Intake and Exhaust Valves

Why stainless?
Good mechanical properties at high temperatures.

Fabrication process:
Hot forging or extrusion, machining, heat treatment, final grinding.

Grade:
Exhaust: Austenitic grades such as EN 1.4882 and 1.4871.
Intake and shaft: Martensitic grades such as EN 1.4718.

Manufacturer:
Not available.

Exhaust valves in combustion engines operate at high temperatures. However, the gas temperature of intake valves is much lower.

This dictates the use of different stainless grades for the intake and exhaust valves. Stainless steel provides optimum performance at the lowest cost.

Image courtesy of Deutsche Edelstahlwerke GmbH, Germany.