

ABSTRACT

CV Barokah Abadi Bandung is one of the drinking water depot that provides service in refilling drinking water and has a serious problem about gallon washing process. In the previous and the existing condition, CV Barokah Abadi is using manpower to wash the gallon by using gallon brush manually which affect the result of the washing process. The result of the washing process shows some imperfection and left dirt inside also outside the gallon surface. The dirt left at the gallon surfaces can cause serious problems for consumer as it will contaminate the refill water and cause waterborne disease such as diarrhea. If this problem can't be handled quickly, it will raise a serious yet lethal disease further more. The middle part of the gallon washing machine can't perfectly wash the inside surface of the gallon because the reach range of the brush bristle is way too short. New brush design planning is created by solving the problem above by using *Reverse Engineering & Redesign Methodology* and changing the bristle material by using morphology chart. to choose the best alternative design. This research proceeds Changes will be made to the middle part of the brush by extending the brush bristle. This study produced a brush that is able to clean the entire surface of the gallon, and accelerate the washing time also prevent bacterial growth proven by water pH level at 6.

Keywords : product design, Reverse Engineering and Redesign Methodology, brush for gallon washing process