







OWNER:  شرکت سست و موی آوند ایرانیان (سهایی نایب)	BUSHEHR PETROCHEMICAL COMPANY MEG PLANT						EPC CONTRACTOR:  Chagalesh-Enerchimi-Steam Joint Venture BUPC-MEG PLANT PROJECT		
MC :  شرکت سست و موی آوند ایرانیان مدیر نایب	CAUSE & EFFECT CHART LIST FOR NITROGEN GAS BOOSTER								
Owner Document Number: 17811-27A							Project	Area	Phase
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CAUSE & EFFECT CHART LIST FOR NITROGEN GAS BOOSTER

 شرکت سست و موی آوند ایرانیان	 Chagalesh-Enerchimi-Steam Joint Venture BUPC-MEG PLANT PROJECT	BUSHEHR PETROCHEMICAL COMPANY MEG PLANT
Document Review		
Issue Purpose:	AFC	
Result Code: AP,AN,CM,RE,NC	AN	
Next Status : IFC,IFA,IFI,AFC,AB	AFC	
Responsible Department	MECHANICAL	
Commented Date	Feb/16/2022	
Approval or review hereunder shall not be construed to relieve Vendor / Subcontractor of his responsibilities and liability under the contract.		

Rev.	Date	Purpose of Issue	Prepared	Checked	Approved	AC Code
03	24/01/2022	Approved for Construction	KP	JR	PW	
02	06/12/2021	Approved for Construction	KP	JR	PW	
01	12/11/2021	For approval	AV	KP	PW	
00	15/09/2021	For approval	AV	KP	PW	
					Class: 1	Phase: P

General comments:
 1. Please be noted that the document must be followed a similar approach. For instance, some alarms ,such as TAH-10153, are reported, but High and Low alarms related to PIC-10158 are not reported.

There are some inconsistencies between the current document, vendor's PID and the project PID. (please refer to the attachment)



DOCUMENT TITLE: 17811-27A
Cause & Effect chart for Nitrogen Compressor

- Effects of following signals shall be specified:
 • PIT-10157
 • PB-10159
 • PB-10160

CAUSE				EFFECT	Tag. Number	Component									
Instrument Tag	Signal	Type	Description		N/A	N/A	XY-10151	XY-10152	XAL-10152	XL-10153	XL-10158	XL-10154	XL-10159	PY-10151	
					MOTOR START / STOP	HEATER START / STOP	LOAD / UNLOAD VALVE	WATER INLET VALVE	COMMON TRIP TO ESD	COMMON ALARM LAMP LCP	COMMON ALARM LAMP UCP	COMMON TRIP LAMP LCP	COMMON TRIP LAMP UCP	RECYCLE VALVE	
					Note 4										
PB-10157	ESD	BUTTON	EMERGENCY SHUT DOWN UCP		SP	ST	DE	DE	X			X	X		
PB-10153	ESD	BUTTON	EMERGENCY SHUT DOWN LCP		SP	ST	DE	DE	X			X	X		
HS-108-SD-1	ESD	ESD	EMERGENCY SHUT DOWN ESD		SP	ST	DE	DE	X			X	X		
PB-10151	START	BUTTON	START COMPRESSOR LCP	Note 3	ST		E	E						ST	
PB-10155	START	BUTTON	START COMPRESSOR UCP	Note 3	ST		E	E						ST	
PB-10152	STOP	BUTTON	STOP COMPRESSOR LCP		SP	ST	DE	DE							
PB-10156	STOP	BUTTON	STOP COMPRESSOR UCP		SP	ST	DE	DE							
PIT-10153	TRANSMITTER	HH	PACKAGE INLET PRESSURE HIGH HIGH		SP		DE	DE	X			X	X		
PIT-10153	TRANSMITTER	LL	PACKAGE INLET PRESSURE LOW LOW		SP		DE	DE	X			X	X		
PIT-10154	TRANSMITTER	LL	COMPRESSOR OIL PRESSURE LOW LOW		SP		DE	DE	X			X	X		
PIT-10156	TRANSMITTER	H	COMPRESSOR 1st STAGE PRESSURE HIGH							X	X				
PIT-10156	TRANSMITTER	HH	COMPRESSOR 1st STAGE PRESSURE HIGH HIGH		SP		DE	DE	X			X	X		
PIT-10158	TRANSMITTER	CONTROL	COMPRESSOR OUTLET PRESSURE CONTROL	Note 2										C	
PIT-10158	TRANSMITTER	CONTROL	PACKAGE OUTLET PRESSURE UNLOAD / STOP	Note 2	SP		DE	DE							
PIT-10158	TRANSMITTER	CONTROL	PACKAGE OUTLET PRESSURE LOAD / START	Note 2	ST		E								
PIT-10159	TRANSMITTER	HH	COMPRESSOR OUTLET PRESSURE HIGH HIGH		SP		DE	DE	X			X	X		
PIT-10159	TRANSMITTER	LL	COMPRESSOR OUTLET PRESSURE LOW LOW		SP		DE	DE	X			X	X		
TIT-10151	TRANSMITTER	H	COMPRESSOR INLET TEMPERATURE HIGH							X	X				
TIT-10152	TRANSMITTER	H	COMPRESSOR 1st STAGE TEMPERATURE HIGH							X	X				
TIT-10153	TRANSMITTER	HH	COMPRESSOR 1st STAGE TEMPERATURE HIGH HIGH		SP		DE	DE	X			X	X		
TIT-10154	TRANSMITTER	H	COMPRESSOR 2nd STAGE SUCTION TEMPERATURE HIGH							X	X				
TIT-10155	TRANSMITTER	HH	COMPRESSOR 2nd STAGE TEMPERATURE HIGH HIGH		SP		DE	DE	X			X	X		
FIT-10151	TRANSMITTER	L	COMPRESSOR COOLING WATER FLOW LOW							X	X				
VT-10151	TRANSMITTER	HH	COMPRESSOR 2nd STAGE SUCTION TEMPERATURE HIGH		SP		DE	DE	X			X	X		
N/A	MOTOR	CONTROL	MOTOR RUNNING FEEDBACK TRIP	Note 1	ST		DE	DE	X			X	X		
N/A	MOTOR	CONTROL	MOTOR FAULT		ST		DE	DE	X			X	X		
N/A	HEATER	CONTROL	HEATER RUNNING FEEDBACK ALARM							X	X				
N/A	HEATER	CONTROL	HEATER FAULT							X	X				

Not found in PID



Legend:

ST = Start

SP = Stop

I = Interlock

X = Action

E = Energize

DE = De-energize

C = Control

NOTES:

1. MOTOR FEEDBACK TRIP, 2 SECOND AFTER START SIGNAL IS SEND AND MOTOR IS NOT SENDING FEEDBACK, THE PACKAGE IS TRIPPED

2. START AND STOP ON LOAD ON UNLOAD IS BASED ON THE TIMERS SPECIFIED IN THE CONTROL PHILOSOPHY

3. LOADING AFTER 30 SECONDS AFTER START AS PER CONTROL PHILOSOPHY

4. HEATER WILL BE STARTED WHEN COMPRESSOR IS STOPPED, TEMPERATURE WILL BE CONTROLLED AUTOMATICALLY FROM A SENSOR IN THE HEATER AND A CONTROLLER IN THE DISTRIBUTION PANEL

