental health perspectives*, 116(2), pp. 249-255.
23. International Organization for Standardization, 2007. *Plastics piping systems- polyethylene (pe) pipes and fittings for water supply*. Geneva: ISO.
24. International Organization for Standardization, 2009. *ISO 2531:2009 Ductile iron pipes, fittings, accessories and their joints for water applications*. Geneva, Switzerland : ISO.
25. Janajreh, I., Alshrah, M. & Zamzam, S., 2015. Mechanical recycling of PVC plastic waste streams from cable industry: A case study,. *Sustainable Cities and Society*, Volume 18, pp. 13-20.
26. Kayombo, W., 1981. *Pipe Materials in Transmission Mains* , Hervanta : Tampere University of Technology, Finland.
27. Kolios, A., Mytilinou, V., Lozano-Minguez, E. & Salonitis, K., 2016. A Comparative Study of Multiple-Criteria Decision-Making Methods under Stochastic Inputs. *Energies* , 9(7), p. Article number 566.
28. Konnur, B. & Rai, R., 2016. Optimal Design of Water Transmission Networks. *International Journal of Engineering Research*, 5(1), pp. 250-256.

29. Kottmann, I., 1994. *Pipe damage due to air pockets in low pressure piping*. Edinburgh, Scotland, Proceedings of the 2nd International Conference on Water Pipeline Systems.
30. Kowalski, D. & Miszta-Kruk, K., 2013. Failure of water supply networks in selected Polish towns based on the field reliability tests. *Engineering Failure Analysis*, pp. 736-742.
31. Liao, T., 1996. A Fuzzy Multicriteria Decision-Making Method for Material Selection. *Journal of Manufacturing Systems*, 15(1), pp. 1-12.
32. Maiolo, M., Capano, G., Carini, M. & Pantusa, D., 2018. Sustainability criteria for the selection of water supply pipeline. *Cogent Engineering*, 5(1).
33. Maniya, K. & Bhatt, M., 2010. Selection of material using a novel type decision-making method: Preference selection index method. *Materials and Design*, Volume 31, pp. 1785-1789.
34. Mays, L., 2000. *WATER DISTRIBUTION SYSTEMS HANDBOOK*. 1st ed. New York: McGraw-Hill.
35. Milani, A., Shaniyan, A. & El-Lahham, C., 2006. Using different ELECTRE methods in strategic planning in the presence of human behavioral resistance. *Journal of Applied Mathematics and Decision Sciences*, Volume 2006, pp. 1-19.
36. Miszta-Kruk, K., 2016. Chapter 9 - Reliability and material failure analysis of water and wastewater systems: Case studies. In: A. Makhoul & M. Aliofkhaezai, eds. *Handbook of Materials Failure Analysis with Case Studies from the Chemicals, Concrete and Power Industries*. Oxford, United Kingdom: Butterworth-Heinemann, pp. 217-242.
37. Mohanty, P., Mahapatra, S., Mohanty, A. & Sthitapragyan, 2018. A novel multi-attribute decision making approach for selection of appropriate product conforming ergonomic considerations. *Operations Research Perspectives*, pp. 82-93.
38. Moser, A. & Folkman, S., 2008. *Buried Pipe Design*. 3rd ed. New York: McGraw-Hill.
39. National Water Supply and Drainage Board, 2021. *Rates*. National Water Supply and Drainage Board.
40. NWSDB, 2002. *National Policy on Water Supply and Sanitation*, NWSDB.
41. Rajani, B. & Tesfamariam, S., 2004. Uncoupled axial, flexural, and circumferential pipe-soil interaction analyses of partially supported jointed water mains. *Canadian Geotechnical Journal*, Volume 41, pp. 997-1010.
42. Rajani, B., Zhan, C. & Kuraoka, S., 1996. Pipe-Soil interaction analysis of jointed water mains. *Can. Geotech. J.*, Volume 33, pp. 393-404.

43. Ramalhete, P., Senos, A. & Aguiar, C., 2010. Digital tools for material selection in product design. *Materials and Design*, Volume 31, pp. 2275-2287.
44. Rao, R., 2006. A material selection model using graph theory and matrix approach. *Materials Science and Engineerin*, A(431), pp. 248-255.
45. Saaty, R., 1980. the Analytic Hierarchy Process-What Is It and How It Used. *Mathematical Modelling*, pp. 161-176.
46. Samad, M., Aheeyar, M., Royo-Olid, J. & Arulingam, I., 2017. *The Political and Institutional Context of the Water Sector in Sri Lanka*, Luxembourg: Publications Office of the European Union.
47. Shiklomanov, I., 1993. World Fresh water Resources. In: *Water in Crisis: A Guide to the World's Fresh Water Resources*. New York: Oxford University Press.
48. Song, D. & Gupta, R., 2021. The use of thermosets in the building and construction industry. *Thermosets*, pp. 165-188.
49. Sridhar, M. & Adejumo, M., 2020. Water, sanitation and hygiene (WASH) disease prevention and control in low resource countries. In: S. Charlesworth, ed. *Sustainable Water Engineering*. Elsevier Inc, pp. 99-120.
50. Sumanaweera, S. & Gunawardena, G., 2008. Prefabricated, Low Cost and Ready to Install Water Treatment Unit Operation Modules for the Townships of Sri Lanka. *ENGINEER*, 41(2), pp. 25-30.
51. Swamee, P. & Sharma, A., 2008. *Design of Water Supply Pipe Networks*. New Jersey: John Wiley & Sons, Inc..
52. Tombouliau, P. et al., 2004. Materials used in drinking water distribution systems: contribution to taste-and-odor. *Water Science and Technology* , 49(9), pp. 219-226.
53. Triantaphyllou, E., Shu, S., Sanchez, S. & Ray, T., 1998. Multi-criteria decision making: An operations research approach. *Encycl. Electr. Electron. Eng.* , Volume 15, pp. 175-186.
54. Trifunovic, N., 2002. Chapter 20: Water Transmission. In: J. Smet & C. van Wijk, eds. *Small Community Water Supplies*. Delft, The Netherlands.: International Water and Research Centre (IRC), pp. 442-464.
55. Vahidi, E. et al., 2015. Comparative Life Cycle Analysis of Materials in Wastewater Piping Systems. *Procedia Engineering*, Volume 118, pp. 1177-1188.
56. Wang, Y., 2013. Seismic risk assessment of water supply systems. In: S. Tesfamariam & K. Goda, eds. *Handbook of Seismic Risk Analysis and Management of Civil Infrastructure Systems*. Sawston: Woodhead Publishing Limited, pp. 867-884.

57. Water Corporation, 2017. *PIPELINE SELECTION GUIDELINES*. [Online] Available at: <https://www.watercorporation.com.au/About-us/Suppliers-and-contractors/Resources/Design-standards>
58. Wei, X., 2021. *Research on the selection of pipe materials for water supply and drainage*, E3S Web of Conferences.
59. Wilhelm, M. & Parsaei, H., 1991. A fuzzy linguistic approach to implementing a strategy for computer integrated manufacturing. *Fuzzy Sets and System*, Volume 42, pp. 191-204.
60. Yeh, C.-H., 2002. A problem-based selection of multi-attribute decision-making methods. *International Federation of Operational Research Societies*, 9(2), pp. 169-181.
61. Zadeh, L., 1973. Outline of a New Approach to the Analysis of Complex Systems and Decision Processes. *IEEE TRANSACTIONS ON SYSTEMS, MAN, AND CYBERNETICS*, 3(1), pp. 28-44.
62. Zhang, Y. & Jar, Y., 2015. Qualitative assessment of deformation-induced damage in polyethylene pressure pipe. *Polymer Testing*, Volume 47, pp. 42-50.
63. Zhao, R., Huang, Y., Yu, Y. & Guo, S., 2019. An IVTIFN–TOPSIS Based Computational Approach for Pipe Materials Selection. *Applied Science*, 9(24).
64. Zhao, R., Neighbour, G., Deutz, P. & McGuire, M., 2012. Materials selection for cleaner production: An environmental evaluation approach. *Materials and Design*, Volume 37, pp. 429-434.
65. Zwan, J. d. & Blokland, M., 1988. *Water Transport and Distribution: Planning And Design Of Network Systems*. Rijswijk, The Netherlands: KIWA.