

BENCH OF BOILER A GRANULATES

DESCRIPTION

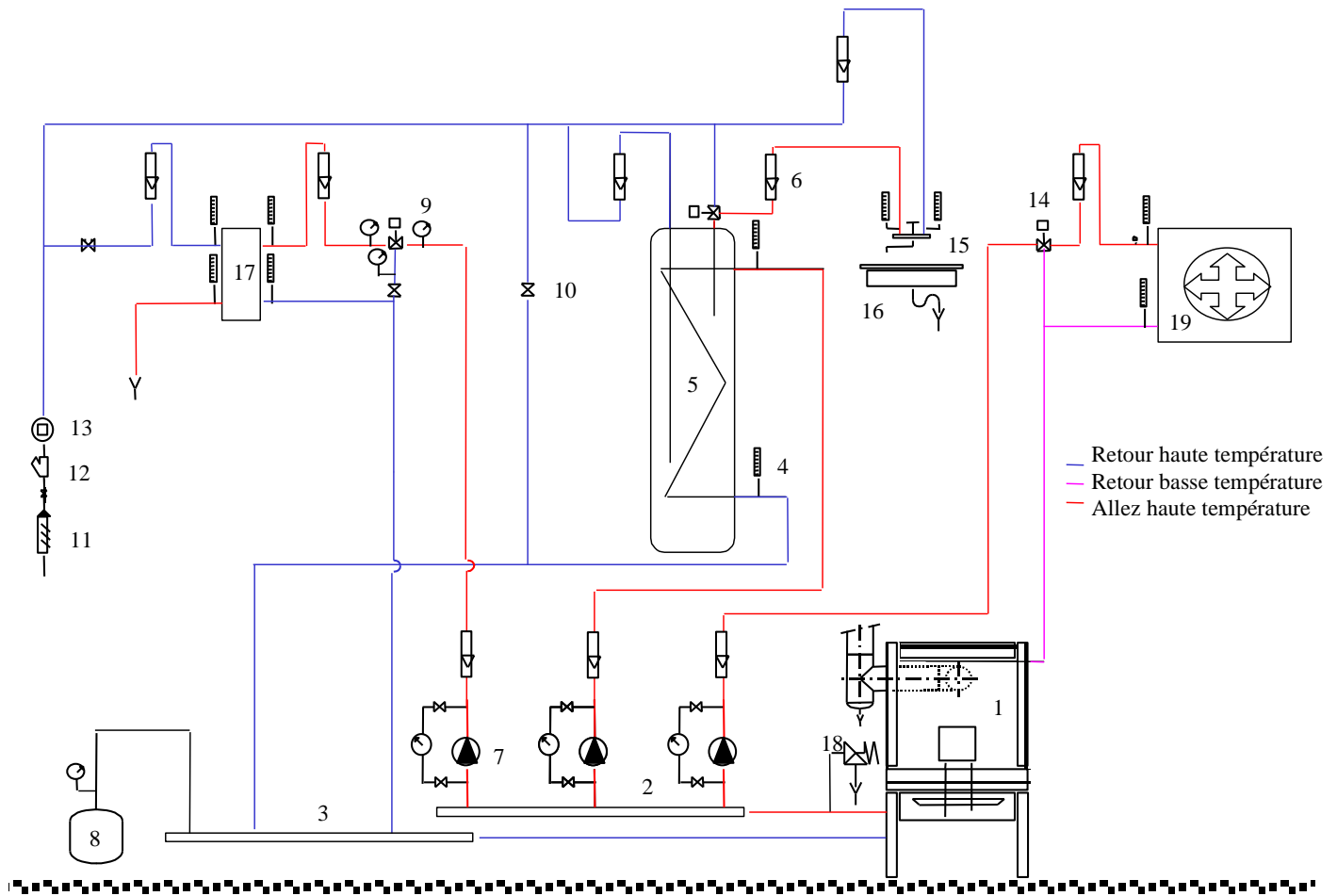
- The bench of study of a boiler with pellet is delivered, instrumented with technical and teaching handbook.
- It is composed of a boiler OKOFEN 8Kw with condensation, of a hot water domestic network, a heating network high temperature and can in option being equipped with a network low temperature to highlight the advantages of a boiler at condensation.
- A silo out of fabrics makes it possible to receive the stock of pellet, it is assembled on a dynamometric hook in order to calculate consumption.
- The food to the boiler is done by an endless screw.



Boiler OKOFEN

including/understanding:

- Automatic feeding since the silo.
- Automatic Lighting.
- Ventilator of air inlet at variable speed.
- Ventilator of pulling support.
- Removing of the cinders and automatic cleaning of the exchangers.
- Circuit of spillplate of temperature integrated.
- Regulator SIMATIC.



Hydraulic diagram GRA 100

Technical nomenclature:

- 1: Boiler OKOFEN 8KW with condensation.
- 2: Stainless starting collector.
- 3: Collector of return out of stainless.
- 4: Thermometer brass 0-100°C.
- 5: Preparatory E.C.S. 75 litres.
- 6: Transparent flowmeter.
- 7: Grundfos circulator.
- 8: Vase of expansion.
- 9: Pressure gauge 0-4 bars.
- 10: Winnow service $\frac{1}{4}$ of turn.
- 11: Disconnecting HY.
- 12: Filter in Y with brass sieve.
- 13: Water meter.
- 14: Winnow 3 ways handbook.
- 15: Mixing tap GROHE.
- 16: Vat STAINLESS.
- 17: Exchanger with plate 8KW.
- 18: Valve of safety.
- 19: Unit heater 13 KW.

Teaching applications

- Handling practice real elements of heating
 - Choice of the equipment.
 - Research and identification of the components.
 - Startup.
 - Adjustment.
 - Preventive and curative Maintenance.
 - Safety Member.
 - Water Supply – water treatment of boilers.
 - Device of expansion of water...

- Use of the instrumentation
 - Measurement of the flows, pressures, temperatures.
 - Consumption.
 - Measurement of the emissions in chimney (option)

- Concepts approached:
 - Thermal Transfers in an exchanger with plates.
 - Thermal Power.
 - Power heating ECS.
 - Assessments.
 - Outputs.

GRA 100

Options

The GRA 100 can be equipped with the following instrumentation:

- Analyzer of combustion for the measurement of the rejections in chimney (with or without measurements of the NO1, NO2)
- Thermometer of contact
- Meter (S) of calories

The GRA 100 can be equipped with a network low temperature with unit heater

Dimensions

Length 3 m
Width 1 m
Height 2 m
Weight 450 kg (without water)

Utilities

WATER: network 3 bars
ELECTRICITY: 230 V Mono
SMOKE: 1 exit out of suction cup

Evacuation for Used Water to envisage

The utilities must be with a maximum of 2,5 m of the installation