GRAHAM
ENGINEERING ANSWERS

# SURFACE CONDENSER SPECIFICATION SHEET

| | | | |
|---|---|---|---|
| Customer: | Lincoln Paper and Tissue LLC | EG.No.: | 1821NEW16 |
| Customer Ref: | | Date: | 4/21/2016 |
| Location | Lincoln, ME | Engineer: | GDM |
| Item: | Surface Condenser | | |

## PERFORMANCE

| | | |
|---|---|---|
| Absolute Pressure @ Steam Inlet | inHgA | 3.5 |
| Steam Condensed | lbs/hr | 81,000 |
| Heat Rejected | BTU/hr | 75,297,600 |
| Circulating Water | gpm | 7,530 |
| Water Specific Gravity / Specific Heat | | |
| Water Inlet / Outlet | °F | 90/ 110 |
| Water Pressure Loss: | psig | 9.5 |
| Service Factor | % Clean | 75 |
| Tube Velocity | ft/s | 8 |

## DESIGN

| | | | | |
|---|---|---|---|---|
| Model: | | 46 62 TALTD | | |
| Tubesheet/ Shell Joint | | FTSTB | | |
| Surface Area Total / Effective | ft2 | 7766/ 7655 | | |
| Number of Water Passes | | 2 | | |
| Number of Tubes | | 1,599 | | |
| Outside Diameter (in) - AVG | | 0. 22 AVG | | |
| Total Tube Length | ft | 24.75 | | |
| Design / Test Pressure | psig | | Shell | Tubes |
| | | Design | FV & 15 | 75 |
| | | Test | 22.5 | 112.5 |
| Design Temperature | °F | | 225 | 150 |
| Hotwell: Cylindrical | Supply | Minutes | 1 | |
| | | | | |
| Steam Inlet (in) | | Qty/ Size | 1 | 48 |
| Water Connections(in) | | Qty/ Size | 2 | 20 |
| Condensate Outlet (in) | | Qty/ Size | 1 | 8 |
| Vapor Outlet (in) | | Qty/ Size | 1 | 3 |
| Relief Connection (in) | | Qty/ Size | 1 | 16 |
| Corrosion Allowance (in) | | Shellside/ Tubeside | 0.313 | 0.625 |
| Impingement Protection | | Perforated SS | | |

## MATERIALS

| | | |
|---|---|---|
| Shell | Carbon Steel | SA-516-70 |
| Water Boxes | Carbon Steel | SA-516-70 |
| Water Box Covers | Carbon Steel | SA-516-70 |
| Baffles | Carbon Steel | SA-516-70 |
| Tube Supports | Carbon Steel | SA-36 |
| Tubes | 316SS | SA-249-TP316 |
| Tube Sheets | 316SS | SA-240-316 |

## Remarks:

Construction Code: HEI, ASME Sec VIII Div 1 w/ Stamp

Ejector Package mounted on Condenser

Vortex Breaker in condensate outlet

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