

The Objective:

The customer wanted us to build a semi automated assembly line for the production of automobile starters along with end of the line test bench. The per day capacity to be obtained was 1200 assemblies with only 10 operators handling the entire assembly line.

The Challenges:

The biggest challenge in the project was very high number of child parts at every stage of assembling operation which could impact cycle time significantly. There were complex testing requirements with high accuracy measurement against aggressive cycle time to chase. Safety measures for the operator were very critical as system was operated at high current up to 450Amps.

The Solution:

This assembly line was built using our 'Consult-Design-Build' delivery model. The entire assembly line consisted total of 13 stations. The material transfer from one station to another was done by conveyor. The line was capable of handling 3 variants of starters. Smart poke yoke systems were incorporated at every stage as the number of child parts in the assembly processes were high and no interchangeable child parts variants were to be mixed. The assembled starters were tested for solenoid performance, and load tests to simulate the starters' operation.