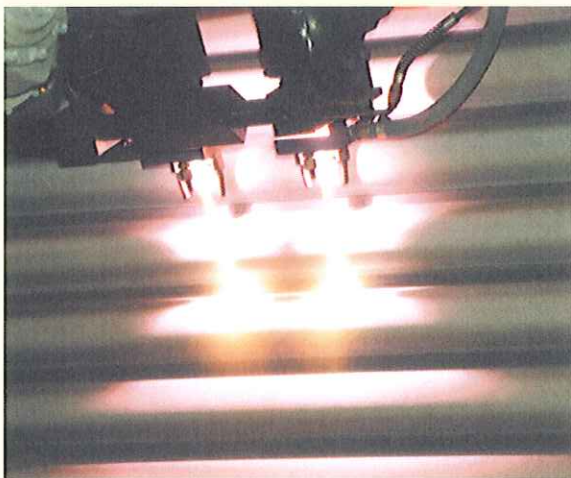
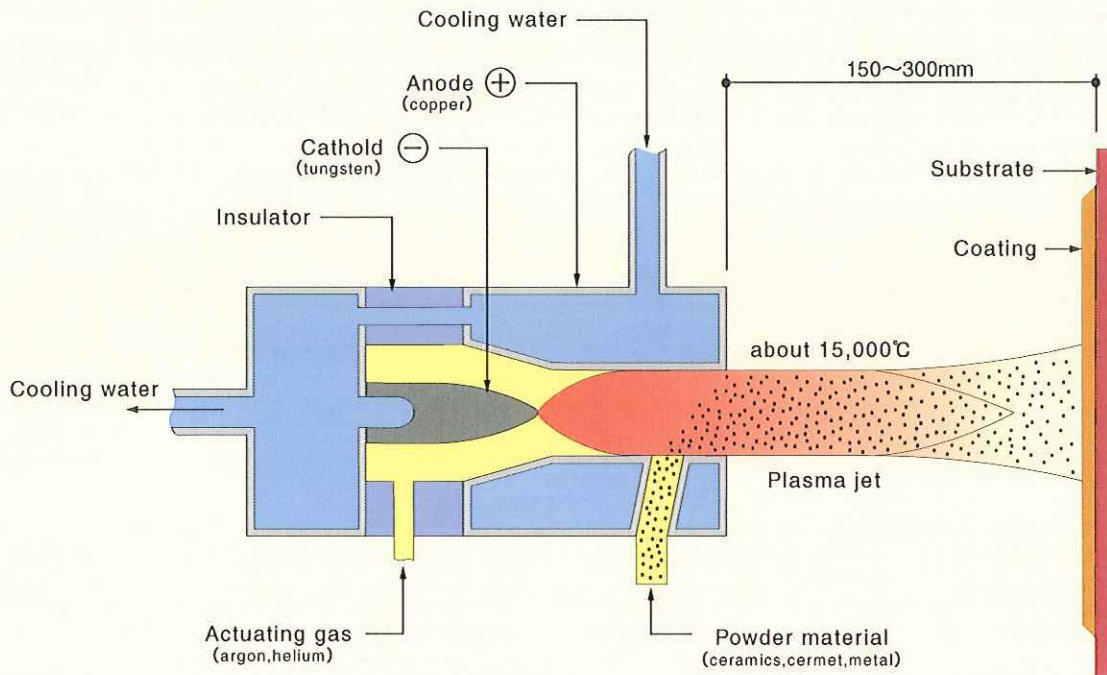


# Gas plasma spraying



It voltage is applied across the tungsten cathode and the copper nozzle anode in the actuating gas such as argon and helium to generate a D.C. arc, the actuating gas dissociates and ionizes, continuously generating a plasma arc. This plasma arc is squeezed by the nozzle and blows out as a plasma jet of an ultrahigh temperature at 15,000°C or above and of an ultrahigh speed.

Powders fed into the plasma jet are accelerated as being melted and coats a material. This method enables spraying of high melting point materials such as ceramics.

Further it enables formation of sprayed films of quality more superior compared with those obtained by other spraying methods because melted particles are sprayed to raw materials at a high speed by the plasma jet. It can also spray various materials.

## ■ General characteristics

- Spraying of all materials including ceramics and general metals possible.
- Formation of sprayed films finer and superior in quality effective in heat resistance and chemical corrosion resistance.
- Rare oxidation and deterioration of materials because of the use of an inert gas such as argon.
- Control of a raw material temperature at 200°C or below possible.
- Most suitable for spraying of a small member.

## ■ Characteristics of ofic

- A portable device enables on-the-spot plasma spraying.
- Spraying of a large construction (building) also possible.



Spraying material : titanium oxide  
(100 magnifications)