

## RESEARCH INTO GLASSES

### DELAY LINE

- From the mid-1960s STL was investigating the properties of glass and their potential uses in communications. This of course was long before the idea of glass fibres had been born and no direct applications had emerged.



- The glasses as used for delay lines in television sets had been found to degrade with moisture and **Cyril Drake** in his researches on this problem had mapped out a whole new set of glass chemistry. The glass was manufactured into TV delay lines at the ITT Quartz Crystal Division facility in Leeds, and successive developments to 'fold' the acoustic wave path lead to miniaturisation of the product.

### CONTROLLED RELEASE GLASS (CRG)

- Unlike conventional glass, which is based on silicates, glasses composed of phosphates or borates were investigated. It was found that these glasses could be formulated to dissolve at any desired rate. It was also possible to incorporate copper, iron, selenium and other inorganic elements into the glass structure.
- With a view to marketing the product STC registered the name "*Vitrilease*" in 1981.



- Cyril was committed to a better world for all and immediately identified the possibilities of CRG in the areas of human and animal medicine, disease control and precision industrial processes where controlled amounts of chemicals must be dispensed equally over time.
- The glasses can be drawn into rods for example or ground to any particle size. Their chemical composition can be adjusted so that in their chosen application they can dissolve at any predetermined rate.
- Early applications, which were rigorously tested both in the UK and Zambia, were the inclusion of metals to control liver fluke and, by attacking its snail carrier, the debilitating tropical disease bilharzia.
- Livestock farmers could implant glass pellets under the skin of cattle, sheep or pigs or administer a bolus to be swallowed.
- CRG-based paints were also developed to reduce the growth of barnacles and other marine organisms of the hulls of boats and ships.



*Vitrilease* was sold to the Pilkington Company and a manufacturing facility was set up in Bishops Stortford, where **Cyril Drake**, **Mary Tripp**, **Bill Arch**, **Ernie Workman** and others worked. Pilkington then moved the manufacturing to Wales, but the ex-STL workers did not move there. Eventually Pilkington sold *Vitrilease* to a Japanese company, and it is not known if the product is still manufactured.