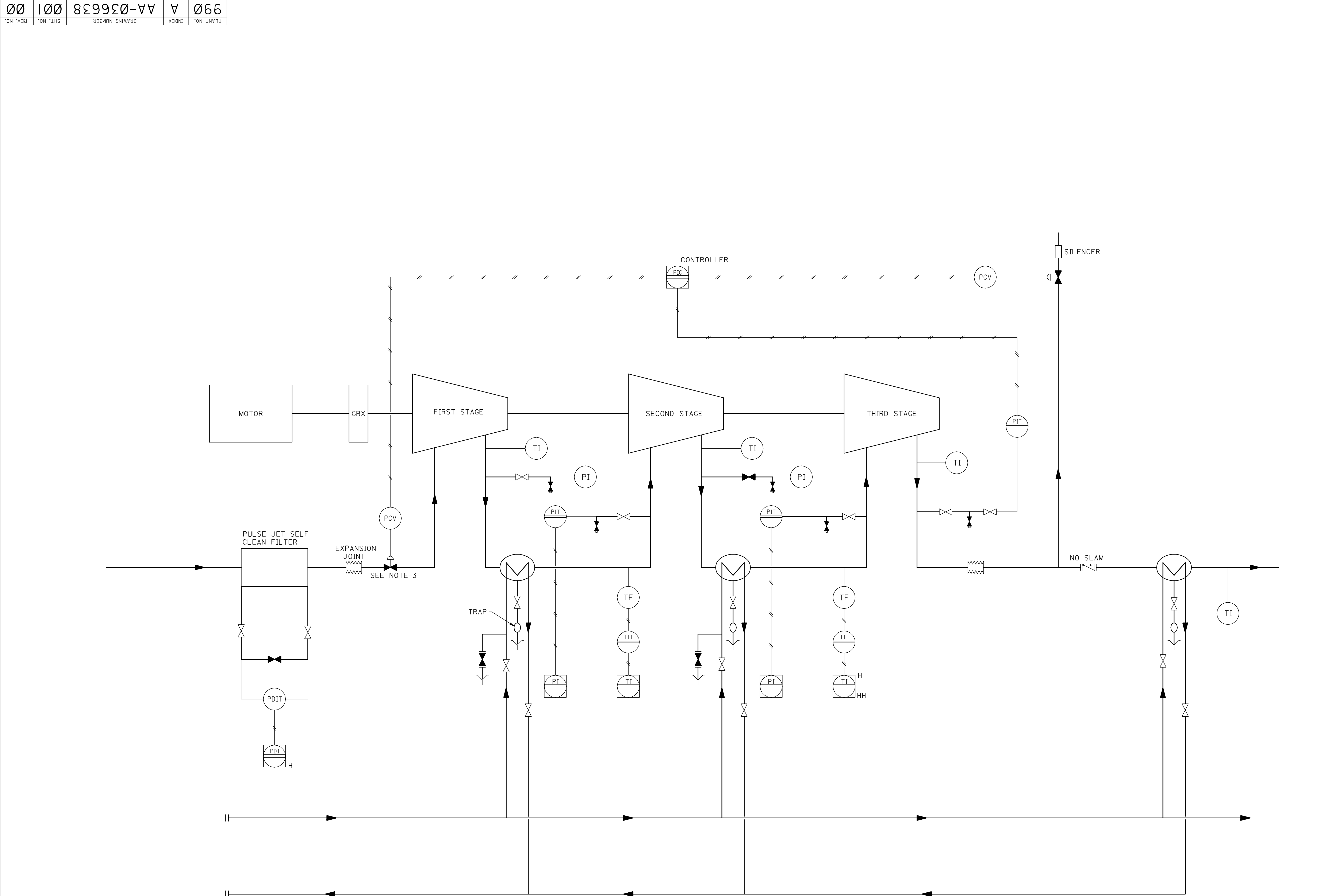




NOTES:

- 1- SEAL AIR PURGE AND ANTI SURGE CONTROL DESIGN PER MANUFACTURER'S STANDARD.
- 2- SUCTION THROTTLE VALVE TO BE SCALLOPED TO PREVENT DRAWING VACUUM.
- 3- VARIABLE INLET GUIDE VANES ARE ACCEPTABLE ALTERNATIVE TO SUCTION THROTTLE VALVE.

PIPING LEGEND		INSTRUMENT LEGEND	
PIPING MATERIAL SPECIFICATION AES-L-005		INSTRUMENT DEFINITION & SYMBOLS AES-I-004	
— PROCESS LINE	AC/AF0 -AIR TO CLOSE/	TT -TEMP. TRANSMITTER	TTd -TEMP. TRANSDUCER
- - - INSTRUMENT AIR LINE	AC/AFS -AIR TO CLOSE/AIR	TH -THERMOWELL	THd -THERMOWELL
— INSTRUMENT FAILURE STEADY	AO/AF0 -AIR TO OPEN/	ZVZ -VACUUM RELIEF VALVE	XA -ANNUNCIATOR
— ELECTRICAL LINE	AO/AFS -AIR TO OPEN/AIR	XL -PILOT LIGHT	XLd -LIMIT SWITCH
REDUCER	AOV -AIR OPERATED VALVE	XVE -VIBRATION ELEMENT	XVS -VIBRATION SWITCH
SPECTACLE PLATE-OPEN	AT -ANALYZER TRANSMITTER	ZV -SAFETY SHUTDOWN VALVE	ZVd -TEMP. INDICATING TRANSMITTER
SPECTACLE PLATE-CLOSED	ESD -EMERGENCY SHUTDOWN SYSTEM	PIT -PRESS. INDICATING TRANSMITTER	
GATE VALVE	FC -FLOW CONTROLLER		
GLOBE VALVE	FCV -FLOW CONTROL VALVE		
CHECK VALVE	FE -FLOW ELEMENT		
PLUG VALVE	FG -FLOW SIGHT GLASS		
BALL VALVE	FHCV -FLOW MANUAL CONTROL VALVE		
DOUBLE DISC GATE VALVE	FHTd -FLOW MANUAL TRANSDUCER		
ANGLE VALVE	FIC -FLOW INDICATOR CONTROLLER		
RELIEF VALVE	FM -FLOW METER		
MOTOR OPERATED VALVE	FOI -FLOW TOTALIZER INDICATOR		
PISTON OPERATED VALVE	FR -FLOW RECORDER		
CONTROL VALVE	FT -FLOW TRANSMITTER		
BALL TYPE CONTROL VALVE WITH POSITIONER	FY -FLOW RELAY		
SOLENOID VALVE	HIC -HAND INDICATOR CONTROLLER		
VALVE NORMALLY CLOSED	HS -HAND SWITCH		
	LA -LEVEL ALARM		
	LCV -LEVEL CONTROL VALVE		
	LG -LEVEL GAUGE GLASS		
	LIC -LEVEL INDICATOR CONTROLLER		
	LI -LEVEL INDICATOR		
	LR -LEVEL RECORDER		
	LS -LEVEL SWITCH		
	LT -LEVEL TRANSMITTER		
	LTD -LEVEL TRANSDUCER		
	MOV -MOTOR OPERATED VALVE		
	PB -PUSHBUTTON		
	PC -PRESSURE CONTROLLER		
	PCV -PRESS. CONTROL VALVE		
	PdC -PRESS. DIFF. CONTROLLER		
	PdC -PRESS. DIFF. INDICATOR		
	PdC -PRESS. DIFF. INDICATOR CONTROLLER		
	PdC -PRESS. DIFF. TRANSMITTER		
	PdC -PRESS. DIFF. TRANSDUCER		
	PG -PRESSURE GAGE		
	PI -PRESSURE INDICATOR		
	PIC -PRESSURE INDICATOR CONTROLLER		
	PR -PRESSURE RECORDER		
	PS -PRESSURE SWITCH		
	PT -PRESSURE TRANSMITTER		
	PV -PRESS. COMPUTATION MOD.		
	PX -PRESSURE POINT		
	PZV -PRESSURE RELIEF VALVE		
	RD -RESTRICTION ORIFICE		
	RTO -RESIST. TEMP. DETECTOR		
	SI -SPEED INDICATOR		
	SS -SPEED SWITCH		
	TC -TEMP. CONTROLLER		
	TCV -TEMP. CONTROL VALVE		
	TE -TEMP. ELEMENT		
	TG -THERMOMETER		
	THS -TEMP. HAND SWITCH		
	TI -TEMP. INDICATOR		
	TR -TEMP. RECORDER		
	TS -TEMP. SWITCH		
TSO -TIGHT SHUT OFF			
S.C. -SAMPLE CONN.			
\$ -DRAIN TO PRESSURE			
SCHER -SPEED			
DWS -OILY WATER SEWER			
D -DRAIN			
V -VENT			

REFERENCE DRAWINGS

LETTER IDENTIFICATION OF LINES	AC-036204
PIPING SYMBOLS	AB-036227
EQUIPMENT SYMBOLS	AB-036305
INSTRUMENT SYMBOLS	AC-036950
PIPING LAYOUT INDEX	
PLOT PLAN	
PROCESS FLOW DIAGRAM	
HYDROSTATIC TEST DIAGRAM	
DRAWING CONTROL JOB ORDER NO.	
INSTRUMENT INSTALLATION SCHEDULES	

REV. NO.	DATE	JO/EWO	DESCRIPTION	ENGG. CERT.	PMT	OPRNS.

DESIGN CERTIFICATION

DRAWN BY	M.H. JANJUA	CHECKED BY	
DATE STARTED	7TH SEPT. 2002	DATE COMPLETED	
DISCIPLINE ENGINEER			
PROJECT ENGINEER			

THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNTIL CERTIFIED AND DATED.	CERTIFIED BY:	NAME:	DATE:
	SIGNATURE		

SAUDI ARABIAN OIL COMPANY

REVIEW FOR KEY DRAWINGS	REQUIRED ☐	NOT REQUIRED ☐
CONSTRUCTION AGENCY		
OPERATIONS		
OTHER		

PIPING & INSTRUMENT DIAGRAM		DRAWING TYPE
PLANT INSTRUMENT AIR COMPRESSOR		STD

STD. DWG.		SAUDI ARABIA	
PLANT NO.	INDEX	DRAWING NUMBER	SH. NO. REV. NO.
990	A	AA-036638	001 00

Saudi Aramco 5994 ENG. (03/99)

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