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# Coffee Roasting Machine Model Design 3Kg Capacity to Boost Craftsman Work Productivity

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Abstract

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#### **Abstract**

Coffee roasting machine innovation using a gas stove heating system. This machine still has a drawback, namely the previous roasting have optimal air circulation that was able to regulate the roasting tube room temperature, so users did not know the roasting tube room design to be made has the advantage that it has an automatic shutdown control system. The capacity of this machine is also greater to the previous engine, with a capacity of 3 kg. After the roasting process, the coffee can be removed from the roasting pan easily. For this planning of the roasting machine was administered through an ergonomic approach in one short case study with a pre- and post-test was administered observationally on the roasting process manually and by employing a roasting machine. Ergonomic Roast Machine seedsigned with a capacity of 5 Kg as follows: a). The roasting tube may be a chrome steel plate with a thickness of 1.2 mm with a length width of 310 mm, b). the facility of the electrical motor is 0.25HP with a rotation of 1400 rpm while the rotation of the drum roast is 50 transmission, c). the size of the machine are 80 cm long, 75 cm wide and 90 cm high. Ergonomic test results show that the utilization o can increase the work productivity of roasted by 62.07%.

#### Keywords

Roasted Grated Coconut, Ergonomic Roast Machine, Work Productivity

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#### References

- [1] Rusdiyantoro, "Product Green Design Development to Support Green Lifecycle Engineering Manufactured in Adibuana Metalworks, International Conference on Creative Industry (ICCI), 2011, p. ISBN 978-979-781-8.
- [2] A. Manuaba, "Research and application of ergonomics in developing countries, with special reference to Indonesia," Indones. J. Erg 1, pp. 24–30, 2000.
- [3] K. H. E. Kroemer and E. Grandjean, Fitting the Task to the Human, Fifth Editione A Textbook of Occupational Ergonomics. London: C 2009.
- [4] R. S. Bridger, Introduction to Ergonomics, 3rd Edition. London: Taylor & Francis, 2008.
- [5] N. Corlett, Static Muscle Loading and the Evaluation of Posture. Evaluation of Human Work, 3rd Edition. London: Taylor & Francis, 2
- [6] S. Nasution, Metode Research (Scientific research). 13th. Jakarta: Bumi Aksara, 2012.
- [7] P. Suma'mur, Company Hygiene and Occupational Health (HIPERKES). Jakarta: Agung Seto, 2013.
- [8] I. K. G. J. Suarbawa, M. Arsawan, M. Yusuf, and I. M. Anom Santiana, "Improvement of environment and work posture through ergon approach to increase productivity of balinese kepeng coin workers in Kamasan village Klungkung Bali," in Journal of Physics: Confi 2018, vol. 953, no. 1.
- [9] M. Yusuf, M. Santiana, and W. D. Lokantara, "Improvement of work posture to decrease musculoskeletal disorder and increase wor jewelry worker in bali," in Proceeding International Joint Conferenceon Science and Technology (IJCST) 2017, 2017, pp. 242–247.
- [10] H. Torik, M. Kholil, and S. Ari, "Ergonomic Work System Design To Reduce Fatigue Levels," J. Ind. Syst. Eng. Assess. J., vol. 10, no. 1, p
- [11] Tarwaka, Industrial Ergonomics: the basics of ergonomics knowledge and workplace applications, First Edit. Harapan Press Solo, 2

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- [12] R. R. Habib, A. El-Harakeh, and S. Hojeij, "Musculoskeletal pain among bakery workers in Lebanon: a national survey," Cogent Eng. pp. 1608–669, 2019.
- [13] F. K. Kimberly, "The Effect of Shift Work on Fatigue of Palm Oil Mill Workers at PT. X Labuhan Batu. Journal of Industrial Engineerin vol. 12, no. 2, pp. 110–117, 2011.
- [14] I. G. N. Priambadi, "Improving Working Conditions of Bronze Alloy Smelting Improves the Performance of Balinese Gamelan Farme Village, Klungkung. (Dissertation)," Udayana University, 2012.
- [15] H. Setiawan, "Ergonomically-based Wet Blanket Work Station design improves the quality of life and productivity of workers at PI Palembang, South Sumatra Province. (Dissertation)," Udayana University, 2013.

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