

its anti-fade characteristics have led to extensive testing. For example, the Ford Motor Company put inserts of ceramic metal at the position of maximum brake wear on their 1958 Thunderbird. The concept was abandoned, reportedly due to uneven braking leading to a directional pull when braking.

Fiberglass - Attempts to use fiberglass instead of asbestos have been attempted since 1938. So far, no design has met the exacting standards required. As with the other materials, the first step is harsh. Apparently the design is better for disc brakes than drums. A problem is the sensitivity of the brake to moisture.

Owens-Corning are undertaking development research in this area. They are very guarded with regard to the status of their work, but state that they are actively engaged in developing a product. To date, no vehicles are known to employ fiberglass in their brake friction product.

Sealed Systems

Sealed systems have been seriously considered. Normally, cars rely on air cooling and the movement of air round the brake caused by the motion of the car. However with high performance cars, more cooling is required. This is achieved in a simple manner by fabricating a superstructure which scoops up air and directs it inside the brake drum. If a filter were added on the exiting side, this would cause a substantial reduction in emissions.

A more elaborate design which has been used is to liquid cool the brake system. This enables the braking system to be completely sealed and thus no emission are possible. The one problem area with this design is that the oil seals must be extremely reliable. However, with a well designed system problems due to overheating could be largely eliminated.