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Design and Fabrication of River Water Cleaning System

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Abstract: *The objective of this project is to design and fabricate a river waste cleaning machine, "River cleaning machine", which removes waste from water surfaces and disposes them safely from the water bodies. As a result of the increase in pollution in the form of waste debris, it is hampering the life of aquatic animals and making their life at risk. This work has examined our national rivers that are dumping crores of litres of sewage and are loaded with toxic material, pollutants, and debris. This project will employ a machine to lift debris from the surface of water bodies, which will reduce water pollution and, ultimately, aquatic animal mortality from these problems will be decreased. The main aim of the project is to reduce manpower and time consumed in cleaning the river. Using a motor and chain drive arrangement, this project uses a battery to store energy for river cleaning. We are designing and developing a river cleaning machine as part of our project. After the 3D model is drawn, all the parts are manufactured, assembled, and then tested.*

Keywords: River Waste, Water Bodies, Motor and Chain Drive.

REFERENCES

[1]. Sirsat, P. M., Khan, I. A., Jadhav, P. V., & Date, M. P. (2017). Design and fabrication of river waste cleaning machine. IJCMES, (1).
[2]. Sayyad, S., Dorlikar, A., Ratnaparkhi, S., Tonge, N., Bhagat, T., & Buradkar, M. (2019). Design and fabrication of River cleaning machine. International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395–0056, 6(05).
[3]. Nair, S. S., Sudheer, A. P., & Joy, M. L. (2019). Design and fabrication of river cleaning robot. In Proceedings of the Advances in Robotics 2019 (pp. 1-8).
[4]. Tiwari, R. V., Maheshwari, A., Srivastava, M. C., & Sharma, A. (2018). Design and fabrication of project on water bodies cleaning robot. International Journal of Engineering and Management Research (IJEMR), 8(3), 15-17.
[5]. Mohammed, M. N., Al-Zubaidi, S., Bahrain, S. H. K., Zaenudin, M., & Abdullah, M. I. (2020, February). Design and development of river cleaning robot using IoT technology. In 2020 16th IEEE International Colloquium on Signal Processing & Its Applications (CSPA) (pp. 84-87). IEEE.
[6]. Gorane, P. S. Design And Fabrication Of River cleaning System.
[7]. Kandare, D. N., Kalel, A. N., Jamdade, A. S., Jawale, G. P., & Khanpate, R. K. (2018). Design & construction of river cleaning mechanism. International Journal of Innovative Science and Research Technology, 3(11), 428-432.
[8]. Laxmi Parajuli, S. K., Paudel, S., Khatri, S., Neupane, S., Pokhara, P. C., & Lamachaur, N. (2021). Design and fabrication of animal waste cleaning machine. Kathmandu University Journal of Science, Engineering and Technology, 15(2).
[9]. Magdum, P. S., Koli, A. S., Kamble, R. R., Kamble, A. T., Patil, R. B., Done, V. V., & Kamble, S. T. (2020). Solar based river cleaning machine. Int. J. Anal. Exp. modal Anal, 12, 1029-1035.
[10]. Yuvaraj, A. (2020). Design and Fabrication of Water Body Cleaning Machine. Journal of Optoelectronics and Communication, 1(2).

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[11]. Khekare, G. S., Dhanre, U. T., Dhanre, G. T., & Yede, S. S. (2019). Design of optimized and innovative remotely operated machine for water surface garbage assortment. International Journal of Computer Sciences and Engineering, 7(1), 113-117.

[12]. Rafique, S. M. S. M., & Langde, A. (2017). Design and fabrication of river cleaning machine. IJSART, 3(11), 8-18.

[13]. Kumar, N., Ranjith, N. S., Vinith, S., & Yashash, K. (2018). Design and Fabrication of a Waterbody Cleaning Machine.

[14]. Dhole, V., Doke, O., Kakade, A., Teradale, S., & Patil, R. (2013). Design and fabrication of beach cleaning Machine. International research journal of engineering and technology.

[15]. Patwardhan, K., Hagawane, S., & Kalokhe, A. Aqua Dredger River Cleaning Machine. International Journal of Engineering Research & Technology (IJERT), 9.

[16]. Noronha, R., Kevin Solomon, A. S., Kumar, V., & Madhusudan, H. J. (2020). Design And Fabrication Of Lake Cleaning Machine (Doctoral dissertation, CMR Institute of Technology. Bangalore).

[17]. Farsi, A., Malvache, C., De Bartolis, O., Magnacca, G., Kristensen, P. K., Christensen, M. L., & Boffa, V. (2017). Design and fabrication of silica-based nanofiltration membranes for water desalination and detoxification. Microporous and mesoporous materials, 237, 117-126.

[18]. Satheesh, J., Nair, A. P., Devipriya, M., Chithra, A., Mahesh, G., & Jayasree, P. R. (2020, June). Wireless Communication based Water Surface Cleaning Boat. In 2020 4th International Conference on Trends in Electronics and Informatics (ICOEI)(48184) (pp. 716-720). IEEE.

[19]. Soumya, H. M., & Gadgay, B. (2018). Pond Cleaning Robot. International Research Journal of Engineering and Technology (IRJET), 5(10).

[20]. Moon, B., & Bawane, N. (2014). Remote Controlled River Cleaning Machine. Journal of Future Computer and Communication, 3(5).

[21]. Paul, V., Srivastava, U., Vishwakarma, S., & Singh, S. (2019). Design and Fabrication of "Extraction Wheel".

[22]. Praneeth, K., James, T., & Sridhar, S. (2014). Design of novel ultrafiltration systems based on robust polyphenylsulfone hollow fiber membranes for treatment of contaminated surface water. Chemical Engineering Journal, 248, 297-306.

[23]. Phirke, S., Patel, A., & Jani, J. (2021). Design of an autonomous water cleaning bot. Materials Today: Proceedings, 46, 8742-8747.

[24]. Vignesh, S., Ruthreesh, T., Sajeev, S., Sanjay, S., & Richard, P. V. A Review On Design and Fabrication of Trash Boat.

[25]. Abed, R. Y., Kaittan, A. S., & Mejeed, R. A. (2020). Implementation of a developed water tunnels cleaning model with an automatic sensing and operation mechanism. International Journal of Engineering and Technology, 9(3), 718-723.

[26]. Ye, H., Wang, Y., Xu, D., Liu, X., Liu, S., & Ma, X. (2021). Design and fabrication of micro/nano-motors for environmental and sensing applications. Applied Materials Today, 23, 101007.