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Hopefully, this final year project will be used as the references for the powder metallurgy products and processes in the future.

ABSTRACT

In this project, we shall attempt the importance of manufacturing, production, flow of the process and its influence on the success of my research of Sumitomo Electric Sintered Components (M) Sdn. Bhd. (SESC). Since its establishment in Malaysia, SESC has become the region's largest and most advanced Powder Metallurgy (P/M) manufacturer, contributing to its growth through active development and promotion of P/M technology.

Powder Metallurgy process includes certain process that must have to run the process. Firstly the powder metal is produced using certain process such as atomization, reduction and electrolysis. The components then are compacted into high precision dies and compressed to a pressure of 3-5 ton/cm^2, resulting in a component close to its final shape. After that the resultant "pre-formed" part to a temperature below its melting point (1100^o C-1150^o C) in a sintering furnace, causing the compressed powder particles to bond together. This process is called sintering. And the last process is finishing and inspection.

At the end of this project, we have been exposed to the world of manufacturing especially in powder metallurgy. A lot of outside knowledge and experience that we've take from there.