Blowtorch Encyclopedia Article

Blowtorch

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Blowtorch

The blowtorch, a portable device that shoots out an extremely hot flame of pressurized burning alcohol or gasoline, can be used in plumbing and metalworking to melt metals, solder pipes, or thaw out frozen pipes. In 1862 James Rhodes, an American, developed and patented a design for a vapor lamp much like modern ones, but he never built a working model. In 1880, several different Swedish inventors claimed credit for the development of the modern blowtorch. Max Sievert, a manufacturer and exporter, patented a design for a tool with a small fuel reservoir connected by a metal tube to a small nozzle located in a perforated combustion chamber. Fuel, which was heated to a gaseous state issued from a nozzle into the combustion chamber, was mixed with air. The fuel was then ignited to form a clean, hot flame that burned strongly because it was pressurized. Although Sievert filed for the patent, it seems more likely that his engineer, C.R. Nyberg, actually devised this blowtorch.Propane is the most common fuel of choice since it is safer than the oxyacetylene gases used in earlier torches. A new tool, a multilayer foil, patented by Troy Barbee and Timothy Weihs uses hair-thin metal foils which, when exposed to heat from a match releases sufficient energy to melt metal and form a welded joint.As production costs for this process drop,it may become a safe alternative to a blowtorch for many applications although it's use is currently limited to such low oxygen environments of space and underwater.