

ISOSTATIC PRESS

Isostatic Press is a reactor using isostatic pressure, which means exerting equal pressure in all directions. It uses water, oil, or other liquid/gas for isostatic pressure. It is used in compression molding, sintering, or sterilization of materials by pressurizing materials in pressure vessel.

Metal & Ceramic (Alloy, Joint)

Pressure Temperature

H.I.P

Diffusion layer

CuCrZr/SS

100 MPa, 1050 °C, 2hr

150 MPa, 1050 °C, 2hr

SS CuCrZr SS CuCrZr

Ref. J. Korean. Phys. Soc. 49 (2006) s442-s446

Peel of Shell (Clam)

Automation Process at 20 °C

3000 bar, 1 min

3000 bar, 5 min

Raw Clam

Hard Metal (WC: Tungsten carbide)

Vacuum Sintering at 1650 °C

HIP Treatment (100 Mpa)

Ref. J. Korean. Phys. Soc. 49 (2006) s442-s446

TiO₂ Films (Flexible Dye-Sensitized Solar Cells)

ITO-PEN

Before

After

2000 bar, 10 min

Ref. Int. J. Photoenergy. 2011 (2011) 1-7.

Foods (Sterilization, Shelf-life increase)

Pressure Medium (Liquid)

Sterilization of Whey beverage Using C.I.P

Salmonella spp. 350 Mpa at 20 °C

L. Monocytogenes at 20 °C

RRef. Effect of High Hydrostatic Pressure on Quality Parameters and Shelf-life of Lager Beer. (2003).

