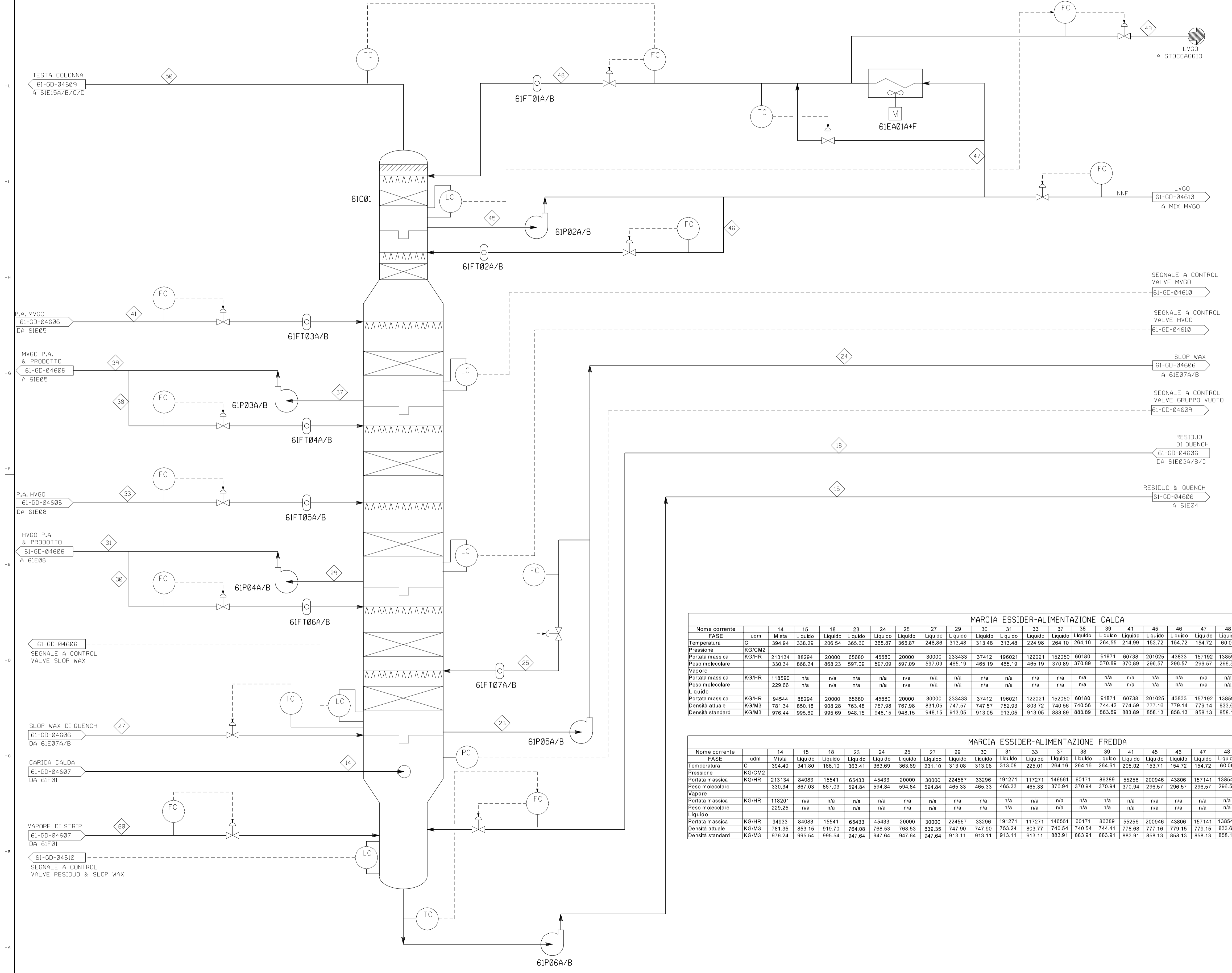


61EA01A+F LVGO P.A. AIR COOLER  
 61FT01A/B FILTRO LVGO P.A.  
 61FT02A/B FILTRO RIFLUSSO CALDO LVGO  
 61FT03A/B FILTRO MVGO P.A.  
 61FT04A/B FILTRO RIFLUSSO CALDO MVGO  
 61FT05A/B FILTRO HVGO P.A.  
 61FT06A/B FILTRO RIFLUSSO CALDO HVGO  
 61FT07A/B FILTRO SLOP WAX DI LAVAGGIO  
 61C01 COLONNA VACUUM  
 61P02A/B POMPA LVGO  
 61P03A/B POMPA MVGO  
 61P04A/B POMPA HVGO  
 61P05A/B POMPA SLOP OIL  
 61P06A/B POMPA RESIDUO VACUUM

**GENERAL NOTE:**  
 1. IL NUMERO DEI CORPI E LA CONFIGURAZIONE DEGLI SCAMBIATORI SONO STATI STIMATI. DA VERIFICARE A CURA DELL'APRES.



SEGNALE A CONTROL VALVE MVGO  
 61-GD-04610  
 SEGNALE A CONTROL VALVE HVGO  
 61-GD-04610  
 SLOP WAX  
 61-GD-04606 A 61E07A/B  
 SEGNALE A CONTROL VALVE GRUPPO VUOTO  
 61-GD-04609  
 RESIDUO DI QUENCH  
 61-GD-04606 DA 61E03A/B/C  
 RESIDUO & QUENCH  
 61-GD-04606 A 61E04

- LEGEND:**
- ◇ NUMERO DI CORRENTE
  - NNF NORMALLY NO FLOW
  - AT ACQUA TEMPERATA
  - FG FUEL GAS
  - BL LIMITE DI BATTERIA
  - LS VAPORE BASSA PRESSIONE
  - FO FUEL OIL
  - DM ACQUA DEMI
  - BFW BOILER FEED WATER
  - CW COOLING WATER
  - LA AMMINA POVERA
  - RA AMMINA RICCA
  - BD BLOWDOWN
  - MS VAPORE MEDIA PRESSIONE

**MARCIA ESSIDER-ALIMENTAZIONE CALDA**

| Nome corrente    | 14     | 15     | 18      | 23      | 24      | 25      | 27      | 29      | 30      | 31      | 33      | 37      | 38      | 39      | 41      | 45      | 46      | 47      | 48      | 49      | 50     | 60     |       |
|------------------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|-------|
| FASE             | udm    | Mista  | Liquido | Liquido | Liquido | Liquido | Liquido | Liquido | Liquido | Liquido | Liquido | Liquido | Liquido | Liquido | Liquido | Liquido | Liquido | Liquido | Liquido | Liquido | Mista  | Vapore |       |
| Temperatura      | C      | 394.94 | 338.29  | 206.54  | 395.60  | 395.87  | 395.87  | 248.86  | 313.48  | 313.48  | 224.98  | 264.10  | 264.10  | 264.55  | 214.99  | 153.72  | 154.72  | 154.72  | 60.04   | 60.04   | 80.00  | 300.00 |       |
| Pressione        | KG/CM2 |        |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |        |        |       |
| Portata massica  | KG/HR  | 213134 | 88294   | 20000   | 65880   | 45680   | 20000   | 30000   | 233433  | 37412   | 196021  | 122021  | 152050  | 60180   | 91871   | 60738   | 201025  | 43833   | 157192  | 138592  | 18600  | 13069  | 7500  |
| Peso molecolare  |        | 330.34 | 868.24  | 868.23  | 597.09  | 597.09  | 597.09  | 465.19  | 465.19  | 465.19  | 465.19  | 465.19  | 370.89  | 370.89  | 370.89  | 296.57  | 296.57  | 296.57  | 296.57  | 296.57  | 19.93  | 18.01  |       |
| Vapore           |        |        |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |        |        |       |
| Portata massica  | KG/HR  | 118590 | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a    | 12259  | 7500  |
| Peso molecolare  |        | 229.66 | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a    | 18.78  | 18.01 |
| Liquido          |        |        |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |        |        |       |
| Portata massica  | KG/HR  | 94544  | 88294   | 20000   | 65880   | 45680   | 20000   | 30000   | 233433  | 37412   | 196021  | 122021  | 152050  | 60180   | 91871   | 60738   | 201025  | 43833   | 157192  | 138592  | 18600  | 810    | n/a   |
| Peso molecolare  |        | 781.34 | 850.18  | 908.28  | 763.48  | 767.98  | 767.98  | 831.05  | 747.57  | 747.57  | 752.93  | 803.72  | 740.56  | 740.56  | 744.42  | 774.59  | 777.16  | 779.14  | 779.14  | 833.64  | 833.64 | 820.28 | n/a   |
| Densità attuale  | KG/M3  | 976.44 | 995.54  | 995.54  | 948.15  | 948.15  | 948.15  | 913.05  | 913.05  | 913.05  | 883.89  | 883.89  | 883.89  | 883.89  | 883.89  | 858.13  | 858.13  | 858.13  | 858.13  | 858.13  | 858.13 | 859.11 | n/a   |
| Densità standard | KG/M3  | 976.44 | 995.54  | 995.54  | 948.15  | 948.15  | 948.15  | 913.05  | 913.05  | 913.05  | 883.89  | 883.89  | 883.89  | 883.89  | 883.89  | 858.13  | 858.13  | 858.13  | 858.13  | 858.13  | 858.13 | 859.11 | n/a   |

**MARCIA ESSIDER-ALIMENTAZIONE FREDDA**

| Nome corrente    | 14     | 15     | 18      | 23      | 24      | 25      | 27      | 29      | 30      | 31      | 33      | 37      | 38      | 39      | 41      | 45      | 46      | 47      | 48      | 49      | 50     | 60     |       |
|------------------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|-------|
| FASE             | udm    | Mista  | Liquido | Liquido | Liquido | Liquido | Liquido | Liquido | Liquido | Liquido | Liquido | Liquido | Liquido | Liquido | Liquido | Liquido | Liquido | Liquido | Liquido | Liquido | Mista  | Vapore |       |
| Temperatura      | C      | 394.40 | 341.80  | 186.10  | 363.41  | 383.69  | 383.69  | 231.10  | 313.08  | 313.08  | 225.01  | 264.16  | 264.16  | 264.61  | 208.02  | 153.71  | 154.72  | 154.72  | 60.00   | 60.00   | 80.00  | 300.00 |       |
| Pressione        | KG/CM2 |        |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |        |        |       |
| Portata massica  | KG/HR  | 213134 | 84083   | 15541   | 65433   | 45433   | 20000   | 30000   | 224567  | 33296   | 191271  | 117271  | 146561  | 60171   | 86389   | 55256   | 200946  | 43808   | 157141  | 138541  | 18600  | 13069  | 7500  |
| Peso molecolare  |        | 330.34 | 867.03  | 867.03  | 594.84  | 594.84  | 594.84  | 465.33  | 465.33  | 465.33  | 465.33  | 370.94  | 370.94  | 370.94  | 296.57  | 296.57  | 296.57  | 296.57  | 296.57  | 296.57  | 19.93  | 18.01  |       |
| Vapore           |        |        |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |        |        |       |
| Portata massica  | KG/HR  | 118201 | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a    | 12259  | 7500  |
| Peso molecolare  |        | 229.25 | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a     | n/a    | 18.78  | 18.01 |
| Liquido          |        |        |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |        |        |       |
| Portata massica  | KG/HR  | 94933  | 84083   | 15541   | 65433   | 45433   | 20000   | 30000   | 224567  | 33296   | 191271  | 117271  | 146561  | 60171   | 86389   | 55256   | 200946  | 43808   | 157141  | 138541  | 18600  | 810    | n/a   |
| Peso molecolare  |        | 781.35 | 853.15  | 919.70  | 764.08  | 768.53  | 768.53  | 839.35  | 747.90  | 747.90  | 753.24  | 803.77  | 740.54  | 740.54  | 744.41  | 778.68  | 777.16  | 779.15  | 779.15  | 833.67  | 833.67 | 820.28 | n/a   |
| Densità attuale  | KG/M3  | 976.24 | 995.54  | 995.54  | 947.64  | 947.64  | 947.64  | 913.11  | 913.11  | 913.11  | 883.91  | 883.91  | 883.91  | 883.91  | 883.91  | 858.13  | 858.13  | 858.13  | 858.13  | 858.13  | 858.13 | 859.11 | n/a   |
| Densità standard | KG/M3  | 976.24 | 995.54  | 995.54  | 947.64  | 947.64  | 947.64  | 913.11  | 913.11  | 913.11  | 883.91  | 883.91  | 883.91  | 883.91  | 883.91  | 858.13  | 858.13  | 858.13  | 858.13  | 858.13  | 858.13 | 859.11 | n/a   |

|     |          |             |          |         |          |
|-----|----------|-------------|----------|---------|----------|
| 0   | 31/04/07 | EMISSIONE   | SMACCON  | ILUCONE | C.ARAM   |
| Rev | Date     | Description | Prepared | Checked | Approved |

Eni S.p.A  
 Divisione Refining & Marketing

**PROJECT: PROGETTO SERENISSIMA - RAFFINERIA DI VENEZIA**  
**UNITA' 61 IMPIANTO VACUUM**

DESCRIZIONE: **PROCESS FLOW DIAGRAM**  
**COLONNA VACUUM**

**Snamprogetti**  
 A company of SAIPEM

JOB No. 316210  
 Dwg. No. 61-GD-B-04608  
 SCALE: Sh. of

This document is the property of Snamprogetti who will safeguard its right according to the civil and penal provision of law