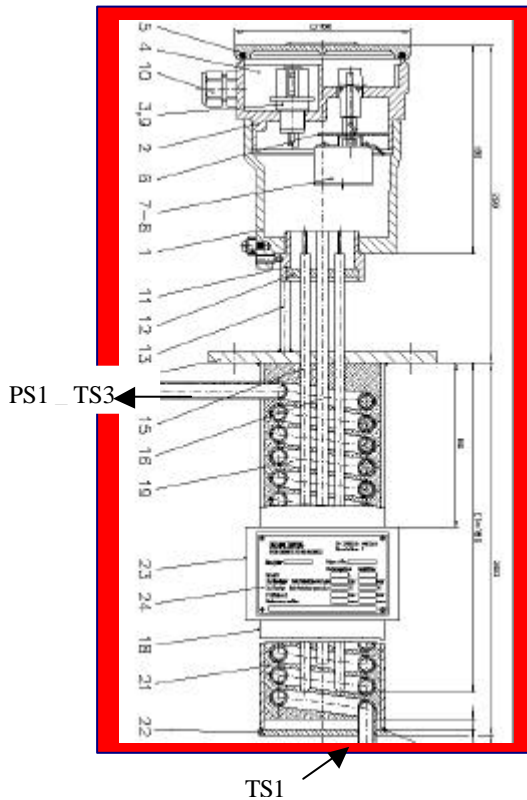


VAPORIZER and CONTROL UNIT

VAPORIZER:

The vaporizer is integrated at the extremity of sample probe spool. It consists in a coil exchanger sealed in calorific block temperature controlled electric type.



The coil exchanger item 16 is a 2m x 3 mm ID tubing and the assembly is so constructed for providing sample flushing to avoid fractionated distillation effect and the heavier components of the LNG will not remain in the coil.

Four temperature points are monitored:

TS 1: thermocouple K: measuring the inlet temperature of LNG, a 2 m extension capillary is provided in the vacuum jacket for thermal insulation and connection is made in the thermocouple junction box model AD 531 certified EExe ia II C T6.

A compensation cable has to be connected by customer to the EExi temperature converter ref 5114B1A integrated in the EExd control unit enclosure ref: AD 442.

The range of temperature is set to -160 to +40 °C .

TS2:PT100 (inserted in well item 16) measuring the vaporizer heat exchanger temperature controlled .

A 3 wires cable has to be connected by customer to the PID controller ref 2286B /4114 in the control unit.

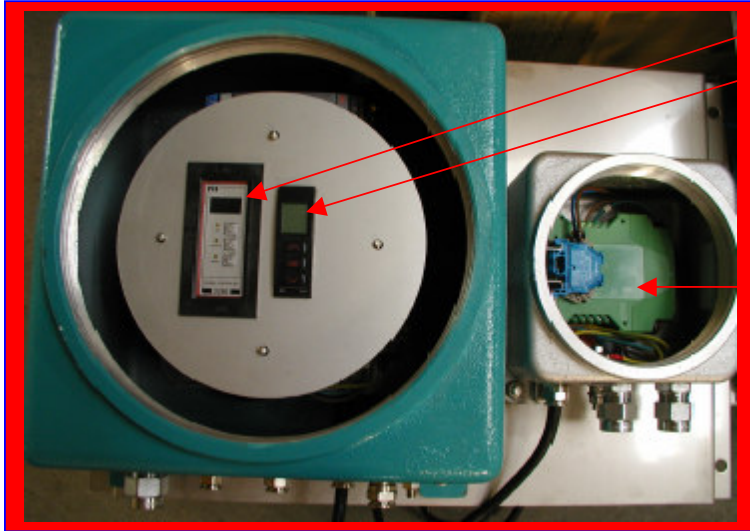
TS 3: Pneumatic temperature switch ref FCNFC on the natural gas at outlet of vaporizer, set point is -20°C.

An high temperature trip switch item 7 ,calibrated at 135°C for class T4 is integrated in the vaporizer for safety

PS1: A pneumatic pressure switch ref FPNFQX is supplied as well on natural gas at outlet of vaporizer; set point is 12 bar-g.

The temperature control of TS2 is set at 65°C and the outlet of TS 3 and PS1 are connected to the Pneumatic Logic Controller interlock system for processing the auto-shut-off sample take-off valve if outlet temperature T3 drops to -20°C (normal is +65 °C) or if pressure at vaporizer outlet exceeds 12 bar-g.

VAPORIZER CONTROL SYSTEM



Temperature controller
TS 1 transmitter/indicator

control unit with 24 VDC power supply
plate assembly

24 VDC power supply



TS 2 and heater

TS 3
PS1

vaporizer enclosure

TS 1
EExi junction box