

Statistics: holland
tunnel disaster, were
common at this



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Statistics: Location: Folkestone, England, and Sangatte, France Completion

Date: 1994 Cost: \$21 billion Length: 163, 680 feet (31 miles) Purpose:

Railway Setting: Underwater Materials: Steel, concrete Engineer(s):

Transmanche Link Engineering Firm When England and France decided to link their two countries with a 32-mile rail tunnel beneath the English Channel, engineers were faced with a huge challenge. Not only would they have to build one of the longest tunnels in the world; they would have to convince the public that passengers would be safe in a tunnel this size. Tunnel fires, like the Holland Tunnel disaster, were common at this time. How did the engineers resolve this problem? They built an escape route.

The Channel Tunnel, also called the Euro Tunnel or Chunnel, actually consists of three tunnels. Two of the tubes are full sized and accommodate rail traffic. In between the two train tunnels is a smaller service tunnel that serves as an emergency escape route.

There are also several “ cross-over” passages that allow trains to switch from one track to another. Just one year after the Chunnel opened, this engineering design was put to the test. Thirty-one people were trapped in a fire that broke out in a train coming from France. The design worked.

Everyone was able to escape through the service tunnel. It took just three years for tunnel boring machines from France and England to chew through the chalky earth and meet hundreds of feet below the surface of the English Channel. Today, trains roar through the tunnel at speeds up to 100 miles per hour and it’s possible to get from one end to the other in only 20 minutes!

Here’s how this tunnel stacks up against some of the longest tunnels in the

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world. (total length, in feet) Facts: At the time it was being built, the Chunnel was the most expensive construction project ever conceived. It took \$21 billion to complete the tunnel. That's 700 times more expensive than the cost to build the Golden Gate Bridge! Many of the tunnel boring machines used on the Chunnel were as long as two football fields and capable of boring 250 feet a day.

When construction began in 1988, British and French tunnel workers raced to reach the middle of the tunnel first. The British won. In the first five years of operation, trains carried 28 million passengers and 12 million tons of freight through the tunnel.