



NOTES
 1. LOCATE E-101C NEAR R-101.
 2. PROVIDE SWING ELBOW
 3. MAX. PIPE LENGTH OF LINE 3P0333A TO PSY-343 TO BE 50 FEET
 4. FOR GENERAL NOTES, ETC., SEE F8.4.

PHILADELPHIA GAS WORKS
 ENGINEERING DEPT. PHILADELPHIA, PA.
 W.D. NO. 12-A-167
 APPROVED

ITEM NOS. THIS DWG.
 T-101
 R-101
 E-101A/D
 H-101
 P-102A
 P-102B

ENGINERING FLOW DIAGRAM
 SECTION 100, REACTOR AREA
 NAPHTHA HYDRODESULFURIZATION SECTION
 60MM S.C.F.D. SNG P. ANT
 PHILADELPHIA GAS WORKS
 PENN. U.S.A.

LEGEND	<ul style="list-style-type: none"> COOLING WATER SUPPLY (120°F-140°F) COOLING WATER RETURN (140°F-170°F) 400 P.S.I. STEAM ATMOSPHERIC STEAM TOP L.P. STEAM 154 REHEATED STEAM POTABLE WATER PLANT AIR INSTRUMENT AIR STEAM CONDENSATE TREATED WATER FUEL OIL (NAPHTHA) FUEL GAS (NATURAL GAS) CLEAN WATER SEWER OILY OR DIRTY WATER SEWER CHEMICAL WASTES SANITARY SEWER FIRE WATER FLUSHING OIL PUMP/OUT FURGE GAS (LITROGEN) BLOWDOWN FLARE TO ATMOSPHERE CRD START-UP GAS PIPELINE LAG (NAT. GAS) REFLUEGED WATER PROCESS CONDENSATE RAW WATER FUEL GAS (STREETWORK) FOUR WATER PRESSURIZATION AIR PIPE STEAM CONDENSATE 	<table border="1"> <tr> <th>ITEM NO.</th> <th>E-101A</th> <th>E-101B</th> <th>E-101C</th> <th>E-101D</th> </tr> <tr> <td>SERVICE</td> <td>REACTOR EFFLUENT FEED</td> <td>REACTOR EFFLUENT FEED</td> <td>REACTOR EFFLUENT FEED</td> <td>REACTOR EFFLUENT FEED</td> </tr> <tr> <td>SHILL DES. P. A.T.</td> <td>550 PSIA/150°F</td> <td>550 PSIA/150°F</td> <td>550 PSIA/150°F</td> <td>550 PSIA/150°F</td> </tr> <tr> <td>TUBE DES. P. A.T.</td> <td>475 PSIA/150°F</td> <td>475 PSIA/150°F</td> <td>475 PSIA/150°F</td> <td>475 PSIA/150°F</td> </tr> <tr> <td>SURFACE</td> <td>300 PSIA/150°F</td> <td>300 PSIA/150°F</td> <td>300 PSIA/150°F</td> <td>300 PSIA/150°F</td> </tr> <tr> <td>MATL. SHELL</td> <td>CS-1</td> <td>CS-1</td> <td>CS-1</td> <td>CS-1</td> </tr> <tr> <td>MATL. TUBE</td> <td>CS-1</td> <td>CS-1</td> <td>CS-1</td> <td>CS-1</td> </tr> <tr> <td>INSULATION</td> <td>H.C.</td> <td>H.C.</td> <td>H.C.</td> <td>H.C.</td> </tr> </table>	ITEM NO.	E-101A	E-101B	E-101C	E-101D	SERVICE	REACTOR EFFLUENT FEED	REACTOR EFFLUENT FEED	REACTOR EFFLUENT FEED	REACTOR EFFLUENT FEED	SHILL DES. P. A.T.	550 PSIA/150°F	550 PSIA/150°F	550 PSIA/150°F	550 PSIA/150°F	TUBE DES. P. A.T.	475 PSIA/150°F	475 PSIA/150°F	475 PSIA/150°F	475 PSIA/150°F	SURFACE	300 PSIA/150°F	300 PSIA/150°F	300 PSIA/150°F	300 PSIA/150°F	MATL. SHELL	CS-1	CS-1	CS-1	CS-1	MATL. TUBE	CS-1	CS-1	CS-1	CS-1	INSULATION	H.C.	H.C.	H.C.	H.C.	<table border="1"> <tr> <th>ITEM NO.</th> <th>H-101</th> <th>R-101</th> <th>T-101</th> </tr> <tr> <td>SERVICE</td> <td>REACTOR</td> <td>REACTOR</td> <td>REACTOR</td> </tr> <tr> <td>SIZE</td> <td>8'0" DIA. X 12'0" H</td> <td>8'0" DIA. X 12'0" H</td> <td>8'0" DIA. X 12'0" H</td> </tr> <tr> <td>DES. PRESS. TEMP.</td> <td>60 PSIA/150°F</td> <td>60 PSIA/150°F</td> <td>60 PSIA/150°F</td> </tr> <tr> <td>OPER. PRESS. TEMP.</td> <td>60 PSIA/150°F</td> <td>60 PSIA/150°F</td> <td>60 PSIA/150°F</td> </tr> <tr> <td>DES. PRESS. TEMP.</td> <td>60 PSIA/150°F</td> <td>60 PSIA/150°F</td> <td>60 PSIA/150°F</td> </tr> <tr> <td>OPER. PRESS. TEMP.</td> <td>60 PSIA/150°F</td> <td>60 PSIA/150°F</td> <td>60 PSIA/150°F</td> </tr> <tr> <td>MATERIAL</td> <td>CS-1</td> <td>CS-1</td> <td>CS-1</td> </tr> <tr> <td>INSULATION</td> <td>INSULATION</td> <td>INSULATION</td> <td>INSULATION</td> </tr> </table>	ITEM NO.	H-101	R-101	T-101	SERVICE	REACTOR	REACTOR	REACTOR	SIZE	8'0" DIA. X 12'0" H	8'0" DIA. X 12'0" H	8'0" DIA. X 12'0" H	DES. PRESS. TEMP.	60 PSIA/150°F	60 PSIA/150°F	60 PSIA/150°F	OPER. PRESS. TEMP.	60 PSIA/150°F	60 PSIA/150°F	60 PSIA/150°F	DES. PRESS. TEMP.	60 PSIA/150°F	60 PSIA/150°F	60 PSIA/150°F	OPER. PRESS. TEMP.	60 PSIA/150°F	60 PSIA/150°F	60 PSIA/150°F	MATERIAL	CS-1	CS-1	CS-1	INSULATION	INSULATION	INSULATION	INSULATION
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