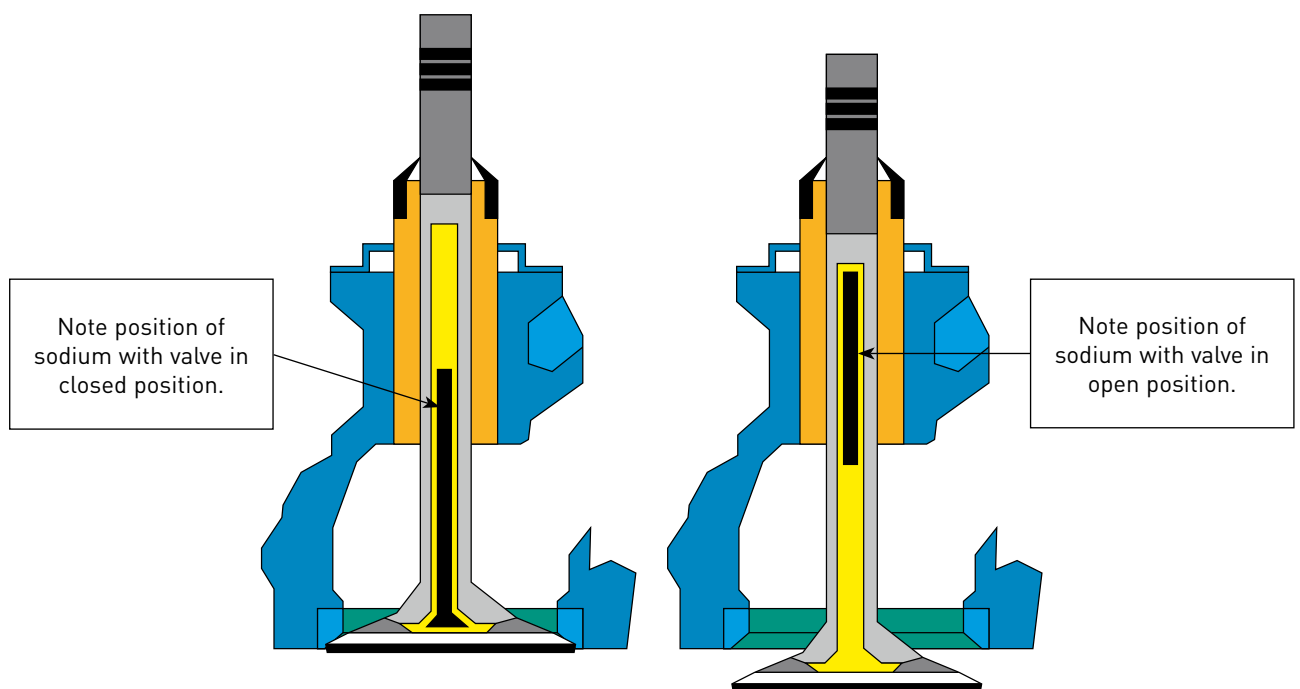


Sodium Filled Valves

Sodium filled valves were used in high performance applications due to their perceived ability to allow the faster transfer of heat away from the head of the valve. However, due to advancements in bimetallic valve technology and finite element analysis techniques, sodium filled valves are now less popular.

For interest: The hollow space in the head/stem of a sodium-cooled valve is filled to approximately 60% of its volume with metallic sodium, which melts at around 97°C. The inertia forces created during valve opening cause the liquid sodium to move up the valve stem (see diagram) transferring heat to the valve guide and away into the water jacket.



Caution!

Please observe the following guidelines when disposing of used sodium filled valves.

A hole should be drilled in the centre of the valve head and in the stem or the stem cut into two parts, during which they must not come into contact with water. Maximum of ten valves, prepared in this way are then thrown into water filled vessel. Immediately move away at least 3 metres from the vessel as a sudden and strong reaction occurs. After this treatment, the valves can be disposed of in the usual manner.