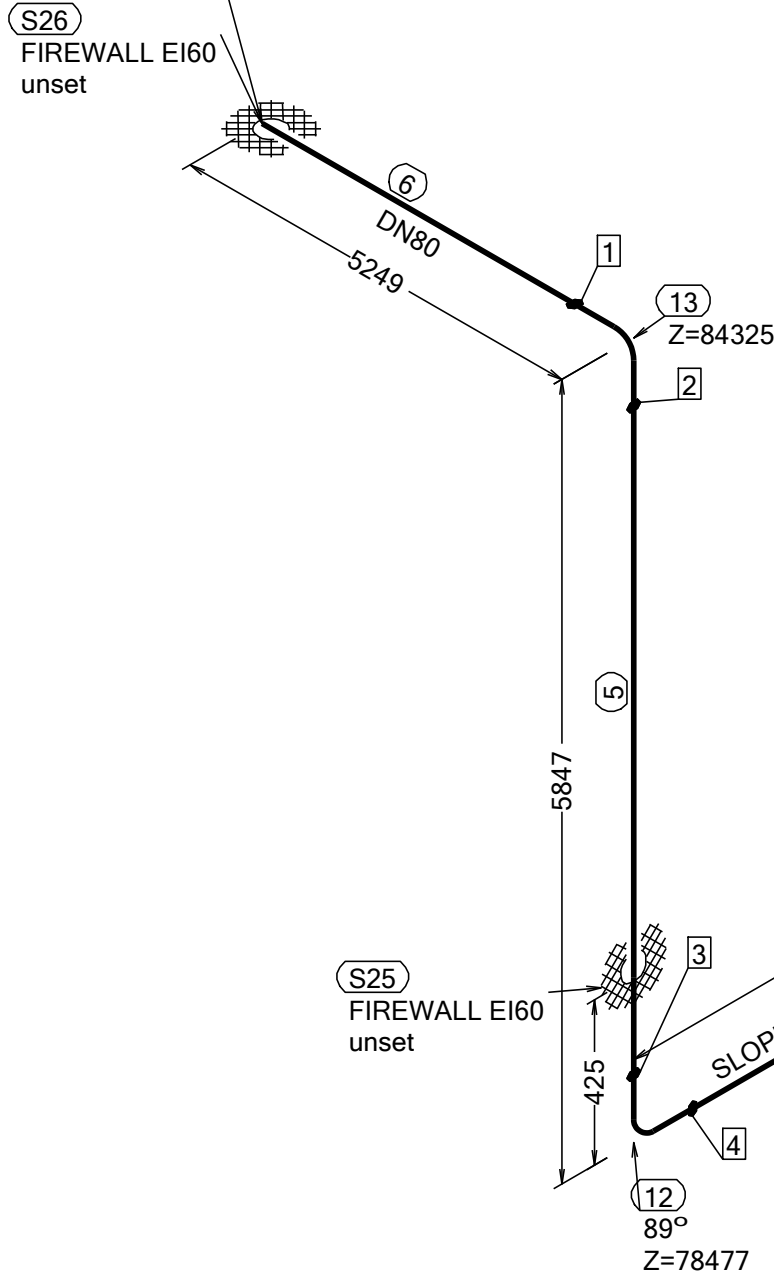


N (Y)

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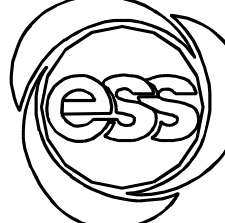
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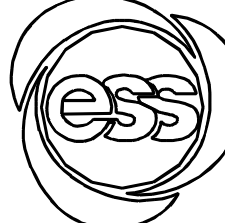
CONT. ON  
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Y=1600  
Z=78393

| WELD | WPS |
|------|-----|
| 1    |     |
| 2    |     |
| 3    |     |
| 4    |     |
| 5    |     |
| 6    |     |
| 7    |     |
| 8    |     |
| 9    |     |
| 10   |     |
| 11   |     |
| 12   |     |
| 13   |     |

| FABRICATION MATERIALS |   |         |           |          |         |
|-----------------------|---|---------|-----------|----------|---------|
| PT NO                 | COMPONENT DESCRIPTION                                   | DN      | MATERIAL  | QTY (mm) | REMARKS |
| PIPE                  |   |         |           |          |         |
| 1                     | PIPE, SS-EN 10217-7, TC1, 88.9x2.0                      | 80      | EN 1.4404 | 2517     |         |
| 2                     | PIPE, SS-EN 10217-7, TC1, 88.9x2.0                      | 80      | EN 1.4404 | 3540     |         |
| 3                     | PIPE, SS-EN 10217-7, TC1, 88.9x2.0                      | 80      | EN 1.4404 | 990      |         |
| 4                     | PIPE, SS-EN 10217-7, TC1, 88.9x2.0                      | 80      | EN 1.4404 | 661      |         |
| 5                     | PIPE, SS-EN 10217-7, TC1, 88.9x2.0                      | 80      | EN 1.4404 | 5620     |         |
| 6                     | PIPE, SS-EN 10217-7, TC1, 88.9x2.0                      | 80      | EN 1.4404 | 5135     |         |
| FITTINGS              |   |         |           |          |         |
| 7                     | TEE REDUCED, SS-EN 10253-4, TYPE A, 88.9x2.0 / 60.3x2.0 | 80 x 50 | EN 1.4404 | 1        |         |
| 8                     | TEE REDUCED, SS-EN 10253-4, TYPE A, 88.9x2.0 / 60.3x2.0 | 80 x 50 | EN 1.4404 | 1        |         |
| 9                     | ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 88.9x2.0      | 80      | EN 1.4404 | 1        |         |
| 10                    | ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 88.9x2.0      | 80      | EN 1.4404 | 1        |         |
| 11                    | ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 88.9x2.0      | 80      | EN 1.4404 | 1        |         |
| 12                    | ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 88.9x2.0      | 80      | EN 1.4404 | 1        |         |
| 13                    | ELBOW 90, TYPE 3D, SS-EN 10253-4, TYPE A, 88.9x2.0      | 80      | EN 1.4404 | 1        |         |
| FLANGES               |   |         |           |          |         |
| 14                    | FLANGE BLIND, SS-EN 1092-1, TYPE 05, PN16               | 80      |           | 1        |         |
| 15                    | FLANGE WN, SS-EN 1092-1, TYPE 11, PN16                  | 80      |           | 1        |         |

| ERECTION MATERIALS |                                      |    |                       |          |         |
|--------------------|--------------------------------------|----|-----------------------|----------|---------|
| PT NO              | COMPONENT DESCRIPTION                | DN | MATERIAL              | QTY (mm) | REMARKS |
| GASKETS            |                                      |    |                       |          |         |
| 16                 | GASKET, EN 1514-1, TYPE XXX, T=1,5mm | 80 | EXPANDED GRAPHITE     | 1        |         |
| BOLTS              |                                      |    |                       |          |         |
| 17                 | HEXAGONAL NUT, M6M, ISO 4032         | 16 | EN 1515-4, A4, HV≥250 | 8        |         |
| 18                 | WASHER, BRB, ISO 7089                | 16 | EN 1515-4, A4-70      | 16       |         |
| 19                 | 70 mm HEXAGONAL BOLT, M6S, ISO 4017  | 16 | EN 1515-4, A4-70      | 8        |         |
| SUPPORTS           |                                      |    |                       |          |         |
| 20                 | ESS Atta                             | 80 |                       | 1        |         |
| 21                 | ESS Atta                             | 80 |                       | 1        |         |
| 22                 | ESS Atta                             | 80 |                       | 1        |         |
| 23                 | ESS Atta                             | 80 |                       | 1        |         |
| 24                 | PENETRATION ATTA                     | 80 |                       | 1        |         |
| 25                 | PENETRATION ATTA                     | 80 |                       | 1        |         |
| 26                 | PENETRATION ATTA                     | 80 |                       | 1        |         |

|  |                                   |  |   |  |   |                        |                              |
|--|-----------------------------------|--|---|--|---|------------------------|------------------------------|
| WPS See Weldlist<br>TBN                            | Design Temperature<br>50degC      | Tightening Torque For Flange Joints<br>TBN | P&ID Drawing Number<br>ESS-0059672  | General Layout Drawing Number<br>TBN   | Calculation Report<br>ESS-0058702   | Inspection Plan<br>TBN | Area Code<br>G01-NCL         |
| Quality Level For Weldign Acc To<br>TBN            | Design Pressure<br>10bar (g)      | Bend Radius<br>N/A                         | Bending Procedure<br>N/A  | Coupling Installation Procedure<br>TBN | Pressure Test Program<br>TBN  | Alternate System Tag   | Date (First Issue)<br>170522 |
| Weld Joint Efficiency Factor (Longitudinal)<br>1,0 | Test Pressure<br>14.3bar (g)      | Insulation Specification<br>N/A            |  |  | Title/Name<br>EUROPEAN SPALLATION SOURCE ERIC<br>WATER COOLING SYSTEM<br>CWL-CWS01 OVERVIEW<br>ESS.ACC.E02.E01.WP0001 |                        | Scale<br>-                   |
| Elevation (z) Acc To<br>BCS                        | Quality Class<br>MQC4-C           | Insulation Thickness<br>N/A                |   |  |   |                        | Format<br>A2                 |
|  | Media<br>CWM                      | Allowance For Corrosion<br>0               |   |  |   |                        | Sheet<br>1 of 1              |
|  | Pipe Specification<br>MQC4-W-PN16 | Surface Treatment<br>N/A                   |   |  |   |                        | Revision<br>A1               |
| Rev<br>A1  | Description<br>ISSUED FOR CDR     | Date<br>170522                             | Drawn<br>FRPE   | Designed<br>FRPE                       | Reviewed<br>AKCO  | Verified<br>ANLU       | Quality<br>Approved          |



EUROPEAN SPALLATION SOURCE ERIC  
WATER COOLING SYSTEM  
CWL-CWS01 OVERVIEW  
ESS.ACC.E02.E01.WP0001

Document Number  
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