**Water Bath Heater**

Water Bath Heaters are designed to heat high pressure fluids and gas coming from the well or pipeline. Water bath heaters (water jacket furnace) used in oil and gas industry for heating medium of the pipeline to prepare for further technology needs. It also called indirect bath heater.

**Configuration**

[Diagram showing the configuration of a water jacket furnace with labeled parts such as chimney, water tank, water level gauge, supporting plate, packing gland, flange, natural gas, air-conditioning fire arrester, burner, saddle, smoke outlet, gas coil pipe, drainage, and heated natural gas.]

**Water Jacket Furnace Schematic Diagram**
**Water Bath Heater**

The configuration of the heater may differ depending on the process application. Usually, the heater consists of main body with coil tubes, burner, firetube and flue stack. Sometimes skid may consider an expansion tank.

The main body refers to the basic vessel into which the firetubes and process coils are inserted from opposite ends. The burner ignites the fuel gas or fuel oil and blow it into firetube to heat the water in the vessel, and the hot water heats the medium in the coils such as crude oil or raw natural gas. The process coils are “bathing” in the water, and that's why it's called a water bath heater.

The heater shell has two saddle types supports, which is cuboid form and mounted on skid or special-designed bases. Outlet temperature may vary, but usually don’t exceed 86-88 °C.

**Code & Standards**

- ASME Section VII, DIV 1
- NACE MR0175
- API SPEC 12K
- UL, Exp
- PED
- CE
- API 6A, API 6D
- ANSI B31.3 Class M (H2S)

**Features**

- Sour medium;
- Heavy fouling medium;
- Salty medium;
- Specified kind of burner and fuel as per client requirements;
- Specified kind of control;
- Remote automation and control;
- Skid-mounted or trailer-mounted

**Application**

The primary applications for Water Bath Heaters include:

- Heating of well fluids coming from choke manifold to prevent freezing/waxing of crude.
- Heating of raw natural gas before turbines
- Heating of sulfur gas in sulfur processing facilities
- Heating of chemicals to maintain proper temperature meeting process requirements.

**Production Photos**