ABSTRACT

PT. Genta Trikarya is one of the manufacturing company that produces guitars in Indonesia. The company produces guitars with middle-to-high quality and more than 90% of its product is exported to another countries. Existing production was not able to cover the demand of acoustic guitar. One of factor that affects not achiving the production target is the presence of waste of defect on binding process in machining department. In Rahmat Ramadhani Bayu's *researche (2016), it is known there are several factors that cause of defect, i.e. man and machine. Some of proposed improvements those are generated by previous researchs are provide guideline for wood heating time, buzzer tool, and create tools for wood cooling. Priority improvement based on previous research is creating tool wood cooling. On the research is focused to develop wood cooling tools by using Nigel Cross's rational method. On rational method, product development is conducted in six stages; clarifying objective, establishing functions, setting requirements, determining charateristics, generating alternatives, and evaluating alternatives. The result of the research is specification and design that could be implemented in next research, thus achieve the purpose of waste reduction.*

***Keywords**: Wood Cooling Machine, Acoustic Guitars, Nigel Cross, Rational Product Development Method.*