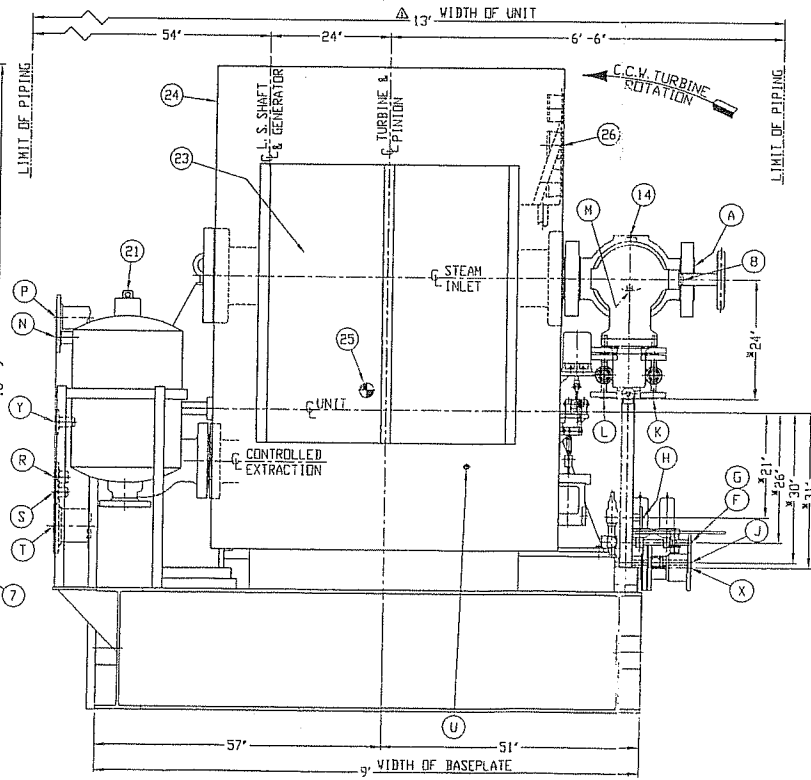
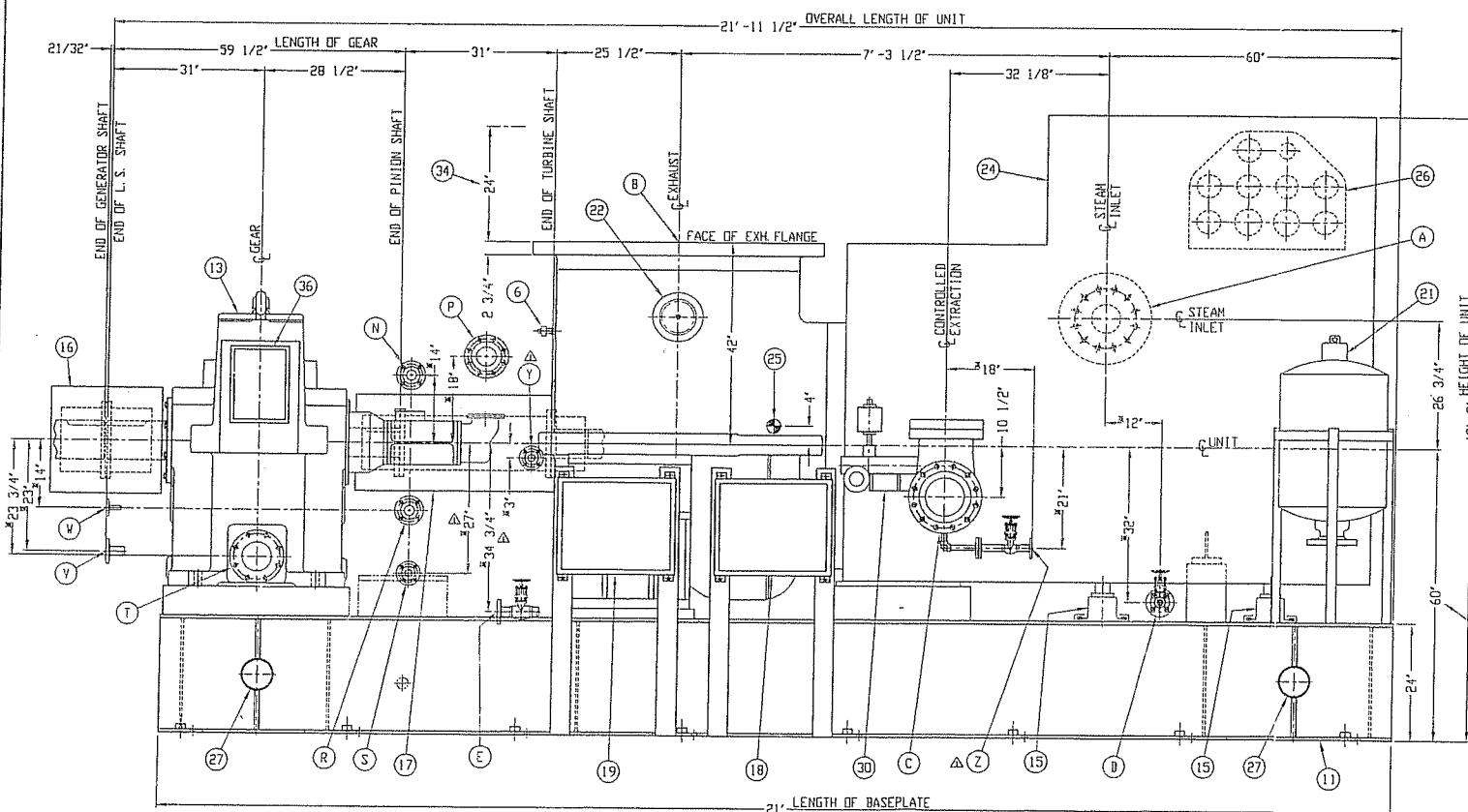
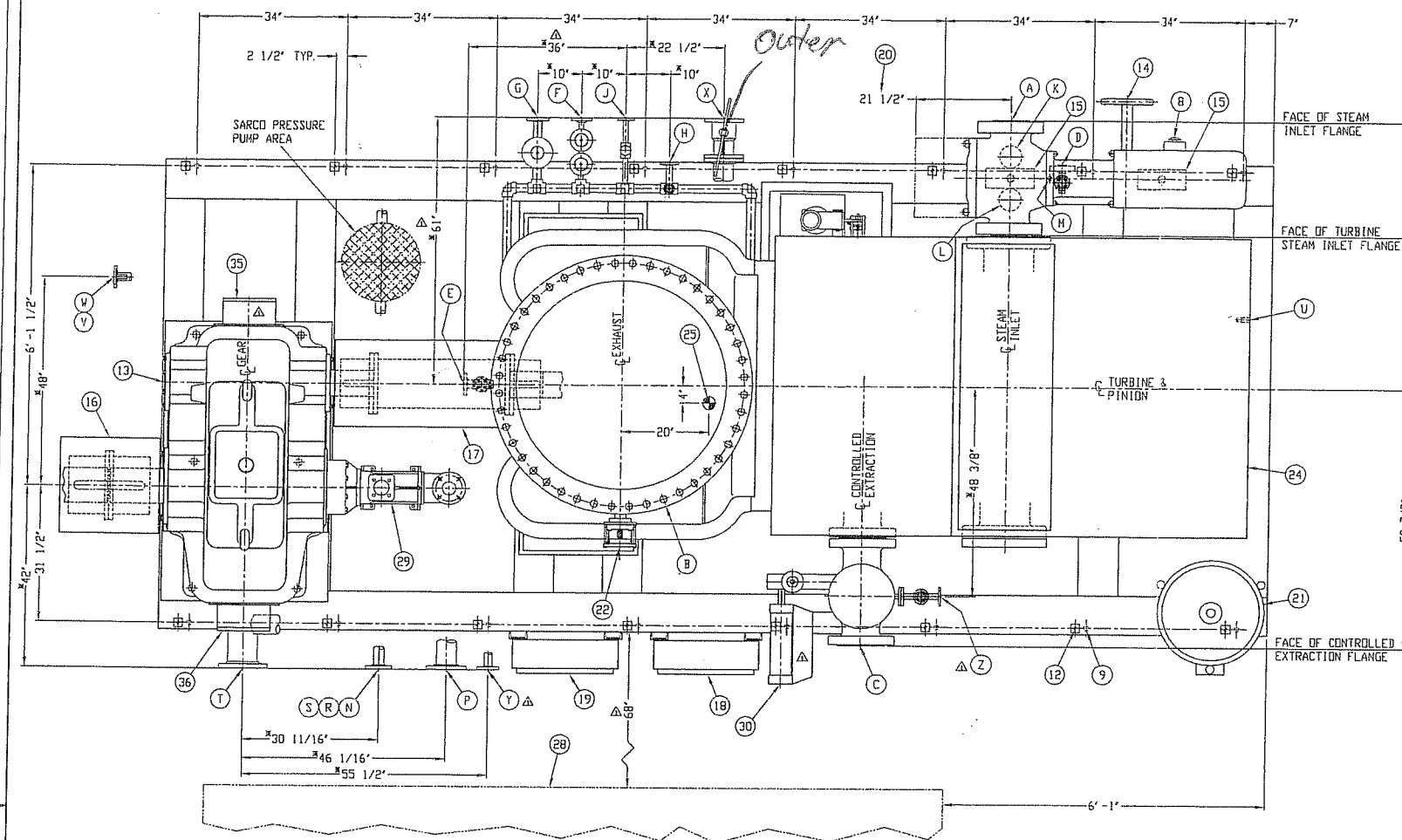




#### ITEMS FURNISHED BY TURBINE MANUFACTURER

SEE LIST 1000

- I. TWO-ELECTRIC TRIP WITH SELENIUM OPERATED TWO-WAY DUMP VALVE (120 VOLTS, 50 HERTZ, 1 PHASE A.C.) NORMALLY ENERGIZED TO TRIP WHEN DE-ENERGIZED.
- II. HORIZONTAL & VERTICAL JACKING SCREWS FOR TURBINE AND GEAR.
- III. FOR ALL LUBE SYSTEM DEVICES SEE TUTHILL ENERGY SYSTEMS PIPING & INSTRUMENT DRAWING 1445551.
- IV. FOR ALL STEAM SYSTEM DEVICES SEE TUTHILL ENERGY SYSTEMS PIPING & INSTRUMENT DRAWING 1445551.
- V. FOR ALL MONITORING SYSTEM DEVICES SEE TUTHILL ENERGY SYSTEMS PIPING & INSTRUMENT DRAWING 1445551.
- VI. FOR ALL VIBRATION, RTD'S, WPT'S, ALARM AND TRIP SWITCHES AND GOVERNOR WIRING SEE TUTHILL ENERGY SYSTEMS WIRING DIAGRAM DVG. 1445552.
- VII. SHAFT GROUNDING BRUSH ON TURBINE.
- VIII. FORWARD PRO-TECH 203 OVERSPEED PROTECTION SYSTEM SHIPPED LOOSE FOR MOUNTING BY OTHERS.
- IX. VIBRATION MONITORING SYSTEM, D.C. AUTO SYNCHRONIZER WITH PROGRAMMER AND VIBRATION SEAL POWER SENSOR SHIPPED LOOSE FOR MOUNTING BY OTHERS.
- X. FORCED FEED LUBRICATION SYSTEM.
- XI. EXHAUST STEAM PRESSURE TRANSMITTER AND SEAL SHIPPED LOOSE FOR MOUNTING BY OTHERS.
- XII. LUBE OIL CONDITIONER, SHIPPED LOOSE FOR MOUNTING BY OTHERS.
- XIII. SARCO PRESSURE BODY PUMP & ACCESSORIES, SHIPPED LOOSE FOR MOUNTING BY OTHERS.
- XIV. GLAND CONDENSER AND STEAM EXTRACTOR, SEE TUTHILL ENERGY SYSTEMS DVG. 1445552.
- XV. EXHAUST STEAM PRESSURE TRANSMITTER AND SEAL, SHIPPED LOOSE FOR MOUNTING BY OTHERS.

#### CUSTOMER CONNECTIONS

- (A) 5"-9000 ANSI R.F. STEAM INLET, 15" DIA. FLANGE, 8-1/2" DIA. ANGLE IRON, 1/4" HIGH, 10 HOLES 1-1/4" DIA. ON A 12-1/2" DIA. 3 C. STRADDLE CENTERLINES. STUDS AND NUTS NOT FURNISHED BY TUTHILL ENERGY SYSTEMS.
- (B) 48"-1500 ANSI R.F. FLANGED STEAM EXHAUST, 59-1/2" DIA. FLANGE, 44 HOLES 1-5/8" DIA. ON 55" DIA. 3 C. STRADDLE CENTERLINES. STUDS & NUTS NOT FURNISHED BY TUTHILL ENERGY SYSTEMS.
- (C) 8"-3000 ANSI R.F. FLANGED CONTROLLED EXTRACTION OUTLET, 15" DIA. FLANGE, 10-5/8" DIA. RISED FACE 1/8" HIGH, 12 HOLES 1" DIA. ON A 12" DIA. 3 C. STRADDLE CENTERLINES. STUDS AND NUTS NOT FURNISHED BY TUTHILL ENERGY SYSTEMS.
- (D) 1"-6000 ANSI R.F. FLANGED FIRST STAGE DRAIN CONNECTION, DRAIN DRAIN BEFORE STARTING TURBINE, CLOSE DRAIN AFTER ALL WATER IS DISPOSED, PIPING TO BE SUPPLIED BY OTHERS. ALL CONNECTIONS TO SEVER TO BE RUN IN SEPARATE LINES.
- (E) 1-1/2"-1500 ANSI R.F. FLANGED EXHAUST CASING DRAIN CONNECTION, CONNECT TO SARCO PRESSURE POWERED PUMP, PIPING TO SARCO PRESSURE POWERED PUMP BY OTHERS. SEE CASING DRAIN SYSTEM DVG. 15511193.
- (F) 3/4"-1500 ANSI R.F. FLANGED GLAND STEAM SEAL CONNECTION, SOURCE OF SUPPLY FOR SEALING STEAM TO BE 125 PSIG R 450°F.
- (G) 1-1/2"-1500 ANSI R.F. FLANGED INNER GLAND LEAK-OFF CONNECTION, TO BE PIPED TO SEWER WITHOUT POSITIVE HEAD, USE 1-1/2" LINE FOR SHORT DIRECT RUNS OF PIPE, ALL CONNECTIONS TO SEVER TO BE RUN IN SEPARATE LINES.
- (H) 1"-1500 ANSI R.F. FLANGED RELIEF VALVE CONNECTION IN SEALING STEAM LINE, TO BE PIPED TO AN AREA WHERE THERE IS NO DANGER WHEN VALVE CLOSING.
- (I) 3/4"-1500 ANSI R.F. FLANGED GLAND LEAK-OFF CONDENSATE DRAIN CONNECTION, PIPING TO SEWER TO BE SUPPLIED BY OTHERS. ALL CONNECTIONS TO SEVER TO BE RUN IN SEPARATE LINES.
- (J) 3/4"-1500 ANSI R.F. FLANGED ABOVE SEAT TRIP THROTTLE VALVE DRAIN CONNECTION, OPEN BEFORE STARTING FOR DRAINING, CLOSE AFTER DRAINING, PIPING TO SEWER TO BE SUPPLIED BY OTHERS. ALL CONNECTIONS TO SEVER TO BE RUN IN SEPARATE LINES.
- (K) 3/4"-1500 ANSI R.F. FLANGED BELOW SEAT TRIP THROTTLE VALVE DRAIN CONNECTION, OPEN BEFORE STARTING FOR DRAINING, CLOSE AFTER DRAINING, PIPING TO SEWER TO BE SUPPLIED BY OTHERS. ALL CONNECTIONS TO SEVER TO BE RUN IN SEPARATE LINES.
- (L) 2"-1500 ANSI R.F. FLANGED MAIN OIL PUMP DISCHARGE CONNECTION, CONNECT TO CONNECTION "4" ON LUBE-POWER INC. DVG. 141469-A1-A4. INTERCONNECTING PIPING FURNISHED AND FIT BY OTHERS.
- (M) 4"-1500 ANSI R.F. FLANGED MAIN OIL PUMP Suction CONNECTION, CONNECT TO CONNECTION "2" ON LUBE-POWER INC. DVG. 141469-A1-A4. INTERCONNECTING PIPING FURNISHED AND FIT BY OTHERS.
- (N) 2"-1500 ANSI R.F. FLANGED BEARING OIL SUPPLY CONNECTION TO TURBINE, 50 GPM @ 15 PSIG, CONNECT TO CONNECTION "1" ON LUBE-POWER INC. DVG. 141469-A1-A4. INTERCONNECTING PIPING FURNISHED AND FIT BY OTHERS.
- (O) 1-1/2"-1500 ANSI R.F. FLANGED CONTROL OIL SUPPLY CONNECTION TO TURBINE, 34 GPM @ 100 PSIG, CONNECT TO CONNECTION "5" ON LUBE-POWER INC. DVG. 141469-A1-A4. INTERCONNECTING PIPING FURNISHED AND FIT BY OTHERS.
- (P) 1"-1500 ANSI R.F. FLANGED OIL DRAIN CONNECTION FROM TURBINE, GEAR AND GENERATOR, CONNECT TO CONNECTION "6" ON LUBE-POWER INC. DVG. 141469-A1-A4. INTERCONNECTING PIPING FURNISHED AND FIT BY OTHERS.
- (Q) 1/2" MPT THREADED AIR CONNECTION FOR BEARING AIR PURGE, PROVIDE 9 SCFM 80-100 PSIG STEADY STATE INSTRUMENT QUALITY AIR, INSTRUMENT AIR TO BE PER INSTRUMENT SOCIETY OF AMERICA'S SPECIFICATION, ISA-5.2.3.
- (R) 1-1/2"-1500 ANSI R.F. FLANGED OIL DRAIN CONNECTION FROM GENERATOR, 3 GPM @ 15 P.S.I.
- (S) 4"-1500 ANSI R.F. FLANGED OUTER GLAND LEAK-OFF CONNECTION, TO BE PIPED TO GLAND CONDENSER, SEE TUTHILL TURBOMACHINERY DVG. 1445552. INTERCONNECTING PIPING FURNISHED AND FIT BY OTHERS.
- (T) 1-1/2"-1500 ANSI R.F. FLANGED D.C. EMERGENCY PUMP DISCHARGE CONNECTION, CONNECT TO CONNECTION "12" ON LUBE-POWER INC. DVG. 141469-A1-A4. INTERCONNECTING PIPING FURNISHED AND FIT BY OTHERS.
- (U) 1"-1500 ANSI R.F. FLANGED 2-INCH VALVE DRAIN CONNECTION.

#### SPECIAL NOTES

- (1) THIS TURBINE IS NOT DESIGNED FOR REVERSE ROTATION.
- (2) A REVERSIBLE ATMOSPHERIC RELIEF VALVE MUST BE INSTALLED IN THE EXHAUST STEAM LINE BETWEEN TURBINE AND FIRST SHUT-OFF VALVE TO PROTECT TURBINE CASING AGAINST OVERPRESSURE.
- (3) THE TURBINE AND DRIVEN EQUIPMENT SHOULD BE MOUNTED ON A RIGID AND SUBSTANTIAL FOUNDATION.
- (4) DUE TO THE ACCUMULATION OF MANUFACTURING TOLERANCES, DIMENSIONS BETWEEN PIPING CONNECTIONS AND HOLES EXISTING IN BASEPLATE MAY VARY. PIPING SHOULD BE LOCATED FROM THE MACHINE.
- (5) ALL DIMENSIONS THIS DRAWING ARE APPROXIMATE DUE TO PIPING FABRICATION, BUT WILL BE EXCEED TO PLUS OR MINUS 1/8".
- (6) CENTRIFUGAL VARIATION VALUE TO VARY OF ACCESS EXHAUST PRESSURE, NOT PRESSURE LIMITING, SET AT 5 PSIG.
- (7) THIS DIMENSION INCLUDES 1/2" OF LAMINATED SHIMS BETWEEN TURBINE AND BASEPLATE FURNISHED AND PLACED BY TUTHILL ENERGY SYSTEMS.
- (8) EMERGENCY TRIP BUTTON (PUSH TO TRIP OUT TURBINE AND HALT TO RESET TURBINE).
- (9) 16-HOLES 1 1/16" THRU LOWER FLANGE OF BASEPLATE VISE FLANGE BEAM BY TUTHILL ENERGY SYSTEMS FOR 3/4" ANCHOR BOLTS NOT FURNISHED BY TUTHILL ENERGY SYSTEMS. (SEE NOTES 4, 10, 11)
- (10) ALL TURBINE ANCHOR BOLTS TO HAVE A TOLERANCE OF 1/16" MAX. IN ANY DIRECTION.
- (11) BASEPLATE IS DESIGNED FOR GRADING IN. BOTTOM IS NOT FINISHED AND THEREFORE, MAY NOT BE PERFECTLY FLAT.
- (12) 16-HOLES 3/4"-10 R.H.T.P.I. THRU LOWER FLANGE OF BASEPLATE WIDE FLANGE BEAM FOR VERTICAL LEVELING SCREWS FURNISHED BY TUTHILL ENERGY SYSTEMS.
- (13) LUKIN MODEL 14000 REDUCTION GEAR.
- (14) TRIP AND THROTTLE VALVE SHIPPED SEPARATELY FOR MOUNTING IN THE FIELD BY OTHERS. MOUNT AS SHOWN TUTHILL ENERGY SYSTEMS.
- (15) TWO TRIP AND THROTTLE VALVE ADJUSTABLE SPRING SUPPORTS, ONE FOR VALVE BODY AND ONE FOR VALVE STEM, SHIPPED LOOSE FOR MOUNTING BY OTHERS. MOUNT AS SHOWN.
- (16) L.S. COUPLING AND GUARD.
- (17) R.S. COUPLING AND GUARD.
- (18) JUNCTION BOX "A" FOR TURBINE VIBRATION PROBES, RTD'S & TRANSMITTERS AND WPT'S. SEE TUTHILL TURBOMACHINERY DVG. 1445552.
- (19) JUNCTION BOX "B" FOR ELECTRICAL DEVICES. SEE TUTHILL TURBOMACHINERY DVG. 1445552.
- (20) DISTANCE REQUIRED TO REMOVE TRIP & THROTTLE VALVE COVER WITH STRAINER. DO NOT PIPE IN THIS AREA.
- (21) GREEK OIL ACCUMULATOR.
- (22) OIL OPERATED VACUUM BREAKER.
- (23) ACCESS DOORS.
- (24) LAGGING AND INSULATION.
- (25) DENOTES APPROPRIATE UNIT CENTER OF GRAVITY.
- (26) GAUGES MOUNTED WITH THE FOLLOWING 4 1/2" (TEST GRADE) INLET PRESSURE INDICATING GAUGE, NOZZLE INLET PRESSURE INDICATING GAUGE, FIRST STAGE PRESSURE INDICATING GAUGE, EXTRACTION PRESSURE INDICATING GAUGE, EXHAUST PRESSURE INDICATING GAUGE, CONTROL OIL PRESSURE INDICATING GAUGE, BEARING OIL PRESSURE INDICATING GAUGE, INLET TEMPERATURE INDICATING GAUGE, EXTRACTION TEMPERATURE INDICATING GAUGE, TACHOMETER INDICATOR.
- (27) BASEPLATE LIFTING HOLES.
- (28) LUBRICATION CONDENSER, SEE LUBE-POWER INC. DVG. 141469-A1-A4 FOR ALL LUBRICATION CONNECTIONS AND PHYSICAL DIMENSIONS.
- (29) GEAR DRIVEN MAIN OIL PUMP.
- (30) 8"-3000 OIL OPERATED CONTROLLED EXTRACTION RETURN VALVE, SHIPPED SEPARATELY FOR MOUNTING IN THE FIELD BY OTHERS. MOUNT AS SHOWN. INTERCONNECTING PIPING FURNISHED AND FIT BY TUTHILL ENERGY SYSTEMS.
- (31) WEIGHT OF UNIT 40,900 APPROXIMATE.  
TURBINE-----32,100  
TRIP & THROTTLE VALVE-----2,300  
GEAR-----10,000  
EXTRACTION VALVE-----1,200  
BASEPLATE & MISC-----15,300
- (32) ALL STEAM PIPING MUST BE ARRANGED SO THAT STRAINS WILL NOT BE IMPOSED ON THE TURBINE. THE TOTAL RESULTANT FORCE AND TOTAL RESULTANT MOMENT AT ANY CONNECTION SHOULD NOT EXCEED:  
INLET: 25' x W = 3000  
EXTRACTION: 25' x W = 4000  
EXHAUST: 25' x W = 1500
- (33) THE COMBINED RESULTANTS OF THE FORCES AND MOMENTS OF THE INLET AND EXHAUST CONNECTIONS, RESOLVED AT THE CENTERLINE OF THE EXHAUST CONNECTION, SHOULD NOT EXCEED:  
25' x W = 5530
- (34) THE COMPONENTS OF THE COMBINED RESULTANTS SHOULD NOT EXCEED:  
Fx = 1105 LB    Fy = 5530 LB-FT  
Fz = 2505 LB    Fx = 2505 LB-FT  
Fz = 2505 LB    Fy = 2505 LB-FT
- (35) THE ABOVE LIMITS ARE PER ASME 2-1959.
- (36) ALIGNMENT DATA  
INLET FLANGE MOVEMENT:  
LEFT-----0.277"  
RIGHT-----0.171"  
UP-----0.171"  
DOWN-----0.171"  
FORWARD FROM CENTERLINE OF EXHAUST 0.320"  
EXTRACTION FLANGE MOVEMENT:  
LEFT-----0.081"  
RIGHT-----0.081"  
UP-----0.081"  
DOWN-----0.081"  
FORWARD FROM CENTERLINE OF EXHAUST 0.075"  
EXHAUST FLANGE MOVEMENT:  
LEFT-----0.016"  
RIGHT-----0.016"  
UP-----0.016"  
DOWN-----0.016"  
TURBINE SHAFT RISE AT STEAM END BEARING 0.049"  
TURBINE SHAFT RISE AT EXHAUST END BEARING 0.037"  
GEAR H.S. PINION SHAFT RISE-----0.010"  
GEAR L.S. PINION SHAFT RISE-----0.009"  
(37) DISTANCE REQUIRED TO REMOVE ROTOR AND TURBINE CASING COVER.
- (38) JUNCTION BOX ON LUKIN GEAR FOR VIBRATION PROBE TRANSMITTERS. SEE LUKIN DVG. 15517951-B.
- (39) JUNCTION BOX ON LUKIN GEAR FOR RTD'S. SEE LUKIN DVG. 15517951-B.

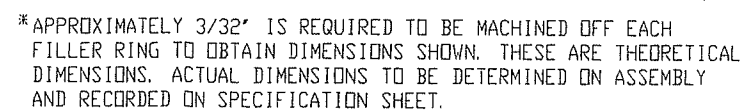
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|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------------------|
| 1   | ISSUED CUSTOMER CONNECTIONS (K) AND (L) FROM 1500 TO 1500, CHANGED CUSTOMER CONNECTION (L) FROM 2" TO 1-1/2". ADDED NOTE XV. EXHAUST STEAM PRESSURE TRANSMITTER                                                                                                                                                                                       | EM 06 DEC 01 | KAD 06 DEC 01    |
| 2   | ADDED DUST, CONN'S (1) AND (2), ADDED DVG. NUMBERS FOR GLAND COND. AND LUBE CONDENSER TO ALL APPLICABLE NOTES. ADDED EXT. OIL CYLINDER 30" DIAMETER, CONN. (3) TO MATCH LUBE POWER DVG. NOTED DUST, CONN. (4), ADDED JUNCTION BOXES TO END OF BASEPLATE. CHANGED OVERALL WIDTH OF UNIT FROM 12' TO 15'. ADDED INLET & EXT. TEMP. GAUGES TO GAUGEBOARD | EM 20 NOV 01 | KAD 20 NOV 01    |

| REV | DESCRIPTION                                                                                                                                                                                                                                                                                                                                           | BY/DATE      | APPROVED BY/DATE |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------------------|
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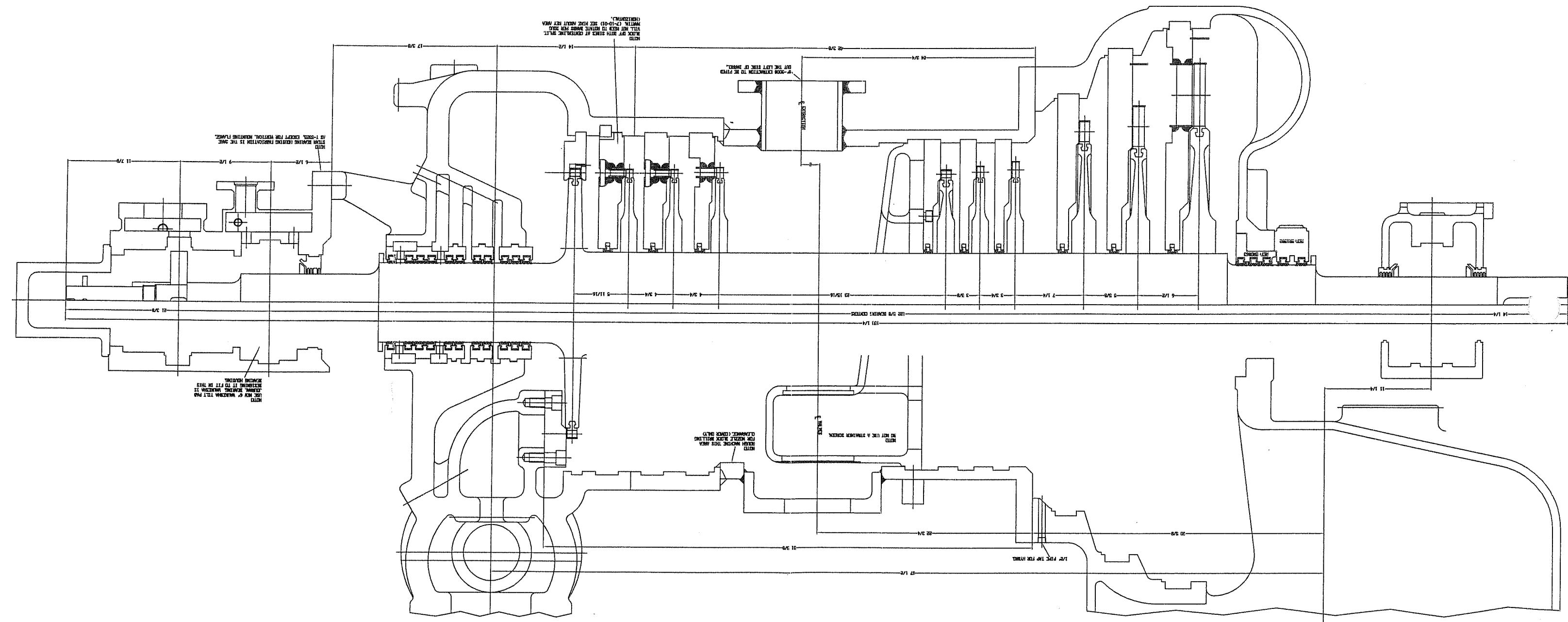
| REV | DESCRIPTION                                                                                                                                                                                                                                                                                                                                           | BY/DATE      | APPROVED BY/DATE |
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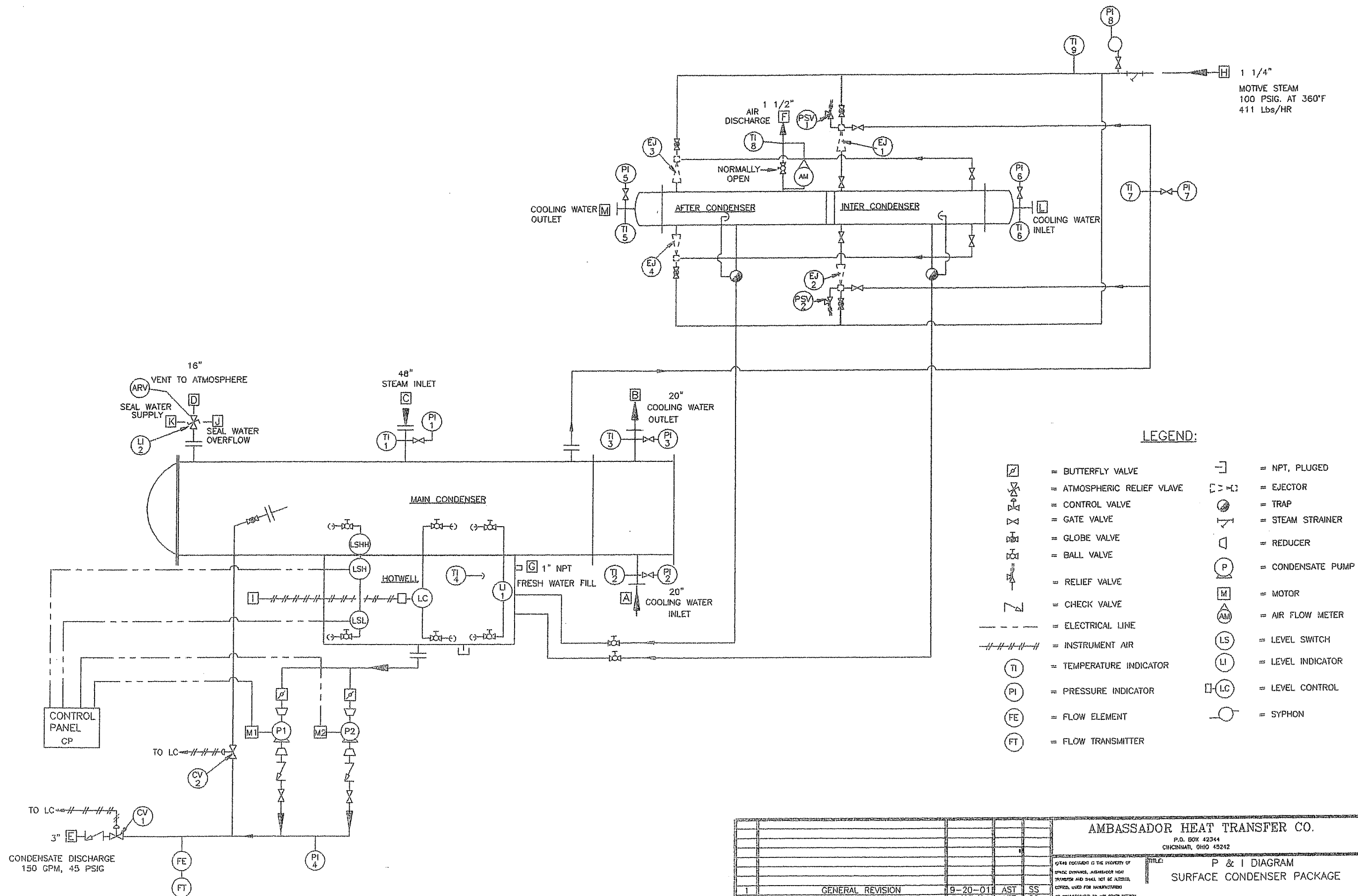
| REV | DESCRIPTION                                                                                                                                                                                                                                                                                                                                           | BY/DATE      | APPROVED BY/DATE |
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NOTE: THE FOLLOWING TOLERANCES ARE TO BE USED FOR THE STACKING OF WHEELS ON A ROTOR ASSEMBLY.  
FIRST STAGE WHEEL  $\pm 0.005^\circ$ .  
ALL SUBSEQUENT WHEELS  $\pm 0.010^\circ$ .



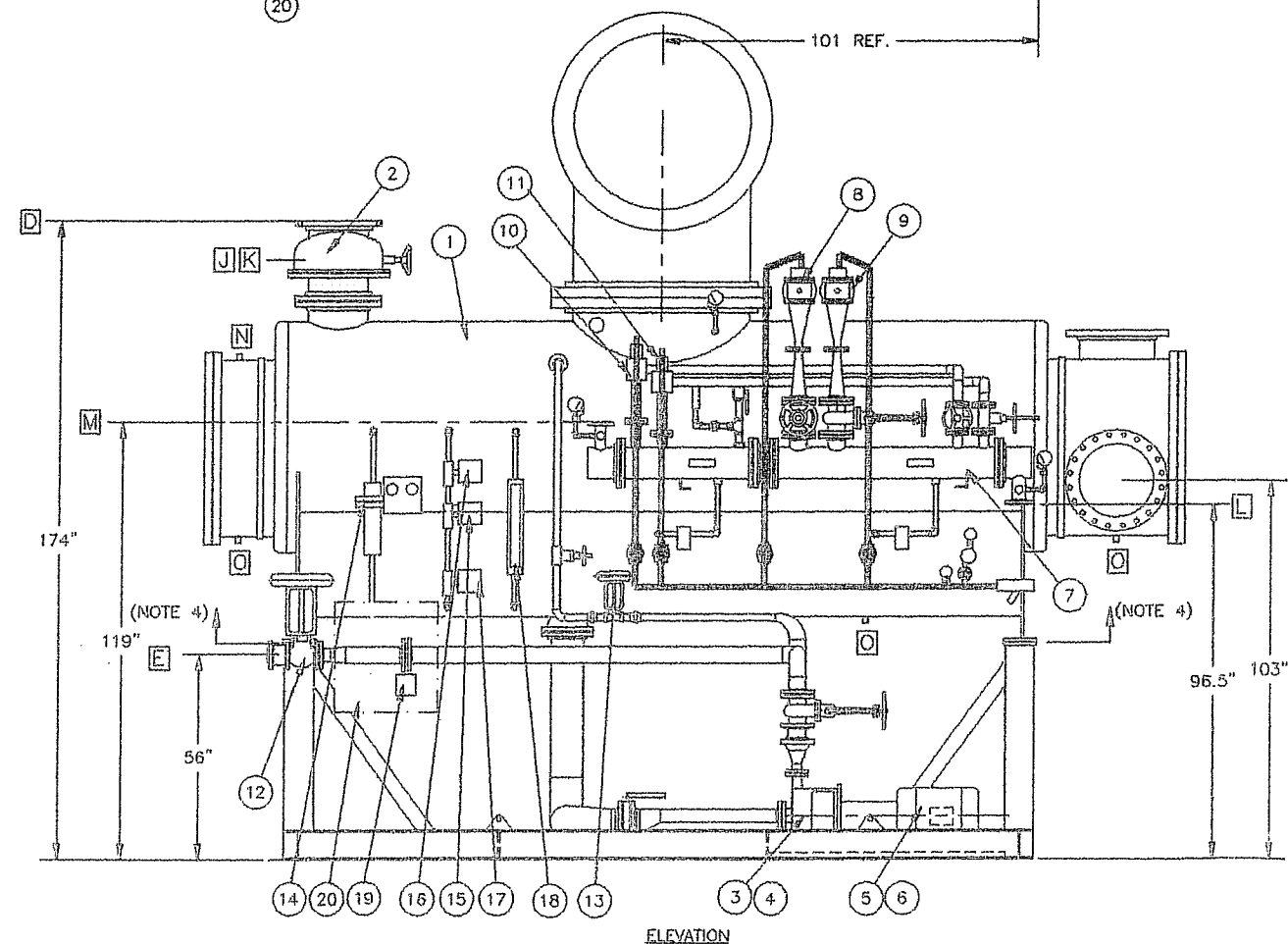
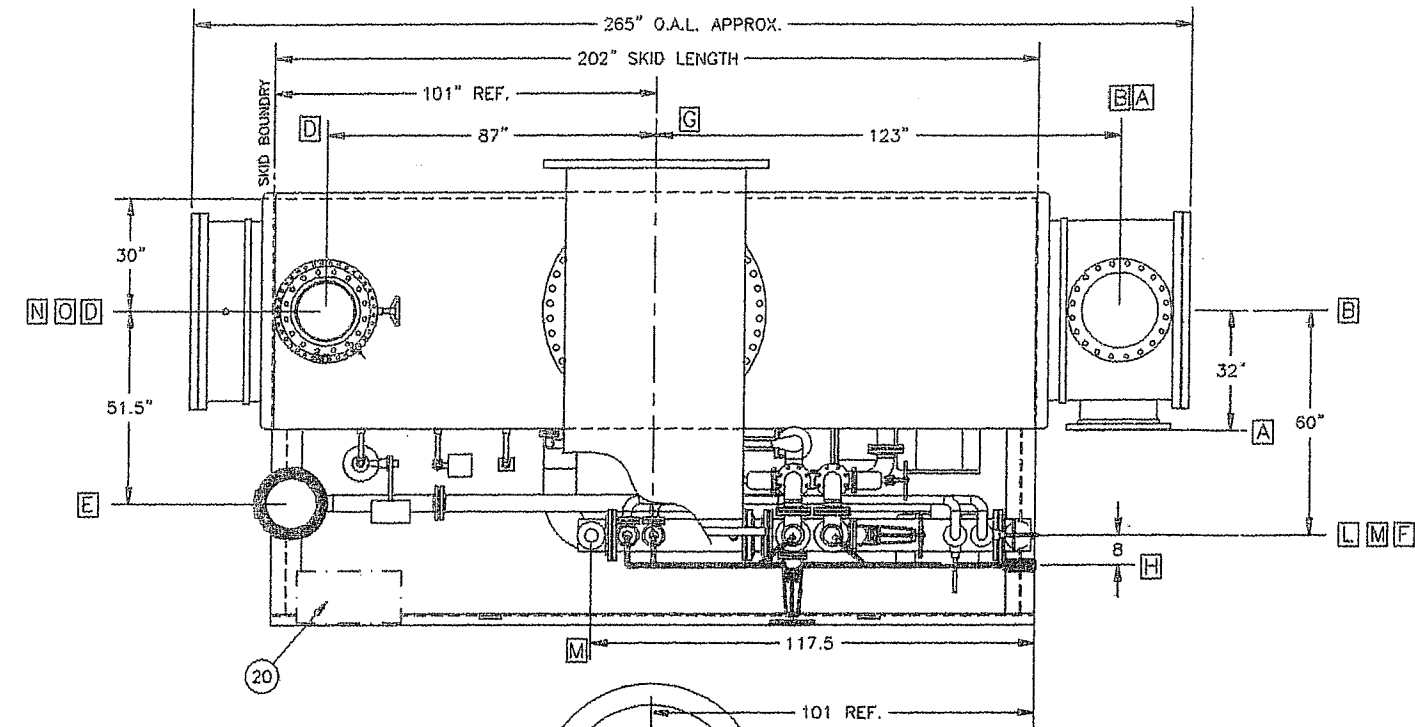
## STEAM PATH





|                                                                                                       |  |  |  |                                                                                                                  |  |  |  |
|-------------------------------------------------------------------------------------------------------|--|--|--|------------------------------------------------------------------------------------------------------------------|--|--|--|
| <div> <div>1</div> <div>GENERAL REVISION</div> <div>9-20-01</div> <div>AST</div> <div>SS</div> </div> |  |  |  | <div> <div>0</div> <div>ORIGINAL ISSUE</div> <div>7/27/01</div> <div>AST</div> <div>SS</div> </div>              |  |  |  |
| <div> <div>REV</div> <div>DESCRIPTION</div> <div>DATE</div> <div>BY</div> <div>APPROVED</div> </div>  |  |  |  | <div> <div>AMBASSADOR HEAT TRANSFER CO.</div> <div>P.O. BOX 42344</div> <div>CINCINNATI, OHIO 45242</div> </div> |  |  |  |
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P & I DIAGRAM  
SURFACE CONDENSER PACKAGE

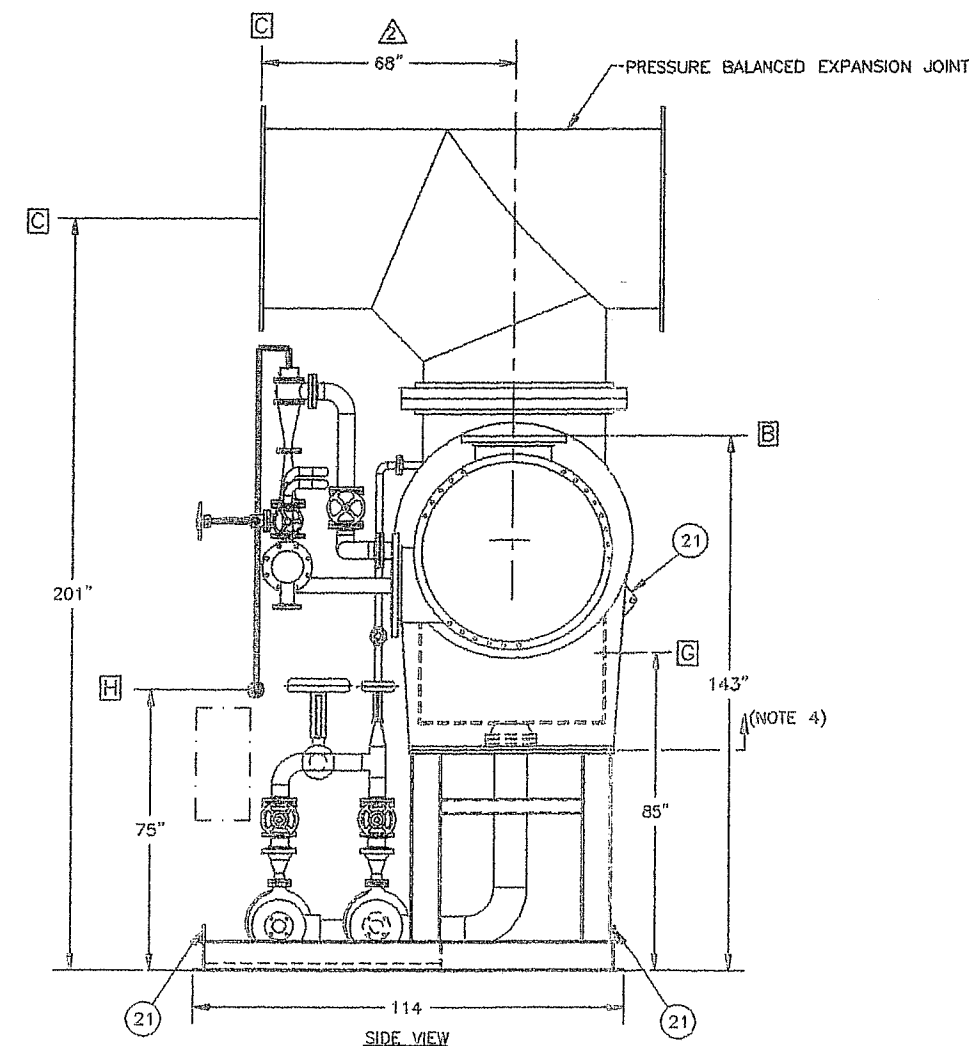


# NOTES :

- 1) COMPLETE SKID MOUNTED PACKAGE CONFIGURATION IS SHOWN WHICH PERMITS FACTORY ASSEMBLY AND CHECKOUT.
- 2) CONNECTION LOCATION TOLERANCE  $\pm 1/2"$
- 3) FLANGE BOLT HOLES TO STRADDLE CENTER LINES.
- 4) CONDENSER SHIPPED IN TWO ASSEMBLIES, BROKEN AT SPLIT LINE SHOWN.

| NOZZLE SCHEDULE |                                 |     |        |        |      |
|-----------------|---------------------------------|-----|--------|--------|------|
| NOZZLE          | DESCRIPTION                     | QTY | SIZE   | RATING | TYPE |
| A               | COOLING WATER INLET             | 1   | 20"    | 150#   | RF   |
| B               | COOLING WATER OUTLET            | 1   | 20"    | 150#   | RF   |
| C               | STEAM INLET                     | 1   | 48"    | 25#LW  | FF   |
| D               | ATMOSPHERIC RELIEF VALVE        | 1   | 16"    | 150#   | FF   |
| E               | CONDENSATE DISCHARGE            | 1   | 3"     | 150#   | RF   |
| F               | AIR DISCHARGE                   | 1   | 1 1/2" | ---    | NPT  |
| G               | FRESH WATER FILL                | 1   | 1"     | ---    | NPT  |
| H               | MOTIVE STEAM INLET              | 1   | 1 1/4" | ---    | NPT  |
| I               | INSTRUMENT AIR                  | 1   | 1/2"   | ---    | NPT  |
| J               | SEAL WATER OVERFLOW ATM. RELIEF | 1   | 3/4"   | ---    | NPT  |
| K               | SEAL WATER SUPPLY ATM. RELIEF   | 1   | 3/8"   | ---    | NPT  |
| L               | IC/AC COOLING WATER IN          | 1   | 3"     | 150#   | RF   |
| M               | IC/AC COOLING WATER OUT         | 1   | 3"     | 150#   | RF   |
| N               | WATER BOX VENT                  | 1   | 3/4"   | ---    | NPT  |
| O               | DRAIN                           | 3   | 1"     | ---    | NPT  |

| MATERIAL LIST |     |      |                          |
|---------------|-----|------|--------------------------|
| MARK          | QTY | TAG# | DESCRIPTION              |
| 1             | 1   | ---  | MAIN CONDENSER           |
| 2             | 1   | ARV  | ATMOSPHERIC RELIEF VALVE |
| 3             | 1   | P1   | CONDENSATE PUMP          |
| 4             | 1   | P2   | CONDENSATE PUMP          |
| 5             | 1   | M1   | PUMP MOTOR               |
| 6             | 1   | M2   | PUMP MOTOR               |
| 7             | 1   | HX   | INTER/AFTER CONDENSER    |
| 8             | 1   | EJ1  | FIRST STAGE EJECTOR      |
| 9             | 1   | EJ2  | FIRST STAGE EJECTOR      |
| 10            | 1   | EJ3  | SECOND STAGE EJECTOR     |
| 11            | 1   | EJ4  | SECOND STAGE EJECTOR     |
| 12            | 1   | CV1  | DISCHARGE CONTROL VALVE  |
| 13            | 1   | CV2  | RECIRC. CONTROL VALVE    |
| 14            | 1   | LC   | PNEUMATIC LEVEL CONTROL  |
| 15            | 1   | LSH  | LEVEL SWITCH HI          |
| 16            | 1   | LSHH | LEVEL SWITCH HI HI       |
| 17            | 1   | LSL  | LEVEL SWITCH LO          |
| 18            | 1   | LI   | LEVEL GAUGE              |
| 19            | 1   | FT   | FLOW TRANSMITTER         |
| 20            | 1   | CP   | CONTROL PANEL            |
| 21            | 8   | ---  | LIFT LUGS                |



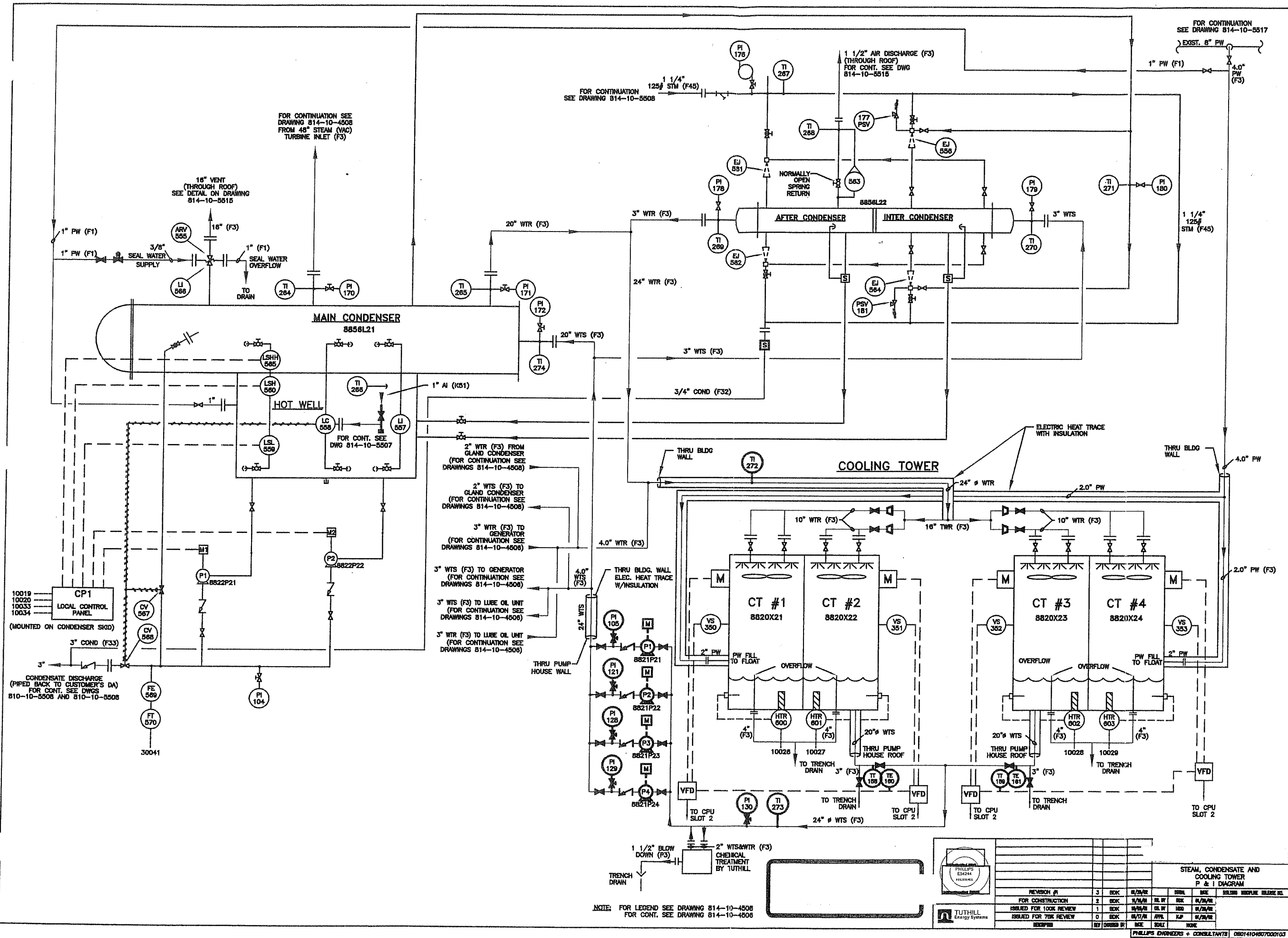
| REV | DESCRIPTION                       | DATE    | BY  | APP'D. |
|-----|-----------------------------------|---------|-----|--------|
| 2   | REVISED EXPANSION JOINT DIMENSION | 1-3-02  | AST | MKG    |
| 1   | GENERAL REVISION                  | 9-20-01 | AST | MKG    |
| 0   | ORIGINAL ISSUE                    | 7-27-01 | AST | MKG    |

AMBASSADOR HEAT TRANSFER CO.

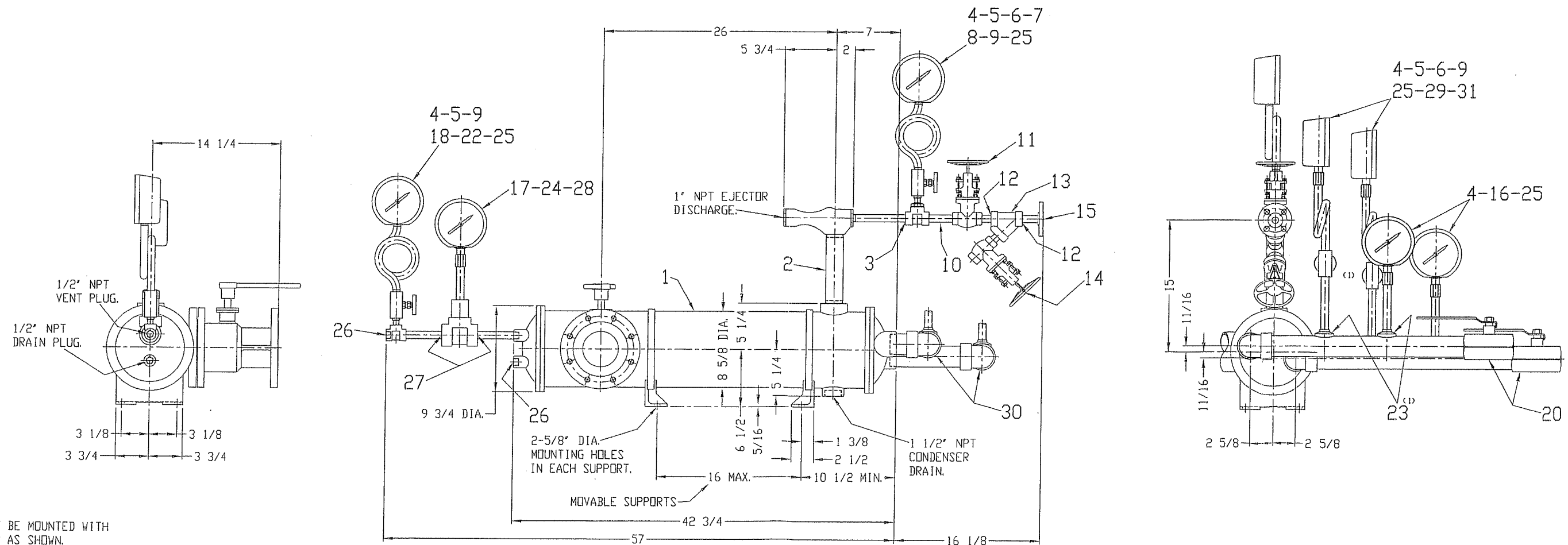
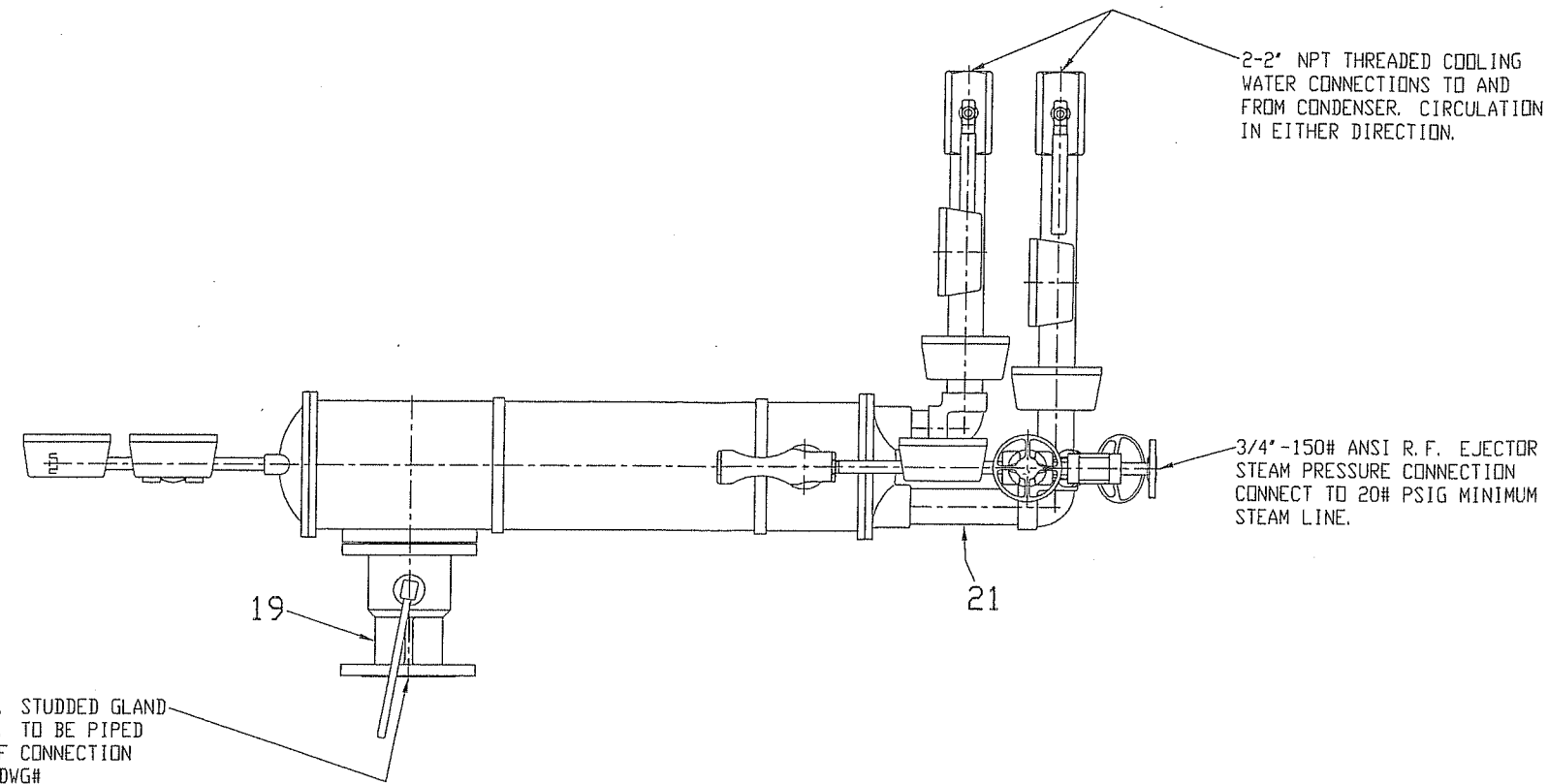
P.O. BOX 42344  
CINCINNATI, OHIO 45242

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OR COMPANY WITHOUT OUR WRITTEN CONSENT.

TITLE: SURFACE CONDENSER PACKAGE







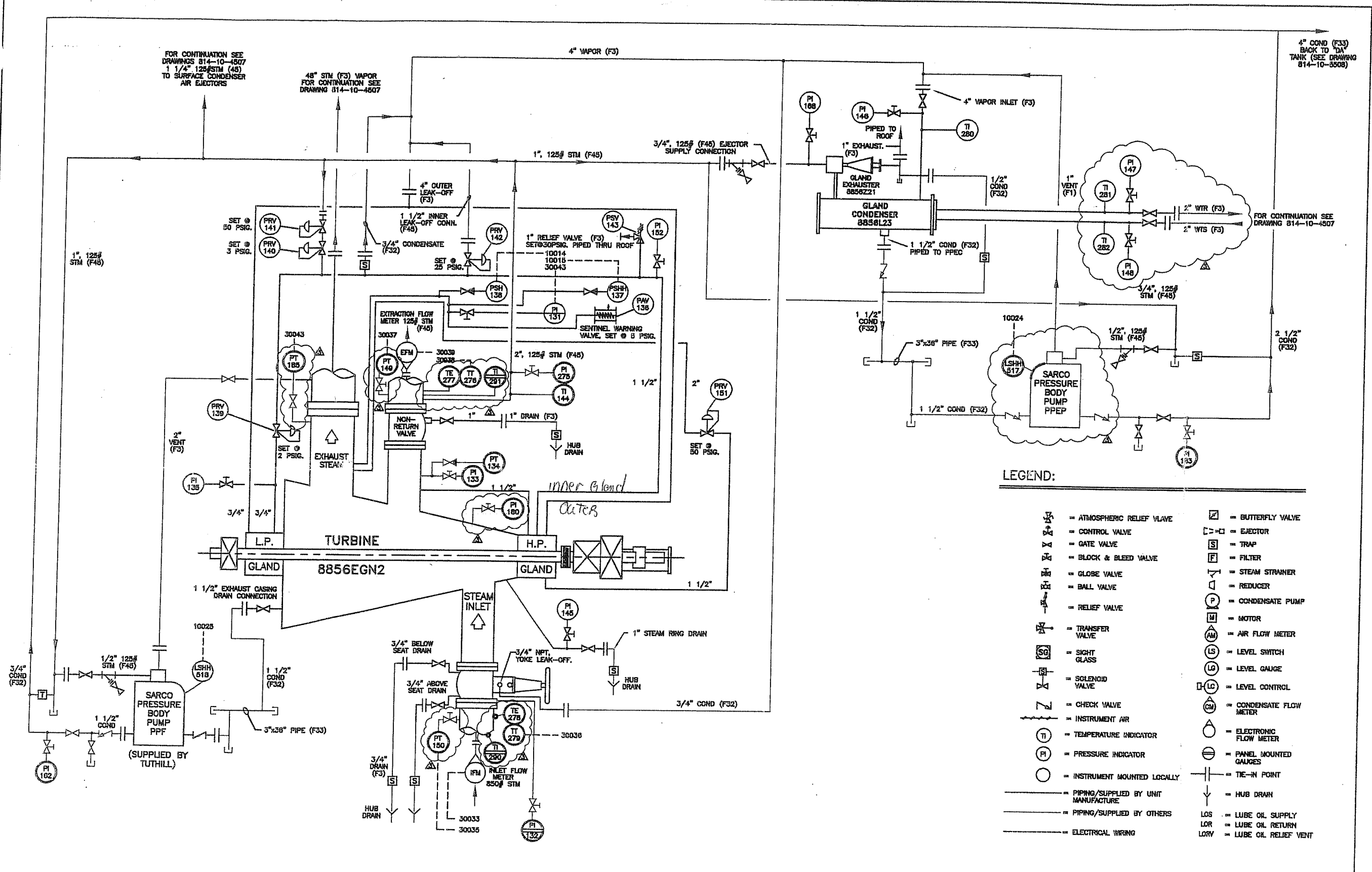
NOTE:  
CONDENSER MUST BE MOUNTED WITH  
EJECTOR ON TOP AS SHOWN.

CONDENSER MUST BE MOUNTED BELOW  
GLAND LEAK-OFF CONNECTION ON TURBINE.

APPROXIMATE EMPTY WEIGHT - 295 lbs.

|                                                               |          |           |                                                    |            |
|---------------------------------------------------------------|----------|-----------|----------------------------------------------------|------------|
| EXCEPT AS NOTED<br>ALL DIMENSIONS<br>ARE IN INCHES.           | DRAWN    | DATE      | TUTHILL<br>Energy Systems                          | PROJECTION |
|                                                               | AJS      | 19 NOV 01 |                                                    |            |
|                                                               | CHECKED  | DATE      |                                                    |            |
|                                                               | JAH      | 29 NOV 01 |                                                    |            |
| TOLERANCES PER<br>ASME Y14.5 UNLESS<br>OTHERWISE<br>SPECIFIED | APPROVED | DATE      | GLAND LEAK-OFF CONDENSER<br>& AIR EJECTOR ASSEMBLY | OF 1       |
|                                                               | JAH      | 29 NOV 01 |                                                    |            |
|                                                               | MURRAY   | DATE      |                                                    |            |
|                                                               | USA      | DATE      |                                                    |            |



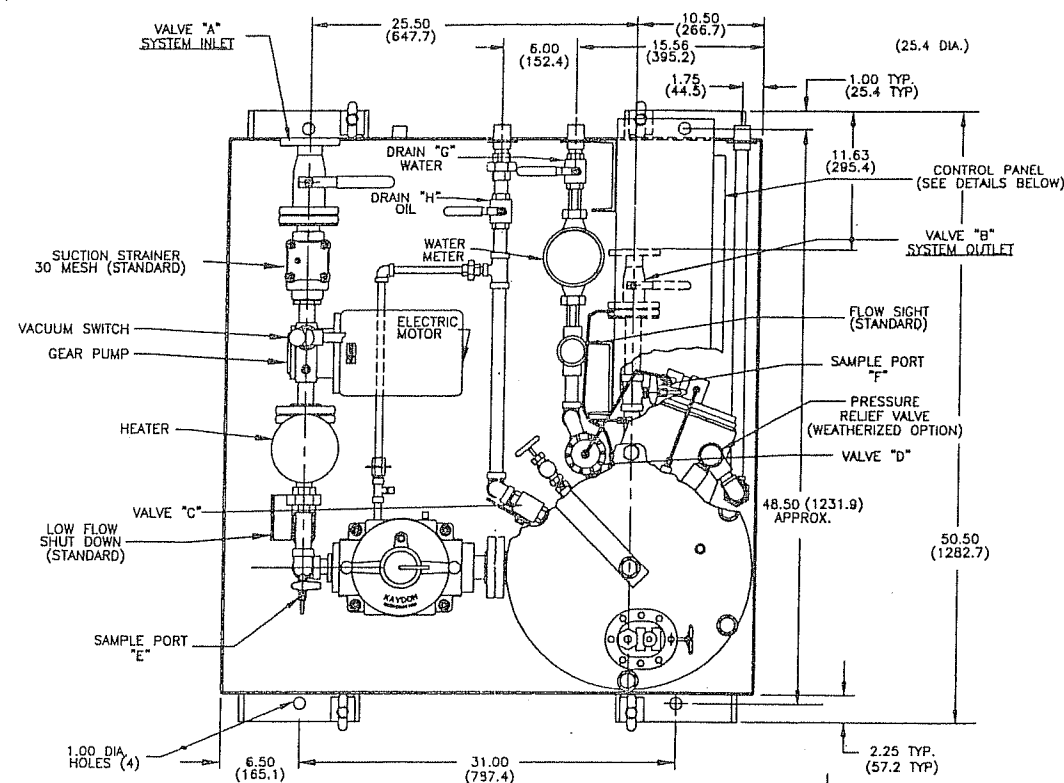


- LEGEND:**
- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>ATMOSPHERIC RELIEF VALVE</li> <li>CONTROL VALVE</li> <li>GATE VALVE</li> <li>BLOCK &amp; BLEED VALVE</li> <li>GLOBE VALVE</li> <li>BALL VALVE</li> <li>RELIEF VALVE</li> <li>TRANSFER VALVE</li> <li>SIGHT GLASS</li> <li>SOLENOID VALVE</li> <li>CHECK VALVE</li> <li>INSTRUMENT AIR</li> <li>TEMPERATURE INDICATOR</li> <li>PRESSURE INDICATOR</li> <li>INSTRUMENT MOUNTED LOCALLY</li> <li>PIPING/SUPPLIED BY UNIT MANUFACTURE</li> <li>PIPING/SUPPLIED BY OTHERS</li> <li>ELECTRICAL WIRING</li> </ul> | <ul style="list-style-type: none"> <li>BUTTERFLY VALVE</li> <li>EJECTOR</li> <li>TRAP</li> <li>FILTER</li> <li>STEAM STRAINER</li> <li>REDUCER</li> <li>CONDENSATE PUMP</li> <li>MOTOR</li> <li>AIR FLOW METER</li> <li>LEVEL SWITCH</li> <li>LEVEL GAUGE</li> <li>LEVEL CONTROL</li> <li>CONDENSATE FLOW METER</li> <li>ELECTRONIC FLOW METER</li> <li>PANEL MOUNTED GAUGES</li> <li>TIE-IN POINT</li> <li>HUB DRAIN</li> <li>LUBE OIL SUPPLY</li> <li>LUBE OIL RETURN</li> <li>LUBE OIL RELIEF VENT</li> </ul> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**FOR CONSTRUCTION**  
 REVISION #1 - ISSUED 01/29/02

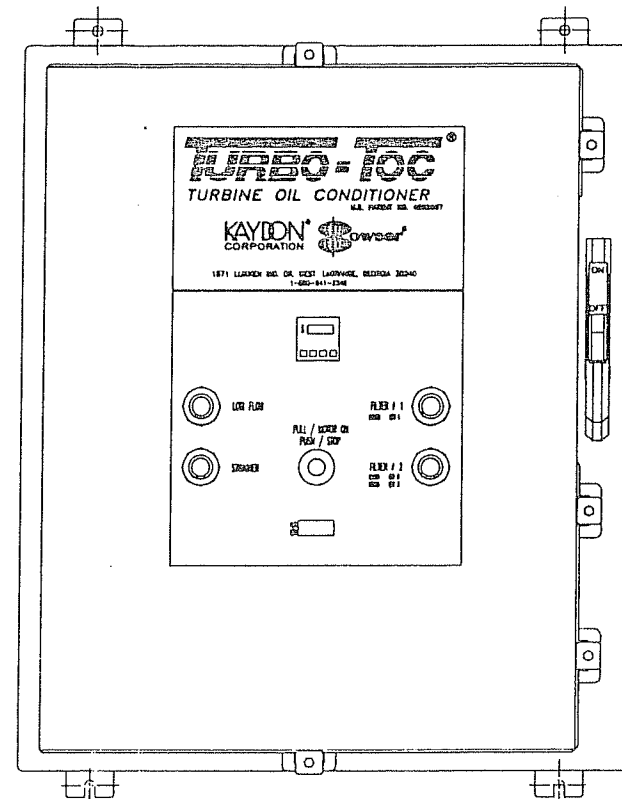
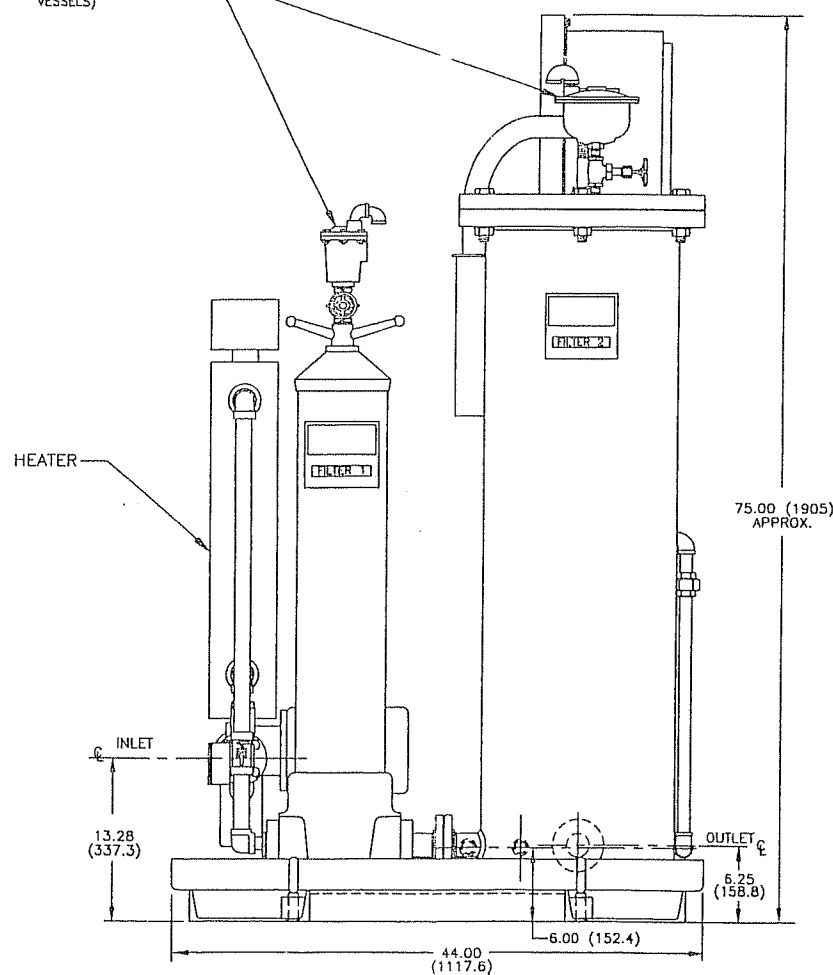
|                                                   |                         |                 |             |             |             |             |              |                |                |
|---------------------------------------------------|-------------------------|-----------------|-------------|-------------|-------------|-------------|--------------|----------------|----------------|
|                                                   |                         | <b>REVISION</b> |             | <b>DATE</b> | <b>BY</b>   | <b>CHKD</b> | <b>APPD</b>  | <b>SCALE</b>   | <b>REMARKS</b> |
| 1                                                 | ISSUED FOR CONSTRUCTION | 3               | 01/29/02    |             |             |             |              |                |                |
| 2                                                 | ISSUED FOR 100% REVIEW  | 2               | 01/29/02    |             |             |             |              |                |                |
| 3                                                 | ISSUED FOR 75% REVIEW   | 1               | 01/29/02    |             |             |             |              |                |                |
| 4                                                 | ISSUED FOR 50% REVIEW   | 0               | 01/29/02    |             |             |             |              |                |                |
| <b>DESCRIPTION</b>                                |                         | <b>REV</b>      | <b>DATE</b> | <b>BY</b>   | <b>CHKD</b> | <b>APPD</b> | <b>SCALE</b> | <b>REMARKS</b> |                |
| STEAM, CONDENSATE AND COOLING TOWER P & I DIAGRAM |                         |                 |             |             |             |             |              |                |                |



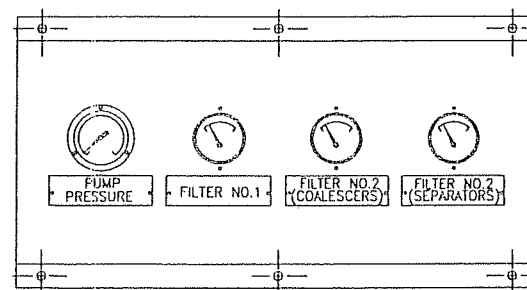


AUTO AIR RELEASE  
WITH ISOLATION VALVE  
(STANDARD ON BOTH  
VESSELS)

32.00 (812.8) REQUIRED FOR  
ELEMENT REMOVAL



CONTROL PANEL DOOR



INDICATOR GAUGE PANEL

MODEL

KL10H

D

W

WEATHERIZATION OPTION

| SYMBOL | DESCRIPTION                    |
|--------|--------------------------------|
| W      | WEATHERIZED FOR<br>OUTDOOR USE |

HEATER OPTION

| SYMBOL | DESCRIPTION                 |
|--------|-----------------------------|
| D      | HEAVY DUTY<br>HEATER OPTION |

NOTES:

- CONSTANT OIL FLOW RATE: APPROX. 9.5 GPM AT 25 PSI.
- VESSEL DESIGN PRESSURE: 150 PSIG AT 250° F.  
VESSEL HYDROSTATIC TEST PRESSURE: 225 PSIG.
- INLET & OUTLET FLANGE BOLT HOLES STRADDLE HORIZONTAL & VERTICAL CENTERLINES.
- VESSELS EQUIPPED WITH 40 PSID INTERNAL ELEMENT RELIEF VALVES-STANDARD.
- A. REPLACEMENT ELEMENT  
NO. K4000  
QUANTITY 1

B. REPLACEMENT ELEMENTS  
COALESCE K2000 QUANTITY 2  
SEPARATOR K3000 QUANTITY 1
- VALVE / PORT DESIGNATION:  
A = INLET PORT VALVE, 1-1/2" 150# R.F. FLANGES, NORMALLY OPEN  
B = OUTLET PORT VALVE, 1" 150# R.F. FLANGES, NORMALLY OPEN  
C = VESSEL OIL DRAIN VALVE, 3/4", NORMALLY CLOSED  
D = AUTOMATIC WATER DRAIN VALVE  
E = FLUID SAMPLE PORT, 1/4", SEE NOTE 7  
F = FLUID SAMPLE PORT, 1/4", SEE NOTE 7  
G = EXTERNAL WATER DRAIN LINE & SKID ISOLATION VALVE,  
3/4" NPT, NORMALLY OPEN  
H = EXTERNAL OIL DRAIN LINE & SKID ISOLATION VALVE, 3/4" NPT,  
NORMALLY CLOSED
- FLUID SAMPLE PORTS PROVIDED - STANDARD  
ALLOWS FLUID SAMPLES TO BE TAKEN UPSTREAM & DOWN STREAM OF FILTER SYSTEM.
- APPROX. WEIGHT (DRY): 1575 LBS.  
APPROX. FLUID VOLUME: 57 GALLONS

|      |        |                       |      |          |
|------|--------|-----------------------|------|----------|
| P    | G7280  | SEE ECN               | HRJ  | 4/27/01  |
| O    | G6028  | SEE ECN               | HRJ  | 7/8/97   |
| N    | G5304  | ADDED PRV OPTION      | HART | 5-30-95  |
| M    | G4962  | ADDED LIFTING LUGS    | HART | 3-31-95  |
| L    | G4988  | MOVED INLET           | TDW  | 11-30-94 |
| K    | G4988  | ADDED DUAL DIMENSIONS | MH   | 6-8-94   |
| J    | G4922  | SEE ECN               | MH   | 4-18-94  |
| I    | L3160  | SEE ECN               | MK   | 7-20-92  |
| H    | L3125  | SEE ECN               | MK   | 5-26-91  |
| G    | L2872  | SEE ECN               | MK   | 3-6-91   |
| F    | L2744  | SEE ECN               | MK   | 8-22-90  |
| REV. | E.C.N. | DESCRIPTION           | BY   | DATE     |

TOLERANCE UNLESS SPECIFIED DIMENSIONS ARE IN INCHES  
3 PLACE 3 PLACE ANGLES FRACTIONS

KAYDON  
CORPORATION

|               |         |             |              |             |                         |
|---------------|---------|-------------|--------------|-------------|-------------------------|
| DESIGNED BY   | HART    | DATE        | 5-8-94       | TITLE       | TURBINE OIL CONDITIONER |
| CHECKED BY    |         | DATE        | 5-24-94      | MODEL NO.   | KL10H                   |
| APPROVED BY   |         | DATE        | 5-23-01      |             |                         |
| FIRST USED ON |         | SCALE       | 1/8" = 1"    |             |                         |
| SUPERSEDES    |         | RELEASED ON | E.C.N. L2229 | DRAWING NO. | SD910009                |
| DATE          | 3-17-88 |             |              |             |                         |
| SHEET         | 1 OF 1  |             |              |             | P                       |