



### **Structural Integrity: Silver Bridge** ***A New Wonder Material - or Not?***

The construction engineers in Pittsburgh knew what they were doing and could rely on their own tried and tested expertise.

At this time, the American Bridge Company also went on to construct both the 'Silver' and 'Hi Carpenter' bridges. However those bridges were engineered by a different designer, who embraced a new high strength, high carbon, heat-treated steel which, presumably, he thought meant that you could build a less substantial structure. Undoubtedly he expected lower 'live' loading than in Pittsburgh. But each bridge was a much longer span and so the loads at the tops of the chains in the towers would have been greater than in the bridges in Pittsburgh.

The towers themselves were less substantial structures as well. Yet, the designer felt sufficiently confident in the new material to proceed.

The new design did have a safety factor of 1.5 when they were built but that didn't account for the increasing weight, and amount, of traffic that each bridge would carry - as cars and lorries were to become heavier and more prevalent with time...

Jack Fowler - a resident of Point Pleasant at the time of the disaster, now runs the local museum.

#### **Jack Fowler**

Well, the new bridge, of course, it was owned by local people, and they publicised and promoted it as a very high-strength material bridge. So, the residents had no reason not to doubt that it was not going to be a nice strong bridge, similar, though thinner in design, not the big chunky bridge that existed in some of the areas, but they had complete confidence in it. And, uh, this nice silver shiny bridge that we had here, uh, people loved it, and we, throughout the 39 years of existence, people had pride in the Silver Bridge.