

All About Glass

Presentations by members of the Science & Technology Group

The History and Evolution of Glass – Clive Dancer

The production of glass commenced in the 1st century AD. The ancient Romans used clay pipes with which they blew glass vessels of surprising clarity. A picture of one such vessel – now almost 2000 years old - was shown to the audience. In the Middle Ages, Venice – most notably Murano - became the centre of glass-making and is still known today as a principal place of manufacture. In the 1960s, glass-making was further developed in the United States and in 1986 a new studio was launched there – the Pulchick Studio – which became the international centre of glass-making education. Also, Dale Chihuly, based at the Westcott Studio in London, is recognised internationally as the foremost exponent of the art of glass-making. Some of his pieces fetch thousands of pounds at auction.

Stained Glass – Erica Godman

Erica explained the process of making a piece of stained glass, from first drawing a picture of the article required, then the pieces of glass needed to reflect the design and the tools necessary for cutting and fitting together the finished product. Pictures of stained glass windows (ancient and modern) were shown to the audience to illustrate the variety of effects that can be achieved. Samples of work by Erica and Victoria were on display.

Flat Glass – Vernon Western

In the early 1600s, there were fourteen glass manufacturing plants in England, mainly in the South because of their close proximity to an abundant supply of wood with which to fire the furnaces. But in 1615 James I of England (formerly James VI of Scotland) decreed that, in future, all furnaces should be fired by coal and a new type of furnace was developed by Sir Robert Mansell (the son of a Welsh nobleman) who henceforth enjoyed a monopoly of the glass-making industry.

The early 20th century saw a revolution in the manufacturing process from blown glass to the production of flat (sheet) glass. The principal challenge in its manufacture was to make a product that was ‘transparent’ rather than ‘translucent’, eliminating contamination from specs of dust and distortion from air bubbles in the cooling process. Pilkington produced plate glass as a private company for 150 years until it was sold to NSG (a Japanese company) in 2006.

Whitefriars Glass – Colin Tufnell

Whitefriars Glass was set up on the site of a monastery off Fleet Street in the late 1600's. James Powell, a wine merchant, bought it for his three sons in 1740. They learnt the craft and manufactured both cast and blown glass products. Their products were highly coloured and somewhat chunky. James' grandson, Harry Powell, took on the company in the mid 1800's and began the production of scientific glass and a range of decorative glass favoured by devotees of the Arts and Craft Movement. Many of their pieces were on show at the Great Exhibition of 1850. As a result of the success of the enterprise, the company outgrew its City of London site and was moved to Harrow in 1923, continuing to manufacture products with gas-fired furnaces. Harry Hodson became the chief designer. Geoffrey Baxter joined the company in 1951 as an apprentice and was the Chairman in 1981. He designed much of the glass that the company is known for; art glass, paper weights and stained glass. Much of this is now valuable. Whitefriars Glass enjoyed its position as the oldest glass-making company in the U.K. until the site was sold to a developer, the factory demolished and replaced by an industrial estate.

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