

Air-Cooled Heat Exchanger Specification Sheet

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|----|--|------------------------|----------------------|-----------------|--------------------|-----------------------------------|--------------------------|--------------------------|---------------|----------|---------------|
| 1 | Client: Ovintiv | | | | | | | | | | |
| 2 | Location: | | | | | | | | | | |
| 3 | Service of Unit: Cooling Water | | | | | | | | | | |
| 4 | Item No.: 190615 | | | | | | | | | | |
| 5 | Date: 4/1/2024 | | | | | | | | | | |
| 6 | Size & Type | 50 | / | 15 | ft | Type | Forced | Number of Bays | 1 | | |
| 7 | Surf/Unit-Finned Tube | 69,662 ft ² | | | Bare area/bundle | 3,238 | ft ² | Ratio (Total | 21.51 | | |
| 8 | Heat exchanged | 13892500 BTU/h | | | MTD, Eff | 43.26 °F | | | | | |
| 9 | Transfer rate | 5.27 | Bare, Service | 99.17 | Clean | 150.41 BTU/(h-ft ² -F) | | | | | |
| 10 | PERFORMANCE DATA - TUBE SIDE | | | | | | | | | | |
| 11 | Fluid Circulated | Water | | | | In/Out | | | | | |
| 12 | Total Fluid Entering | lb/h | 347,306 | | Density, Liq | lb/ft ³ | 60.677 | / | 61.532 | | |
| 13 | | BPD | 25,000 | | Density, Vap | lb/ft ³ | 0 | / | 0 | | |
| 14 | Temperature | °F | 180 | / | 140 | Specific Heat, Liq | BTU/(lb-F) | 1.0003 | / | 0.9997 | |
| 15 | Liquid | lb/h | 347306 / 347306 | | Specific Heat, Vap | BTU/(lb-F) | 0 / 0 | | | | |
| 16 | Vapor | lb/h | 0 / 0 | | Therm. Cond, Liq | BTU/(ft-h-F) | 0.384 / 0.372 | | | | |
| 17 | Noncondensable | lb/h | 0 / 0 | | Therm. Cond, Vap | BTU/(ft-h-F) | 0 / 0 | | | | |
| 18 | Steam | lb/h | / | | Freeze Point | °F | 0 | | | | |
| 19 | Water | lb/h | / | | Bubble / Dew point | °F | 0 / 0 | | | | |
| 20 | Molecular wt, Vap | / | | Latent heat | BTU/lb | 0 | | | | | |
| 21 | Molecular wt, NC | | | | | Inlet pressure (abs) | psi | 64.7 | | | |
| 22 | Viscosity, Liq | cp | 0.3443 | / | 0.4744 | Pres Drop, Allow/Calc | psi | 20 | / | 16.29 | |
| 23 | Viscosity, Vap | cp | 0.0000 | / | 0.0000 | Fouling resistance | ft ² -h-F/BTU | 0.001 | | | |
| 24 | PERFORMANCE DATA - AIR SIDE | | | | | | | | | | |
| 25 | Air Quantity, Total | 1,720,000 | lb/h | | | Altitude | 2,500 | ft | | | |
| 26 | Air Quantity/Fan | 224,599 | ft ³ /min | | | Temperature In | 100 | °F | | | |
| 27 | Static Pressure | 0.53 | inH2O | | | Temperature Out | 133 | °F | | | |
| 28 | Face Velocity | 10.97 | ft/s | Bundle velocity | 2,521 | lb/h/ft ² | Design Ambient | 100 | °F | | |
| 29 | DESIGN-MATERIALS-CONSTRUCTION | | | | | | | | | | |
| 30 | Design/Vac./Test Pres | 260 | / | 0 | / | 0 | psi | Design temperature | 200 | °F | |
| 31 | TUBE BUNDLE | | Header | | | Tube | | | | | |
| 32 | Size | 50 | ft | Type | Box | Material | Carbon Steel | | | | |
| 33 | Number/bay | 1 | | Material | Carbon Steel | Specifications | | | | | |
| 34 | Tube Rows | 4 | | Passes | 4 | OD | 1 | Min Thk. | 0.075 | in | |
| 35 | Arrangement | | | | Plug Mat. | No./Bun | 266 | Lng | 48 | ft | |
| 36 | Bundles | 1 | par | Gasket Mat. | | | | Pitch | 2.625 / 2.273 | 30 deg | |
| 37 | Bays | 1 | par | Corr. Allow. | 0 | in | Fin | | | | |
| 38 | Bundle frame | | | | Inlet Nozzle | 2 | 6 | Type | L-finned | | |
| 39 | MISCELLANEOUS | | | | | | Outlet nozzle | 2 | 6 | Material | Aluminum 1060 |
| 40 | Struct. Mount. | | | | Special Nozzles | OD | 2.25 | Tks | 0.016 | in | |
| 41 | Surf.Prepare | | | | Rating | 150 | ANSI | No. 10 | #/in | DesTemp | 0 °F |
| 42 | Louvers | | | | TI | PI | Code | ASME Code Sec VIII Div 1 | | | |
| 43 | Vibration Switches | | | | Chem Cleaning | Stamp | Yes | Specs | | | |
| 44 | MECHANICAL EQUIPMENT | | | | | | | | | | |
| 45 | Fan,Mfr., Model | | | | Driver, Type | V-belt | Speed Reducer, Type | | | | |
| 46 | No./Bay | 2 | RPM | | | | Mfr. | Mfr.&Model | | | |
| 47 | Dia. | 14 | ft | Blade(s) | | | | No./Bay | | | |
| 48 | Pitch | | | | Angle | RPM | Rating | | | | |
| 49 | Blade(s) | | | | Hub | | | | Enclosure | | |
| 50 | hp/Fan | 30 | hp | MinAmb | | | | V/Phase/Hz | | | |
| 51 | Control Action on Air Failure- | | | | | | | | Louvers | | |
| 52 | Degree Control of Outlet Process Temperature | | | | | | | | | | |
| 53 | Recirculation | | | | | | | Steam Coil | No | | |
| 54 | Plot Area | 0 | ft ² | Drawing No. | | | Wt.Bundle | 32,347 | Wt. Unit | 32,347 | lb |
| 55 | Notes: | | | | | | | | | | |
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