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***APPLICATION OF COMPOSITE
MATERIALS IN GOLF CLUB***

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0.4 OBJECTIVES

The objective of this project is to mention on the application of composite materials that use in sport equipment – golf club. We know that, there are many materials that use in producing a club head, like, titanium, graphite, stainless steel and tungsten. In this project, we are also trying to produce a new composition of material to applying in club head, in order to improve their characteristic and performance.

Club design technology's advancement owes largely to the development of applications in composite materials. Recent composite material applications and new alloys are prevalent in the world of golf clubs. Golf clubs (head) that made from composite materials enable players to hit the ball farther and more accurately, resulting in lower scores.

Basic characteristics and properties of club head:-

- High strength to weight ratio
- unsurpassed hardness
- outstanding anti-corrosion properties
- high impact durability
- abrasion resistance

1.1 INTRODUCTION TO COMPOSITE MATERIALS

Composite materials have been active subject scientific investigation and apply research for three decades. The use these materials is also being explored in many others application. At the same time, scientific interest in composites materials has grown substantially. This stems from the realization that a deeper understanding of fundamentals is needed for composite materials to become more broadly useful.

Composites offer an increasingly important range of new and developing materials which find applications in many modern industrial. They find these applications because they are the best material available for the job, and can have their properties tailored to suit the particular requirements. There are many reasons why a composite material may be preferable to a 'conventional' material such as metal, plastic or ceramic. It may be that a component with a zero coefficient of thermal expansion is required; the weight of a component needs to be reduced by 30%, the stiffness or strength needs to be doubled; the number of sub-components has to be reduced; the cost reduced; or the fatigue life or operating temperature increased.