FROM AGENCE FRANCE PRESSE - COMMENTS BY WILLIAM MEACHAM

Preparations for the dating process that led to the Shroud of Turin being branded a medieval fake were all wrong according to an archaeologist at the University of Hong Kong.

Mr William Meacham, who was involved in the initial stages of the project, said an earlier, secret test conducted in 1982 at the University of California gave different readings.

Mr Meacham said he was one of the 22 experts who participated in a 1986 conference the Vatican organised in Turin on the programme for dating the Shroud, which many Christians revere as the cloth Christ was buried in.

"The lab work on the Shroud was very sophisticated," said Mr Meacham, "but the planning and sampling methodology was very shabby."

Carbon-14 tests conducted independently at three separate laboratories, placing the age of the Shroud at some time between 1260 and 1390, were questionable because all three laboratories used identical samples, he said.

"The samples were taken from a repaired corner which had been scorched in a fire in 1532," he said. "The C-14 date may reflect the influence of the 1532 fire rather than the actual age of the linen".

He said the damaged portions of the Shroud had certainly been subject to temperatures above 300 degrees Celsius when molten silver dripped onto the relic during the 16th century fire at the castle of Chambery in France.

Resulting modifications in the composition of the linen would have affected the C-14 reading, he said.

Samples should have been taken from other parts of the Shroud - including undamaged areas, badly charred portions and patches covering them that are known to date from the Middle Ages - to get a more precise reading, said Mr Meacham.

But the Vatican strongly opposed this, he said, because it wanted damage to the relic kept to a minimum, although "a very small amount, one centimetre by one centimetre or less, would have been enough".

The two secret tests in California were conducted with the techniques identical to those whose results were announced on Thursday, on separate halves of a thread taken from a piece removed in 1973 and known by Shroud experts as the "Raes sample".

One half of the thread was dated at 200 AD and the other at 1000 AD, Mr Meacham said. The results were never announced because the test was conducted without the permission of the Turin church authorities.

He said errors in carbon dating were frequent - sometimes even giving readings into the future - because of contamination.