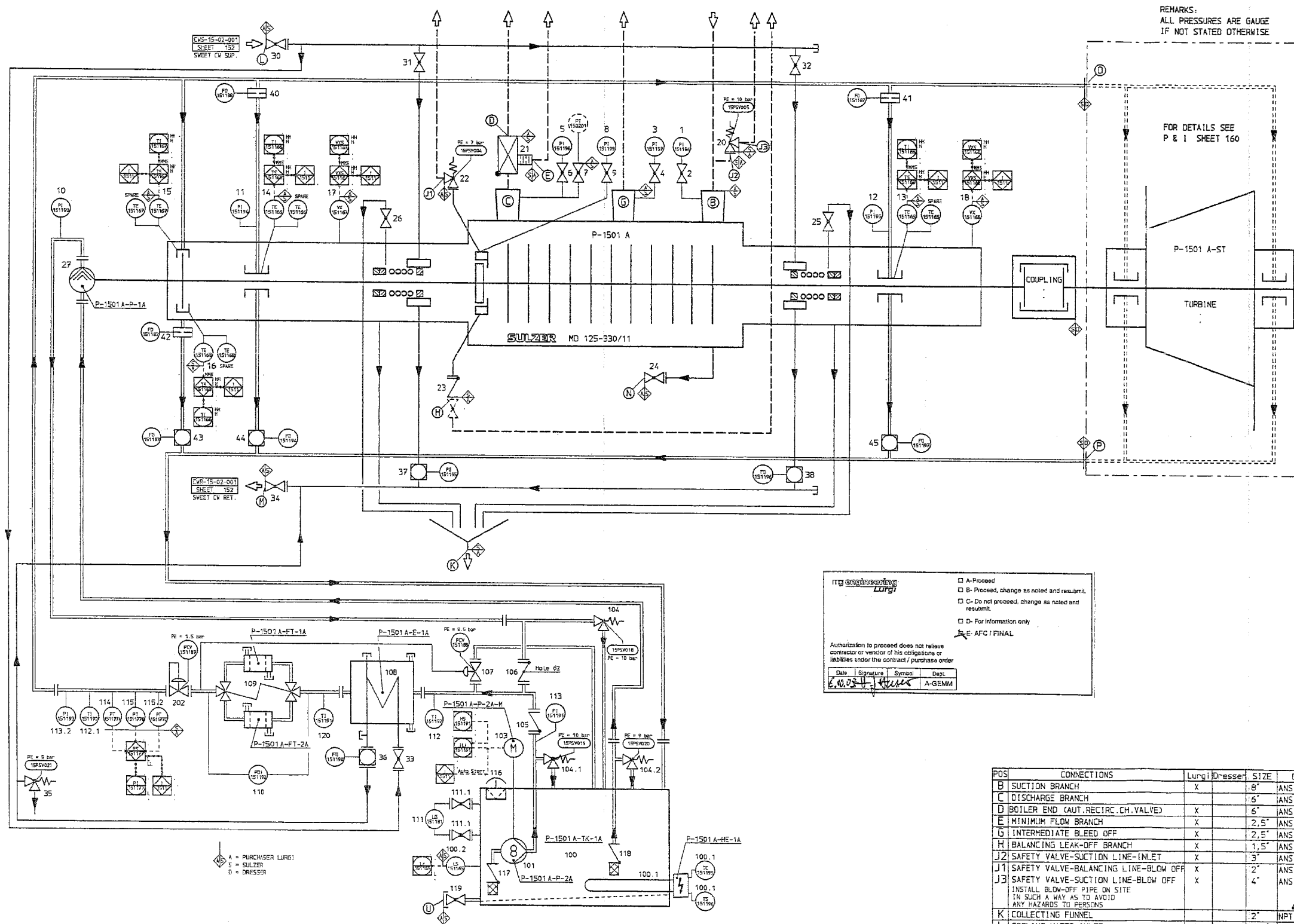


| P-1501 A<br>BOILER FEED WATER PUMP      | P-1501 A-TK-1A<br>LUBE OIL TANK | P-1501 A-E-1A<br>OIL COOLER         | P-1501 A-P-1A<br>MAIN OIL PUMP | P-1501 A-P-2A<br>AUXILIARY OIL PUMP | P-1501 A-FT-1A / 2A<br>DOUBLE FILTER |
|-----------------------------------------|---------------------------------|-------------------------------------|--------------------------------|-------------------------------------|--------------------------------------|
| OPERATING POWER 1401 kW                 | DESIGN PRESSURE 0 bar           | COOLING SURFACE 7.4 m <sup>2</sup>  | DISCHARGE CAPACITY 126 L/min   | DISCHARGE CAPACITY 126 L/min        | FLOW RATE 59 L/min                   |
| OPERATING HEAD 1428 m                   | DESIGN TEMPERATURE 90 °C        | DESIGN PRESSURE SHELL SIDE 10 bar   | DESIGN PRESSURE 16 bar         | DESIGN PRESSURE 25 bar              | PRESSURE LOSS (LEAN) 42.25 bar       |
| OPERATING FLOW 237 m <sup>3</sup> /h    |                                 | DESIGN TEMPERATURE 100 °C           | DESIGN TEMPERATURE 110 °C      | DESIGN TEMPERATURE 100 °C           | DESIGN PRESSURE 17.7 bar             |
| DESIGN PRESSURE SUCTION SIDE 40 bar     |                                 | DESIGN PRESSURE 10 bar              | DIFFERENCE PRESSURE 5 bar      | DIFFERENCE PRESSURE 6 bar           | DESIGN TEMPERATURE 100 °C            |
| DESIGN TEMPERATURE SUCTION SIDE 150 °C  |                                 | DESIGN TEMPERATURE TUBE SIDE 100 °C |                                |                                     |                                      |
| DESIGN PRESSURE PRESSURE SIDE 250 bar   |                                 |                                     |                                |                                     |                                      |
| DESIGN TEMPERATURE PRESSURE SIDE 180 °C |                                 |                                     |                                |                                     |                                      |



**Authorization to proceed does not relieve**  
contractor or vendor of his obligations or  
liabilities under the contract / purchase order

| Date       | Signature   | Symbol      | Dept.  |
|------------|-------------|-------------|--------|
| 20.08.2003 | [Signature] | AFC / FINAL | A-GEMM |

☐ A- Proceed  
☐ B- Proceed, change as noted and resubmit.  
☐ C- Do not proceed, change as noted and resubmit.  
☐ D- For information only  
☒ E- AFC / FINAL

| POS | CONNECTIONS                          | Lurg Dresser | SIZE | CLASS       |
|-----|--------------------------------------|--------------|------|-------------|
| B   | SUCTION BRANCH                       | X            | 8"   | ANSI 300RF  |
| C   | DISCHARGE BRANCH                     | X            | 6"   | ANSI 1500RF |
| D   | BOILER END (AUT. RECIRC. CH. VALVE)  | X            | 6"   | ANSI 1500RF |
| E   | MINIMUM FLOW BRANCH                  | X            | 2.5" | ANSI 1500RF |
| G   | INTERMEDIATE BLEED OFF               | X            | 2.5" | ANSI 1500RF |
| H   | BALANCING LEAK-OFF BRANCH            | X            | 1.5" | ANSI 300RF  |
| J2  | SAFETY VALVE-SUCTION LINE-INLET      | X            | 3"   | ANSI 300RF  |
| J1  | SAFETY VALVE-BALANCING LINE-BLOW OFF | X            | 2"   | ANSI 150RF  |
| J3  | SAFETY VALVE-SUCTION LINE-BLOW OFF   | X            | 4"   | ANSI 150RF  |
| K   | COLLECTING FUNNEL                    |              | 2"   | NPT Female  |
| L   | COOLING WATER INLET                  | X            | 1.5" | ANSI 150RF  |
| M   | COOLING WATER OUTLET                 | X            | 1.5" | ANSI 150RF  |
| N   | DRAINING-PUMP-SUCTION CASING         | X            | 1"   | ANSI 300RF  |
| O   | LUBE OIL INLET TURBINE               | X            | 1"   | ANSI 150RF  |
| P   | LUBE OIL OUTLET TURBINE              | X            | 3"   | ANSI 150RF  |
| U   | DRAIN OIL TANK                       |              | 1"   | NPT PLUGGED |

Auftraggeber/Contractor: Lurg, Öl Gas Chemie GmbH  
 Auftrags-Nr./Contract No.: 101340-050  
 Anlage/Plant: Mega Methanol Iran  
 Aufstellungsort/Location: Bandar Assaluyeh (Iran)  
 Pos.-Nr./Pos. No.: P-1501 A  
 Sulzer-Equipment-Nr./Equipment No.: 1203807  
 Sulzer-Auftrags-Nr./Sulzer Order No.: 101340-050

REPLACED BY: MD 125-330/11  
 SUBSTITUTION FOR: 101340-050  
 ORIGINAL SCALE: 1:1

CAD - DRAWING  
 PART - No.: 1-A.4470.056  
 E 1-A.4470.056 1/1

ZAGROS PETROCHEMICAL COMPANY  
 NATIONAL PETROCHEMICAL COMPANY  
 ZAGROS PETROCHEMICAL COMPLEX  
 4th METHANOL PROJECT

CONTRACTOR: PETROCHEMICAL INDUSTRIES  
 DESIGN & ENGINEERING COMPANY  
 شرکت طراحی و مهندسی صنایع پتروشیمی

IDENTIFICATION:  
 P-1501 A  
 HP/MP-BFW Pump  
 P-1501 A  
 P&I Diagram / SHEET 161  
 169666-01 27291