

OXY/ACETYLENE WELDING AND CUTTING

Introduction

Oxygen/Acetylene welding, or "Gas Welding", is a process which relies on combustion of oxygen and acetylene. When mixed together in correct proportions within a hand-held torch or blowpipe, a hot flame is produced with a temperature of about 3,200°C. The chemical action of the oxy/acetylene flame can be adjusted by changing the ratio of the volume of oxygen to acetylene, using the valves on the torch or blowpipe.

Equipment

Oxy/acetylene equipment is portable and easy to use. It comprises oxygen and acetylene gases stored under pressure in steel cylinders. The cylinders should be fitted with regulators, to control the pressure and flow of gases. Flexible hoses are used to connect the regulators to the torch or blowpipe. Specially designed safety devices, called flame traps or "Flashback Arrestors" are fitted between the hoses and the regulators. Flashback arrestors prevent flames generated by a 'flashback' from reaching the cylinders

Flashbacks

A flashback is a rapid, high-pressure flame travelling back up the gas hoses, caused by welding or cutting at incorrect pressure settings, or from blockage or overheating of the nozzle (for example by operating with the nozzle too close to the material)

