ABSTRACT

Trolley storage engine front axle is temporary storage equipment for engine and front axle to solve problems that happen at sub assembly engine and front axle areas. At sub assembly engine and front axle, production often stoped because of transferred engine and front axle from jig assembly engine and front axle out of time. Literaly didn't have a tool to use temporary storage for assembled engine and front axle, the effect is operator of sub assembly engine and front axle cant continiued production of engine and front axle if the assembled engine and front axle not yet transferred from jig assembly. So, trolley storage engine front axle are made for solve the problems.

To find the right design of trolley storage engine front axle is by observation an discuss with engineer and operator. And for macnining must compatible with tool on workshop. Design of trolley storage engine front axle is made for used to four type of car that need combination of some design. The materials for made trolley storage engine front axle are choosed by discussiong with engineer to comform with workshop.

With trolley storage engine front axle is used to temporary storage, so operator can directly continuous assembly engine and front axle after operator move the engine and front axle from jig assembly to trolley storage engine front axle. So with that working time operator increase 60 minutes up to 80 minutes and increase too the production up to 20% per day and reduce bill of material of trolley storage engine front axle amount Rp. 282.366.160.

Keyword: Design, simulation, solidworks

INTISARI

Trolley storage engine front axle adalah penyimpanan sementara untuk *engine* dan *front axle* yang dibuat karena masalah yang terjadi di area *sub assembly engine* dan *front axle.* Proses produksi sering terhenti karena kedatangan *sub frame* untuk pemindahan *engine* dan *front axle* dari *jig assembly engine* dan *front axle* yang terlambat, akibatnya *operator* tidak dapat melanjutkan proses produksi jika *engine* dan *front axle* belum dipindahkan dari *jig assembly*.

Perancangan dilakukan dengan melakukan observasi lapangan dan diskusi dengan *engineer* serta *operator* untuk mendapatkan desain yang sederhana, mudah dibuat, dan tidak membutuhkan banyak biaya. Rancangan *trolley storage engine front axle* dibuat agar dapat digunakan pada empat tipe mesin mobil. Pemilihan material melalui diskusi dengan *engineer* untuk menyesuaikan ketersediaan material yang dimiliki *workshop*.

Digunakannya *trolley storage engine front axle* sebagai tempat penimpanan sementara, maka *operator* dapat langsung melanjutkan proses perakitan setelah *operator* memindahkan *engine* dan *front axle* dari *jig assembly* ke *trolley storage engine front axle*. Dengan itu, *idle time* berkurang sekaligus menambah waktu kerja *operator* selama 60 hingga 80 menit perhari dan menambah produksi *engine* dan *front axle* sebesar 20% serta menghemat biaya untuk pengadaan storage engine front axle sebesar Rp. 282.366.160.

Kata kunci: Desain, simulasi, solidworks.