**HEAT EXCHANGER SPECIFICATION**

E-TSM 107 Appendix

|  |  |  |  |
| --- | --- | --- | --- |
| 01 Plant | 02 Location, Room No | 03 System No | 04 Component No |
|       |       |       |       |
| 05 Quantity | 06 Date | 07 Revised: Date/Item |
|      S |       |       |

**THERMAL PART**

|  |  |  |
| --- | --- | --- |
| 08 Rating10 Mean temp diff corr. | 09 Mean temp diff corr. | 10 Overall Heat transfer coeff. |
|       | kW |       |       | kW/m2°CC |
| 11 Surface per unit | 12 Number of shells | 13 Surface per shell |
|       | m2 |       |       | m2 |
|  | Primary Side | Secondary Side |
|  | 14 | 15 |
| Medium acc. to |       |       |
|  | 16 | 17 |
| Flow | kg/s |       |       |
|  | 18 | 19 |
| Temp Inlet | °C |       |       |
|  | 20 | 21 |
| Temp Outlet | °C |       |       |
|  | 22 | 23 |
| Operating Pressure (absolute) | MPa |       |       |
|  | 24 | 25 |
| Number of passes |       |       |
|  | 26 | 27 |
| Velocity | m/s |       |       |
|  | 28 | 29 |
| Pressure Drop | MPa |       | (max) |       |       | (max) |       |
|  | 30 | 31 |
| Fouling resistance | m2°C/kW |       |       |
|  | 32 | 33 |
| Heat transfer coefficient | kW/m2°C |       |       |

**DESIGN AND PERFORMANCE PART**

|  |  |  |
| --- | --- | --- |
|  | Primary Side | Secondary Side |
|  | 34 | 35 |
| Design temp | °C |       |       |
|  | 36 | 37 |
| Design pressure, internal (absolute) | MPa |       |       |
|  | 38 | 39 |
| Design pressure,external (absolute) | MPa |       |       |
|  | 40 | 41 |
| Design acc. to |       |       |
|  | 42 | 43 |
| Inspection acc. to |       |       |
|  | 44 | 45 |
| Quality class |       |       |
|  | 46 | 47 |
| Tightness class |       |       |
|  | 48 | 49 |
| Corrosion protection, external |       |       |
|  | 50 | 51 |
| Radiation internal | mSv/h |       |       |
| 52 Forces and moments from connecting pipe | 53 Pressure difference across tube plate | 54 Operating conditions. Transients |
|       connecting pipe |       | MPa |       |
| 55 Ambient Conditions | Pressure | Temperature  | Humidity | Radiation |
| Normal |       | MPa |       | °C |       | RH % |       | mSv/h |
| 56 Ambient Conditions | Pressure | Temperature | Humidity | Radiation |
| Abnormal |       | MPa |       | °C |       | RH % |       | mSv/h |

**DESIGN AND PERFORMANCE PART**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 57 **Type** |  |  |  | To be proposed by |
| Tube exchanger |       | Plate exchanger |       | manufacturer |       |
| 58**Arrangement**64 Vertical      |
| U-tubes | [ ]  | Straight tubes | [ ]  | Horizontal | [ ]  | Vertical | [ ]  |
| 59 **Type of tube fixing** |  |  |  |
| Welding after rolling | [ ]  | Rolled | [ ]  | To be proposed by manufacturer |       |
| **Connecting pipes** | **Primary side** | **Secondary side** |
|  | Size | Weld | Flange | Pipe Code | Size | Weld | Flange  | Pipe Code |
|  | 60 |  |  |  | 61 |  |  |  |
| Inlet |  | mm |       |       |       |       |       |       |       |       |
|  |  |  | 62 |  |  |  | 63 |  |  |  |
| Outlet |  | mm |       |       |       |       |       |       |       |       |
|  |  |  | 64 |  |  |  | 65 |  |  |  |
| Drain |  | mm |       |       |       |       |       |       |       |       |
|  |  |  | 66 |  |  |  | 67 |  |  |  |
| Venting |  | mm |       |       |       |       |       |       |       |       |
|  |  |  | 68 |  |  |  | 69 |  |  |  |
| Instrumentation |  |       |       |       |       |       |       |       |       |
| **Type of flange steal** |  |  |
|  | 70 Double seal with interm. drainage | [ ]  | 74 Double seal with interm. drainage | [ ]  |
|  | 71 Single seal with prov. for sealing weld | [ ]  | 75 Single seal with prov. for sealing weld | [ ]  |
|  | 72 Single seal | [ ]  | 76 Single seal | [ ]  |
|  | 73 Seal according to mfr´s standard | [ ]  | 77 Seal according to mfr´s standard | [ ]  |
| **Material** |  | 78 Tubes | 79 Tubeplate | 80 Channel | 81 Shell |
|  | Tube exchanger |       |       |       |       |
|  |  |  |  |  |  |
|  |  | 82 Plates | 83 Nozzles | 84 Gaskets between plates | 85 Conn. flanges gaskets |
|  | Plate exchanger |       | Prim. |       | Prim. |       | Prim. |       |
|  |  | Sec. |       | Sec. |       | Sec. |       |
| 86 Max Cobalt Content 0,2 % in item |
|       |

|  |  |
| --- | --- |
| 87 Weight empty: | 88 Weight, during operation |
|       | kg |       | kg |
| 89 Max, overall length: | 90 Max, overall height: |
|       | mm |       | mm |

|  |  |
| --- | --- |
| 91 Manufactured by: | 92 Constructions drawings No  |
|       |       |

**QUALITY AND CLASSIFICATION**

|  |  |  |  |
| --- | --- | --- | --- |
| 93 Quality class | 94 Design acc. to | 95 Inspection acc. to | 96 Tightness class |
|       |       |       |       |
| 97 Surface treatment acc. To | 98 Seismic Class |
|       |       |

**REMARK**

|  |
| --- |
| 99 To be stated by manufacturer |
|       |