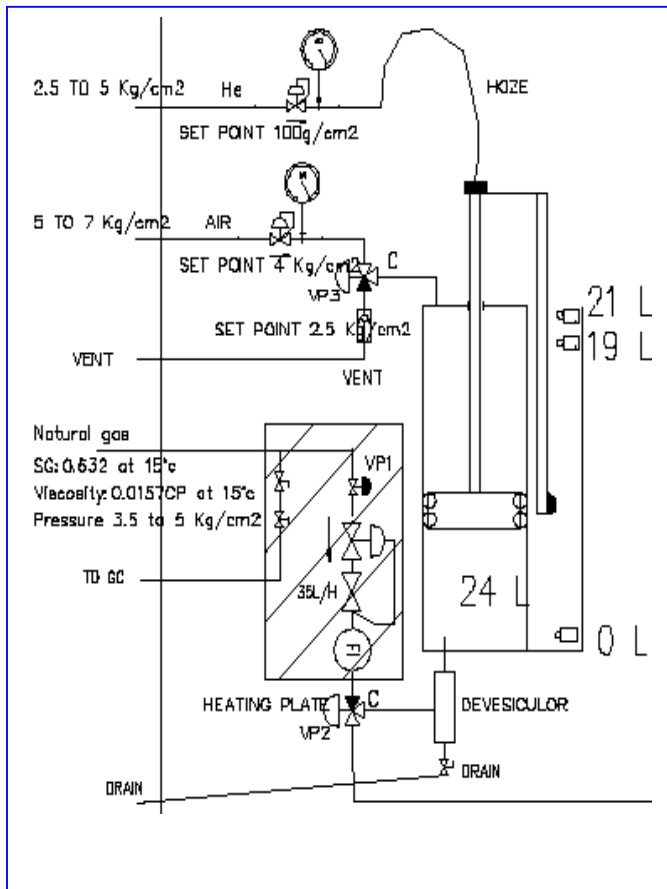
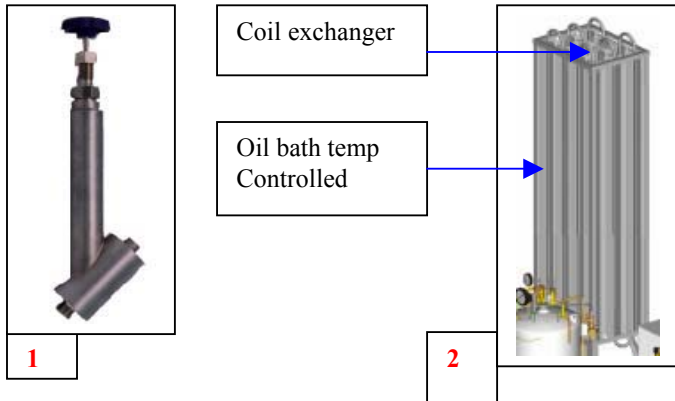


LIQUEFIED GAS AUTOSAMPLER

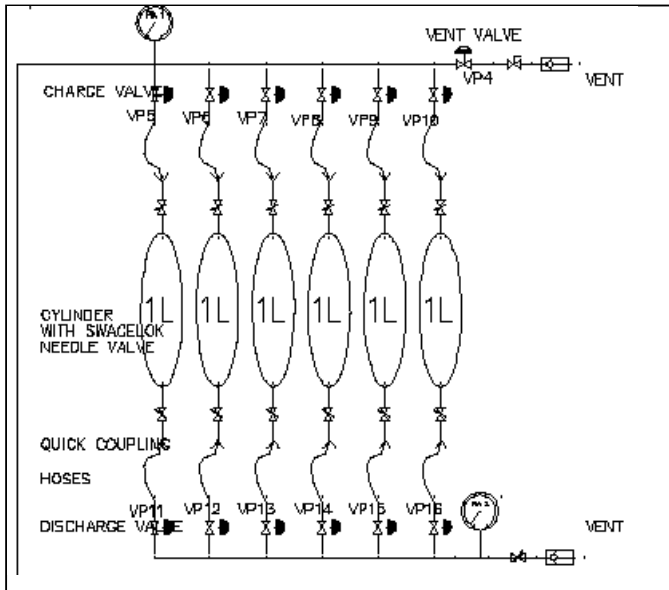
ISOSAMPLE 8100

SUBJECT: The ISOSAMPLE 8100 has been designed to sample Liquefied Natural Gas or Refrigerated Light Hydrocarbon Fluid according to the requirements of the most usual standard :ISO 8943

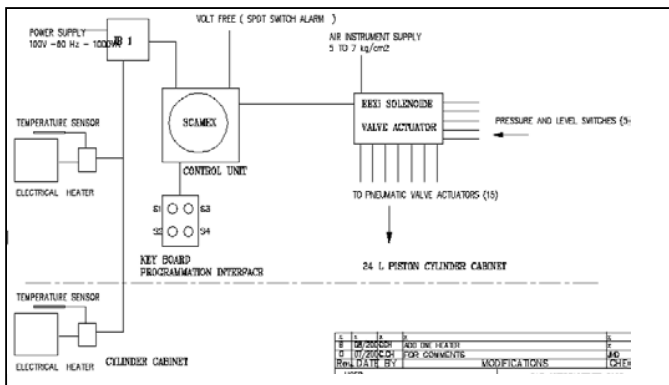


I- ISOSAMPLE 8 100 Main features :

- 1- Thermal insulation of the sample take-off probe by high vacuum on tube and block valve with extended bonnet vertically mounted.
- 2- Sample vaporizer by coil exchanger imerged in oil bath temperature controlled or by epiradiator IR Air fin heater is provided downstream
- 3- Spot and batch portable cylinders sampling:
Sample is accumulated in floating piston holders for spot and batch loops before transfer to portable cylinders .
Spot portable cylinder usual volume is 1 Sl charged at 4 barg sample pressure .
Batch portable cylinder usual is 3 Sl at 7 barg pressure .
Microflow controllers are used to fill spot and batch piston holders
Deveshiculor is an accumulator with sight facility
Cycle filling time adjustable for spot and batch cylinders
Balancing gas: instrument air pressure controlled at 2.5 bg during the charge of holder cylinders and at 4 bg during the discharge into the spot or 7 bg for discharge in batch cylinder with air pressure booster .Interseal barrier gas: Helium .
- 4- Spot and batch transportation cylinders charging :
Automatic operation on spot and manual on batch
Procedure for sampling: as per the fill and empty method Annex D of ISO 10 715 e.g.for the spot cylinders :
 - Open the vent valve and purge slowly the vent line
 - Open the charge valve and purge slowly the line and spot cylinder
 - Close the discharge valve and charge the spot cylinder
 - Close the charge valve and vent the spot cylinder until it reaches atmospheric pressure
 - Close the discharge valve and open the charge valve with controlling the pressure at 4 bg.



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- Repeat the operation for a total of 8 cycles
- Charge the spot cylinders at 4bg and close the valves. For batch cylinder manual purging is operated through sample line only final charging is fed by batch piston holder .
- Spot and batch transportation cylinders other characteristics: Internal polishing; featuring a needle valve ¼” at both ends and a relief valve at inlet.
- Design, manufacturing and verification of portable cylinder comply with essential requirements of European Process Equipment Directive PED 97/23/CE. Factory certification for 30 bg proof test .
- **7 – Control Unit SCAMEX:**

Micro-processed computer processing the application via the solenoid valve actuator BUS manifold with profibus data-link. Sampling sequence and alarm history reported on screen with data acquisition by keyboard. Communication with customer DCS via RS-485 data-link + general alarm contact SPDT NC. Power supply: 110/220 V-50/60Hz –Single phase or 24/48 V DC . Explosion proof computer enclosure and keyboard ATEX II 2G EExIIBT3; Solenoid valve actuator ATEX II 2G EExII (i p) BT3.

- 8 – System integration:**
- The sample take-off probe and block valve are connected to the sample vaporizer by vacuum tube for thermal insulation; these items are supplied as losing parts with the air fin heater for installation by others.
- The microflow controller /spot and batch piston cylinder holders and the Control unit SCAMEX are enclosed in a cabinet approximatively sized 1000 (L) x 600 (D) x 2000 (H) mm in epoxy painted carbon steel 20/10 mm sheet and IP 55 rating to accept location in harsh environment.
- To compensate the Joule/Thomson effect, the microflow controller is electrically heated and the cabinet is accurately temperature controlled at 40°C +/- 5°C to avoid condensation.
- The front door features laminated safety windows for control unit display view.
- The spot and batch transportation cylinders hook-up system is in a separated cabinet at the back side, temperature controlled between 40 and 50°C.

