





OWNER:  شرکت سست و موی آوند ایرانیاان (سایه نیاان)	BUSHEHR PETROCHEMICAL COMPANY MEG PLANT						EPC CONTRACTOR:  Chagalesh-Enerchimi-Steam Joint Venture BUPC-MEG PLANT PROJECT		
MC :  شرکت سست و موی آوند ایرانیاان (سایه نیاان)	CAUSE & EFFECT CHART LIST FOR NITROGEN GAS BOOSTER								
	Project	Area	Phase	Unit	Dis.	Doc.	Seq.	Contract No : 52-98/445	
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CAUSE & EFFECT CHART LIST FOR NITROGEN GAS BOOSTER

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



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Cause & Effect chart for Nitrogen Compressor

CAUSE				EFFECT	Tag. Number	N/A	N/A	XY-10151	XY-10152	XAL-108-2	XL-10153	XL-10158	XL-10154	XL-10159	PY-10151
Instrument Tag	Signal	Type	Description		Component	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
PB-10157	ESD	BUTTON	EMERGENCY SHUT DOWN UCP										X	X	
PB-10153	ESD	BUTTON	EMERGENCY SHUT DOWN LCP										X	X	
HS-108-SD-1	ESD	ESD	EMERGENCY SHUT DOWN ESD										X	X	
PB-10151	START	BUTTON	START COMPRESSOR LCP	Note 3				E	E						ST
PB-10155	START	BUTTON	START COMPRESSOR UCP	Note 3				E	E						ST
PB-10152	STOP	BUTTON	STOP COMPRESSOR LCP					DE	DE						
PB-10156	STOP	BUTTON	STOP COMPRESSOR UCP					DE	DE						
PIT-10153	TRANSMITTER	HH	PACKAGE INLET PRESSURE HIGH HIGH					DE	DE	X			X	X	
PIT-10153	TRANSMITTER	LL	PACKAGE INLET PRESSURE LOW LOW					DE	DE	X			X	X	
PIT-10154	TRANSMITTER	LL	COMPRESSOR OIL PRESSURE LOW LOW					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					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				DE	DE						
PIT-10158	TRANSMITTER	CONTROL	PACKAGE OUTLET PRESSURE LOAD / START	Note 2				E							
PIT-10159	TRANSMITTER	HH	COMPRESSOR OUTLET PRESSURE HIGH HIGH					DE	DE	X			X	X	
PIT-10159	TRANSMITTER	LL	COMPRESSOR OUTLET PRESSURE LOW LOW					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					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					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					DE	DE	X			X	X	
N/A	MOTOR	CONTROL	MOTOR RUNNING FEEDBACK TRIP	Note 1				DE	DE	X			X	X	
N/A	MOTOR	CONTROL	MOTOR FAULT					DE	DE	X			X	X	
N/A	HEATER	CONTROL	HEATER RUNNING FEEDBACK ALARM								X	X			
N/A	HEATER	CONTROL	HEATER FAULT								X	X			



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

