## FORM U-2 MANUFACTURER'S PARTIAL DATA REPORT A Part of a Pressure Vessel Fabricated by One Manufacturer for Another Manufacturer As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

| <ol> <li>Manufactured and certified by</li> </ol>  | Monticello Exchanger & Mfg.  | . Co. 806 N. First Street, Monticello, IN 47960   |  |  |  |  |  |  |  |
|--|--|---|--|--|--|--|--|--|--|
| 2. Manufactured for  | (Name and address of Manufacturer) Lindlow and Associates, P.O. Box 176, Schererville, IN 46375  |   |  |  |  |  |  |  |  |
| 2 Manufactured for   | (Name and address of Purchaser)  |   |  |  |  |  |  |  |  |
| 3 Location of installation   | Lindlow and Associates, 628 Gatlin Road, Schererville, IN 46375  |   |  |  |  |  |  |  |  |
|  | (Name and address) Channel Section JN2192  |   |  |  |  |  |  |  |  |
| 4 Type   | el part (shell, two-piece head, tube bundle))  | (Mfg's serial No )  | (CRN)  |  |  |  |  |  |  |
| 188  | 2192   | Monticello Exchanger &  | , ,  |  |  |  |  |  |  |
| (Nat'l Bd No.)   | (Drawing No.)  | (Drawing prepared   | - ····· 5· · · · · · · · · · · · · · · ·   |  |  |  |  |  |  |
| 5 ASME Code. Section VIII, Div. 1  | 1995, A96  |   |  |  |  |  |  |  |  |
|  | Edition and Addenda (date) gle wall vessels, lackets of lacketed vessels   | Code Case No. , shell of heat exchangers, or chamber of m   | Special Service per UG-120(d) ulti-chamber vessels.  |  |  |  |  |  |  |
| 6 Shell (a) No of course(s).   | <u> </u>   | (b) Overall length ft & in.:  |  |  |  |  |  |  |  |
| 6 Shell (a) No of course(s).   |  | (b) Storal longer to a live   |  |  |  |  |  |  |  |
| Course(s)  | Material   | Thickness Long Joint (Cat. A)   | Circum, Joint (Cat. A, B & C) Heat Treatment   |  |  |  |  |  |  |
| No Diameter, in Length ft. & in.   | Spec /Grade or Type  | Nom Corr. Type Full, Spot, None   | Eff. Type Full, Spot, None Eff. Temp Time  |  |  |  |  |  |  |
| •  |  |   |  |  |  |  |  |  |  |
|  |  |   |  |  |  |  |  |  |  |
|  |  |   |  |  |  |  |  |  |  |
| 7 Hoods (a)  |  | (b)   |  |  |  |  |  |  |  |
| 7 Heads (a) (Mat'l Spec  | (b)<br>c. No , Grade or Type) H.TTime & Temp (Mat'l Spec. No , Grade or Type) H.TTime & Temp   |   |  |  |  |  |  |  |  |
| Location (Top. Thickness   | Radius Elliptical  | Conical Hemispherical Flat  | Side to Pressure Category A  |  |  |  |  |  |  |
| 5 5  | orr Crown Knuckle Ratio  | pex Angle Radius Diameter   | Convex Concave Type Full, Spot, None Eff.  |  |  |  |  |  |  |
| (a)  | •  |   |  |  |  |  |  |  |  |
| (b)  |  |   |  |  |  |  |  |  |  |
|  |  |   |  |  |  |  |  |  |  |
|  | (Control of the Control of the Contr |   |  |  |  |  |  |  |  |
| If removable, bolts used (describe other   | rastening)   | (Mat'l Spec. No., G   | irade, Size, No.)  |  |  |  |  |  |  |
| 0. T   |  | Jacket closure  |  |  |  |  |  |  |  |
| 8 Type of jacket   |  | Jacket closure  | (Describe as ogee & weld, bar, etc.)   |  |  |  |  |  |  |
| If bar, give dimensions  |  |   | If bolted, describe or sketch  |  |  |  |  |  |  |
| •  |  | <sup>o</sup> F Min. design n  | 0-   |  |  |  |  |  |  |
| 9 MAWP   | psi at max, temp   |   | notal tomp Fat noi   |  |  |  |  |  |  |
|  | ernal) (internal)  |   | netal temp. <sup>o</sup> F at psi.   |  |  |  |  |  |  |
| , , ,  | ernal) (internal)  | (external)  | netal temp. F at psi.  |  |  |  |  |  |  |
| 10 Impact test   |  | (external)  |  |  |  |  |  |  |  |
| 10 Impact test   | (Indicate yes  | (external) or no and the component(s) impact tested)  |  |  |  |  |  |  |  |
| 10 Impact test  11 Hydro , pneu , or comb test press   | (Indicate yes  | (external) or no and the component(s) impact tested)  |  |  |  |  |  |  |  |
| 10 Impact test  11 Hydro pnetror combitest pressitems 12 and 13 to be completed for tub  | (Indicate yes  | (external) or no and the component(s) impact tested)  |  |  |  |  |  |  |  |
| 10 Impact test  11 Hydro pnetror combitest pressitems 12 and 13 to be completed for tub 12 Tubesheet   | (Indicate yes<br>Proof tes   | (external)  or no and the component(s) impact tested) t   |  |  |  |  |  |  |  |
| 10 Impact test  11 Hydro pnetror combitest pressitems 12 and 13 to be completed for tub  | (Indicate yes<br>Proof tes   | (external)  or no and the component(s) impact tested) t   |  |  |  |  |  |  |  |
| 10 Impact test  11 Hydro pnetror combitest pressitems 12 and 13 to be completed for tub 12 Tubesheet   | (Indicate yes Proof tes ie section  ec No) Dia in (subject to pres   | (external)  or no and the component(s) impact tested) t   | Corr Allow., in. Attachment (welded or bolted)   |  |  |  |  |  |  |
| 10 Impact test  11 Hydro , pneu , or comb test press items 12 and 13 to be completed for tub 12 Tubesheet  Stationary (Mat'l Sp  | (Indicate yes Proof tes ie section  ec No) Dia in (subject to pres   | (external) s or no and the component(s) impact tested) t  Nom. thk , in.  | Corr Allow., in. Attachment (welded or bolted) in. Attachment  |  |  |  |  |  |  |
| 10 Impact test  11 Hydro , pneii , or combitest pressitems 12 and 13 to be completed for tub 12 Tubesheet  Stationary (Mat'l Specificating (Mat'l Specificating (Mat'l Specification))  13 Tubes  Mat I Specification or combitest pressitems (Mat'l Specification)  Mat I Specification or combitest pression (Mat'l Specification)  Mat I Specification (Mat'l Specification) | (Indicate yes Proof tes  es section  Dia , in (subject to pres  Dia , in Nom  Type  O D., in   | (external)  s or no and the component(s) impact tested) t  s.) Nom. thk , in.  thk , in Corr. Allow.,   | Corr Allow., in. Attachment (welded or bolted)   |  |  |  |  |  |  |
| 10 Impact test  11 Hydro , pneii , or combitest pressitems 12 and 13 to be completed for tub 12 Tubesheet  Stationary (Mat'l Specificating (Mat'l Specificating (Mat'l Specification))  13 Tubes  Mat I Specification or combitest pressitems (Mat'l Specification)  Mat I Specification or combitest pression (Mat'l Specification)  Mat I Specification (Mat'l Specification) | (Indicate yes Proof tes se section  Dia , in (subject to pres  | (external)  s or no and the component(s) impact tested)  t  Nom. thk , in.  Nom. thk , in.  Nom. thk., in. or gauge els of heat exchangers.   | Corr Allow., in. Attachment (welded or bolted) in. Attachment  Number Type (Straight or U)   |  |  |  |  |  |  |
| 10 Impact test  11 Hydro , pneii , or combitest pressitems 12 and 13 to be completed for tub 12 Tubesheet  Stationary (Mat'l Specificating (Mat'l Specificating (Mat'l Specification))  13 Tubes  Mat I Specification or combitest pressitems (Mat'l Specification)  Mat I Specification or combitest pression (Mat'l Specification)  Mat I Specification (Mat'l Specification) | (Indicate yes Proof tes  es section  Dia , in (subject to pres  Dia , in Nom  Type  O D., in   | (external)  s or no and the component(s) impact tested) t  s.) Nom. thk , in.  thk , in Corr. Allow.,   | Corr Allow., in. Attachment (welded or bolted) in. Attachment  Number Type (Straight or U)   |  |  |  |  |  |  |
| 10 Impact test  11 Hydro , pneu , or comb test press items 12 and 13 to be completed for tub.  12 Tubesheet  Stationary (Mat'l Spec No.)  13 Tubes  Mat I Spec No. Grade or Items 14 - 18 incl. to be completed for in 14 Shell. (a) No. of course(s)  | (Indicate yes Proof tes  es section  Dia , in (subject to pres  Dia , in Nom  Type  O D., in   | (external)  s or no and the component(s) impact tested)  t  Nom. thk , in.  Nom. thk , in.  Nom. thk , in. or gauge els of heat exchangers.   | Corr Allow in. Attachment (welded or bolted) in Attachment  Number Type (Straight or U)  |  |  |  |  |  |  |
| 10 Impact test  11 Hydro , pneii , or combitest pressitems 12 and 13 to be completed for tub 12 Tubesheet  Stationary (Mat'l Specification of Specification (Mat'l Specification of Specification | (Indicate yes Proof tes e section  Dia , in (subject to pres  Dia , in Nom  Type O D., in iner chambers of jacketed vessels or chann  Material   | (external)  s or no and the component(s) impact tested)  t  Nom. thk , in.  Nom. thk , in.  Nom. thk , in. or gauge els of heat exchangers  (b) Overall length (ft & in.)  Thickness Long Joint (Ca | Corr Allow in. Attachment (welded or bolted) in Attachment  Number Type (Straight or U)  3/4** at. A) Circum, Joint (Cat. A. B & C) Heat Treatment |  |  |  |  |  |  |
| 10 Impact test  11 Hydro , pneti , or combitest pressitems 12 and 13 to be completed for tub 12 Tubesheet  Stationary (Mat'l Specification of Specification (Mat'l Specification of Specification | (Indicate yes Proof tes e section  Dia , in (subject to pres  Dia , in Nom  Type O D., in  iner chambers of jacketed vessels or chann  | (external)  s or no and the component(s) impact tested)  t  Nom. thk , in.  Nom. thk , in.  Nom. thk , in. or gauge els of heat exchangers.  (b) Overall length (ft & in.)                          | Corr Allow in. Attachment (welded or bolted) in Attachment  Number Type (Straight or U)  3/4** at. A) Circum, Joint (Cat. A. B & C) Heat Treatment |  |  |  |  |  |  |

## Form U-2 (Back)

| 15         | Heads (                 |                    |  | I Spec No , Gr                | Grade or Type) H T -Time & Te   |                              | (b)                          | Hemispher                   |                              | (Mat'l Spec. No , Grade or Type) H.T -Time & ' |                                    |                                  | Temp<br>Category A   |           |
|------------|-------------------------|--------------------|--|-------------------------------|---|------------------------------|------------------------------|-----------------------------|------------------------------|--|------------------------------------|----------------------------------|----------------------|-----------|
|            | Bottom, E               | inds)              | Min  | Corr                          | Crown Knuckle   | Ratio                        | Apex Angle                   | Radius                      |                              |  |                                    | Type Full, Spot,                 | •                    | Eff       |
| (a)<br>(b) |                         |                    |  |                               |   |                              |                              |                             |                              |  |                                    |                                  |                      |           |
| If re      | movable.                | bolts us           | sed (describe  | other fastening               | )   |                              |                              | (Mat                        | Spec No                      | Grade, Size, No.                               | <b>.</b>                           |                                  |                      |           |
| 16         | MAWP                    |                    | 150  |                               | psi at max_temp.  | 300                          |                              |                             | Min design                   |  | -20                                | °F at                            | 150                  | psi       |
| 17         | Impact tes              | N10                | ernal)<br>D, EXEMP   | (external)<br>PT PER UG       | -20F, UCS-66(a)   | (internal)<br>(b)            | (external                    | )                           |                              |  |                                    |                                  |                      |           |
|            |                         |                    | comb test pro  | ess 225 PS                    | 81  | Indicate yes o<br>Proof test | or no and the cor<br>NONE    | nponent(s) i                | mpact tested                 | <b>i</b> )                                     |                                    |                                  |                      |           |
| P          | urpose (inl             | let.               | Diameter   | Flange                        |   | Material                     | l                            | Nozzle 1                    | hickness                     | Reinforcement                                  | How A                              | ttached                          | Loc                  | ation     |
|            | let, Drain.<br>Ch In-Oi |                    | o or Size  | Type<br>CL150FL               | Nozzi<br>G. SA106Gr.B   |                              | Flange<br>SA105              | Nom.<br>.322                | Corr.<br>.0625               | Material<br>N/A                                | Nozzie<br>UW16-0                   | Flange<br>UW16-K                 | (Insp                | Open      |
|            |                         |                    |  |                               |   |                              |                              |                             |                              |  |                                    |                                  |                      |           |
|            |                         |                    |  |                               |   |                              |                              |                             |                              |  |                                    |                                  |                      |           |
|            |                         |                    |  |                               |   |                              |                              |                             |                              |  |                                    |                                  |                      |           |
|            |                         |                    |  |                               |   |                              |                              |                             |                              |  |                                    |                                  |                      |           |
|            |                         |                    |  |                               |   |                              |                              |                             |                              |  |                                    |                                  |                      |           |
|            |                         |                    |  |                               |   |                              |                              |                             | •                            |  |                                    |                                  |                      |           |
|            |                         |                    | 3.7  |                               |   |                              |                              |                             |                              |  |                                    |                                  |                      |           |
| 20         | Supports                | Skirt              | No<br>(Yes or N  | Lu                            | gs No<br>(No)   | Legs                         | No Oth                       | ers                         | N/A                          | 1  | Attached                           | N/A                              | A                    |           |
| (          |                         | hk par<br>lief de  | tition plate<br>vice to be in  |                               | nt channel only,<br>into channel shell,<br>thers.   |                              |                              |                             |                              |  |                                    |                                  |                      |           |
| We         | certify th              | at the             | statements   | made in this                  | CERTII report are correct a   |                              | F SHOP/FIE                   |                             |                              |  | o of this pres                     | sure vessel n                    | art cor              | nform     |
| to ti      | ne ASME                 | Code               |  | e Vessels. S                  | ection VIII, Division<br>1576   | <u>,</u> 1.                  |                              | Expires                     |                              | April 18                                       | , 19                               | 1998                             |                      |           |
| 1          | Date 🗇                  | • 7                | 17   | Mor<br>Name                   | nticello Exchange   | (Manufac                     | cturer)                      |                             |                              | gned $\mathcal U$                              | (Repre                             | sentative)                       |                      |           |
| ariu       | employe                 | uby                |  |                               | ion issued by The later & Insurance   | National Bo                  |                              | nd Pressu                   | re Vessel i<br>of            | nspectors and<br>Hartford, (                   |                                    | have insp                        | ected                | the       |
| Mar<br>emp | nufacture<br>bloyer ma  | r has d<br>ikes ar | onstructed in the onstructed i | this pressure<br>expressed or | urer's Data Report of<br>vessel in accordan<br>r implied, concernin<br>iny manner for any i | ce with ASM<br>g the pressi  | ME Code, Secture vessel part | ion VIII, Di<br>t described | vision 1. By<br>I in this Ma | nufacturer's Da                                | ertificate neitl<br>ita Report. Fi | ner the Inspec<br>urthermore, ne | tor nor<br>either tl | his<br>he |
|            | ate                     |                    | , . <b>-</b> ,   | Signed .                      | (Authorized Ins   | , we                         |                              | Commissi                    |                              | ろ ハックラ・  |                                    |                                  |                      |           |