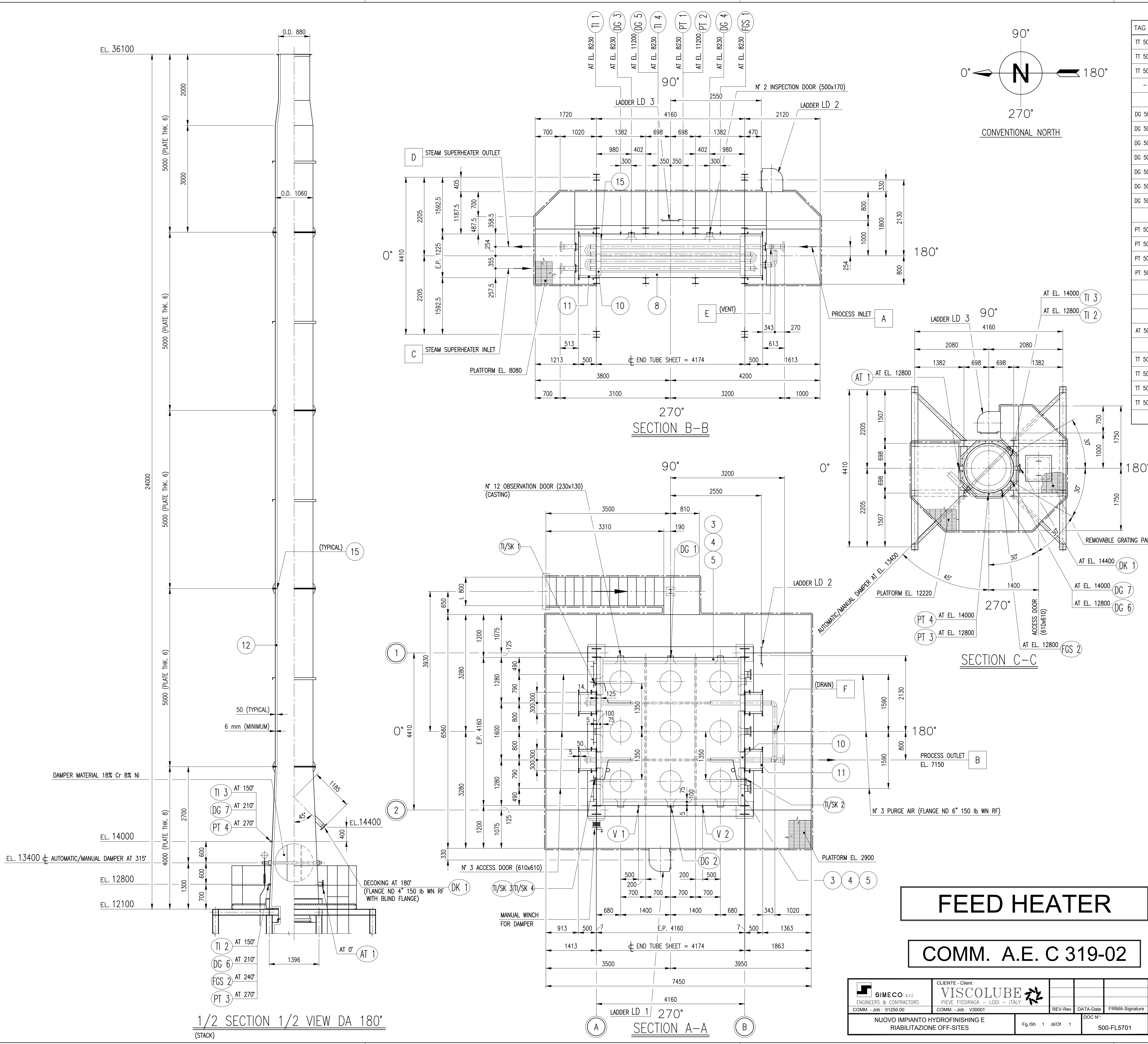




# FEED HEATER

## COMM. A.E. C 319-02

|                                                                           |                                                                                                  |  |               |           |                 |
|---------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--|---------------|-----------|-----------------|
| <b>SIMECO</b> s.r.l.<br>ENGINEERS & CONTRACTORS<br>COMM. - Job : 01250.00 | CLIENTE - Client :<br><b>VISCOLUBE</b><br>PIEVE FISSIRAGA - LODI - ITALY<br>COMM. - Job : V30001 |  | REV-Rev       | DATA-Date | FIRMA-Signature |
|                                                                           | NUOVO IMPIANTO HYDROFINISHING E<br>RIABILITAZIONE OFF-SITES                                      |  | Fg/Sh 1 di 01 | 1         | 500-FL5701      |

| INSTRUMENT CONNECTION (WITH BLIND FLANGE OR PLUG)    |         |     |                       |            |                                        |                            |
|------------------------------------------------------|---------|-----|-----------------------|------------|----------------------------------------|----------------------------|
| TAG N°                                               | ITEM    | QT. | DESCRIPTION           | LOCATION   | DIMENSION                              | DWG.                       |
| TT 5096                                              | TI 1    | 1   | FLUE GAS TEMPERATURE  | CONVECTION | COUPLING ND 1 1/2" 3000 lb NPT         | C319-A1-124                |
| TT 5097                                              | TI 2    | 1   | FLUE GAS TEMPERATURE  | STACK      | COUPLING ND 1 1/2" 3000 lb NPT         | C319-A1-124                |
| TT 5098                                              | TI 3    | 1   | FLUE GAS TEMPERATURE  | STACK      | COUPLING ND 1 1/2" 3000 lb NPT         | C319-A1-124                |
| -                                                    | TI 4    | 1   | FLUE GAS TEMPERATURE  | CONVECTION | COUPLING ND 1 1/2" 3000 lb NPT         | C319-A1-124                |
|                                                      |         |     |                       |            |                                        |                            |
| DG 5001                                              | DG 1    | 1   | DRAFT GAUGE           | RADIANT    | COUPLING ND 1 1/2" 3000 lb NPT         | C319-A1-124                |
| DG 5002                                              | DG 2    | 1   | DRAFT GAUGE           | RADIANT    | COUPLING ND 1 1/2" 3000 lb NPT         | C319-A1-124                |
| DG 5003                                              | DG 3    | 1   | DRAFT GAUGE           | CONVECTION | COUPLING ND 1 1/2" 3000 lb NPT         | C319-A1-124                |
| DG 5004                                              | DG 4    | 1   | DRAFT GAUGE           | CONVECTION | COUPLING ND 1 1/2" 3000 lb NPT         | C319-A1-124                |
| DG 5005                                              | DG 5    | 1   | DRAFT GAUGE           | BREECHING  | COUPLING ND 1 1/2" 3000 lb NPT         | C319-A1-124                |
| DG 5006                                              | DG 6    | 1   | DRAFT GAUGE           | STACK      | COUPLING ND 1 1/2" 3000 lb NPT         | C319-A1-124                |
| DG 5007                                              | DG 7    | 1   | DRAFT GAUGE           | STACK      | COUPLING ND 1 1/2" 3000 lb NPT         | C319-A1-124                |
|                                                      |         |     |                       |            |                                        |                            |
| PT 5034                                              | PT 1    | 1   | PRESSURE TRANSMITTERS | CONVECTION | COUPLING ND 1 1/2" 3000 lb NPT         | C319-A1-124                |
| PT 5033                                              | PT 2    | 1   | PRESSURE TRANSMITTERS | BREECHING  | COUPLING ND 1 1/2" 3000 lb NPT         | C319-A1-124                |
| PT 5032                                              | PT 3    | 1   | PRESSURE TRANSMITTERS | STACK      | COUPLING ND 1 1/2" 3000 lb NPT         | C319-A1-124                |
| PT 5031                                              | PT 4    | 1   | PRESSURE TRANSMITTERS | STACK      | COUPLING ND 1 1/2" 3000 lb NPT         | C319-A1-124                |
|                                                      |         |     |                       |            |                                        |                            |
|                                                      | FGS 1   | 1   | FLUE GAS SAMPLE       | CONVECTION | COUPLING ND 1 1/2" 3000 lb NPT         | C319-A1-124                |
|                                                      | FGS 2   | 1   | FLUE GAS SAMPLE       | STACK      | COUPLING ND 1 1/2" 3000 lb NPT         | C319-A1-124                |
| AT 5001                                              | AT 1    | 1   | ANALYZER OXYGEN       | STACK      | FLANGE ND 4" 150 lb W.N. R.F. (NOTE 1) | C319-A1-124                |
|                                                      |         |     |                       |            |                                        |                            |
| TT 5093                                              | TI/SK 1 | 1   | SKIN THERMOCOUPLE     | RADIANT    | COUPLING ND 1 1/2" 3000 lb NPT         | C319-A1-124<br>C319-A2-250 |
| TT 5092                                              | TI/SK 2 | 1   | SKIN THERMOCOUPLE     | RADIANT    | COUPLING ND 1 1/2" 3000 lb NPT         | C319-A2-250<br>C319-A1-124 |
| TT 5094                                              | TI/SK 3 | 1   | SKIN THERMOCOUPLE     | RADIANT    | COUPLING ND 1 1/2" 3000 lb NPT         | C319-A1-124<br>C319-A2-250 |
| TT 5095                                              | TI/SK 4 | 1   | SKIN THERMOCOUPLE     | RADIANT    | COUPLING ND 1 1/2" 3000 lb NPT         | C319-A1-124<br>C319-A2-250 |
| NOTE 1) FLANGE TYPE RF. SMOOTH FINISH 125 + 250 AARH |         |     |                       |            |                                        |                            |

| CONNECTION SPECIFICATION                                                      |                                                                                                           |                                     |       |               |
|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------|-------|---------------|
| ITEM                                                                          | SERVICE                                                                                                   | TERMINALS                           | QT.   | MATERIAL      |
| A                                                                             | PROCESS INLET                                                                                             | ND 4" 1500 lb W.N. R.J.             | 1     | A 182 F 347 H |
| B                                                                             | PROCESS OUTLET                                                                                            | ND 4" 1500 lb W.N. R.J.             | 1     | A 182 F 347 H |
| C                                                                             | STEAM SUPERHEATER INLET                                                                                   | ND 4" 300 lb W.N. R.F. (NOTE 1)     | 1     | A 182 F 11    |
| D                                                                             | STEAM SUPERHEATER OUTLET                                                                                  | ND 4" 300 lb W.N. R.F. (NOTE 1)     | 1     | A 182 F 11    |
| E                                                                             | COIL VENT WITH BLIND FLANGE                                                                               | ND 1" 1500 lb L.W.N. R.J.           | 1     | A 182 F 347 H |
| F                                                                             | COIL DRAIN WITH BLIND FLANGE                                                                              | ND 1" 1500 lb L.W.N. R.J.           | 1     | A 182 F 347 H |
|                                                                               |                                                                                                           |                                     |       |               |
| V 1                                                                           | SNUFFING STEAM (RADIANT)                                                                                  | ND 1 1/2" 600 lb W.N. R.F. (NOTE 1) | 1     | ASTM A 105    |
| V 2                                                                           | SNUFFING STEAM (RADIANT)                                                                                  | ND 1 1/2" 600 lb W.N. R.F. (NOTE 1) | 1     | ASTM A 105    |
|                                                                               |                                                                                                           |                                     |       |               |
| DK 1                                                                          | DECOCKING                                                                                                 | ND 4" 150 lb W.N. R.F. (NOTE 1)     | 1     | ASTM A 105    |
| NOTE 1) FLANGE TYPE RF. SMOOTH FINISH 125 + 250 AARH                          |                                                                                                           |                                     |       |               |
| FOR GENERAL ARRANGEMENT (ELEVATION) AND GENERAL NOTES SEE DRAWING C319-A1-010 |                                                                                                           |                                     |       |               |
|                                                                               |                                                                                                           |                                     |       |               |
|                                                                               |                                                                                                           |                                     |       |               |
|                                                                               |                                                                                                           |                                     |       |               |
| 5                                                                             |                                                                                                           |                                     |       |               |
| 4                                                                             |                                                                                                           |                                     |       |               |
| 3                                                                             |                                                                                                           |                                     |       |               |
| 2                                                                             | REVISED WHERE SHOWN  | 18/10/02                            | A.E.  | F.M.A.        |
| 1                                                                             | ISSUED FOR CONSTRUCTION                                                                                   | 16/07/02                            | A.E.  | F.M.A.        |
| 0                                                                             | ISSUED FOR APPROVAL                                                                                       | 31/05/02                            | A.E.  | F.M.A.        |
| REV.                                                                          | DESCRIZIONE / DESCRIPTION                                                                                 | DATA                                | FIRMA | CONTROLLATO   |
|                                                                               |                                                                                                           | DATE                                | SIGN  | CHECKED       |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div><b>SCANDIUZZI SUD</b><br/>COSTRUZIONI METALLICHE - IMPIANTI INDUSTRIALI<br/><small>Sede legale: Via PAVE - 31040 VOLPAGO DEL MONTELLO (TV) ITALY<br/>Sede operativa: Via ENRICO FERMI - 72100 BRINDISI (BR) ITALY<br/>TEL. (0831)575016 - FAX (0831)575006</small></div>                                                                                                                                                                      |                                                                                         | <div><b>ALFA ENGINEERING</b><br/>CONSULENZA E PROGETTAZIONE FORNI PETROLCHIMICI<br/><small>Via ROBERTO 41/A - 20092 CINISELLO BALSAAMO (MI) ITALY<br/>TEL. (02)6126832 - FAX (02)66013486<br/>e-mail: <a href="mailto:alfaengineering@libero.it">alfaengineering@libero.it</a></small></div> |
| CLIENTE<br>CLIENT                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>VISCOLUBE S.p.A.</b> PIEVE FISSIRAGA (LODI)-ITALIA<br>ORDINE VISCOLUBE V30001 NR 010 | COMMESSA SCANDIUZZI /JOB<br><b>E-02</b><br>COMMESSA ALFA ENGINEERING /JOB<br><b>C319/02</b>                                                                                                                                                                                                                                                                                       |
| PROGETTO<br>PROJECT                                                                                                                                                                                                                                                                                                                                                                                                                                | NUOVO IMPIANTO HYDROFINISHING<br>E RIABILITAZIONE OFF-SITES                             | VISTA /VIEW<br> <br>N° FILES<br><b>C319-02-011-A1-R2</b>                                                                                                                                                |
| FEED HEATER ITEM PH-501                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                         | SCALA /SCALE<br>1:50<br>FORMATO /FORM<br><b>A1</b>                                                                                                                                                                                                                                                                                                                                |
| OGGETTO<br>OBJECT                                                                                                                                                                                                                                                                                                                                                                                                                                  | GENERAL ARRANGEMENT (SECTION)                                                           | DISSEGNO /DRAWING<br><b>C319-A1-011</b><br>FOGLIO /SHEET<br>1 di 1<br>REV. REV.<br><b>2</b>                                                                                                                                                                                                                                                                                       |
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| <div><b>ALFA ENGINEERING</b><br/>Consulenza e Progettazione dal 1983</div>                                                                                                                                                                                                                                                                                    |                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                   |
| VISCOLUBE S.p.A.                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                   |
| NUOVO IMPIANTO HYDROFINISHING E RIABILITAZIONE OFF-SITES                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                   |
| FEED HEATER ITEM PH-501 - GENERAL ARRANGEMENT (SECTION)                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                   |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                    | NAME FILE: C319-02-011-A1-R2<br>DWG. 31902-A1-011<br>SCALE: 1:50                        | REV. 2                                                                                                                                                                                                                                                                                                                                                                            |