

ABSTRACT

The assembly and manufacture process are the essential part in product Load Weight Device development, because they involve so many parts that cause assembly time and assembly cost become so big. Boothroyd-Dewurst Method is used, which is Design for Assembly (DFA) approach. The principal from this method is reduction the part of component, so it can decrease assembly times and assembly cost, that can increase the company capability.

This research is hope can gives the increase of the assembly design efficiency and decrease assembly times and Load Weight Device assembly cost.

This research is begun with the identification to component design in Load Weight Device. Then it continued with the analysis based on assembly work sheet (DFA Worksheet) existing Load Weight Device. From the analysis, we can identify the component is unused and can be joined with other components. Sliding rod cup is joined with their sliding rod, so the screw that is used to lock those components can be reduced. Then, spring base design is changed into have a self locating in order to ease the assembly process with their operating values.

The result from the redesign analysis in Load Weight Device can reduce the different parts up to 9.09 %. Total components reduce up to 10.64 % and the total operational reduce up to 21.05 % too. The efficiency increase up to 2%, from 11 % to 13 % that can influence the significant assembly time and assembly cost so significant. The assembly time and assembly cost is reduced up to 13.28 %.

Key words : DFA concept, DFA worksheet, parts number, assembly times, assembly cost, assembly design efficiency.