

OWNER:



**BUSHEHR PETROCHEMICAL COMPANY  
MEG PLANT**

EPC CONTRACTOR:



MC :



**CAUSE & EFFECT CHART LIST FOR  
NITROGEN GAS BOOSTER**



Owner Document Number: 17811-27A	Project	Area	Phase	Unit	Dis.	Doc.	Seq.	Contract No : 52-98/445	
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**CAUSE & EFFECT CHART LIST FOR NITROGEN GAS  
BOOSTER**

00	15/09/2021	For approval			AV	KP	PW	
Rev.	Date	Purpose of Issue			Prepared	Checked	Approved	AC Code
							Class: 1	Phase: P





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

CAUSE				EFFECT	Tag. Number	N/A	XY-10001	XY-10002	XY-10002	XL-10003	XL-10008	XL-10004	XL-10009		
Instrument Tag	Signal	Type	Description		Component	MOTOR START / STOP	LOAD / UNLOAD VALVE	WATER INLET VALVE	COMMON ALARM TO DCS	COMMON ALARM LAMP LCP	COMMON ALARM LAMP UCP	COMMON TRIP LAMP LCP	COMMON TRIP LAMP UCP		
PB-10003	ESD	BUTTON	EMERGENCY SHUT DOWN LCP					X			X	X			
PB-100307	ESD	BUTTON	EMERGENCY SHUT DOWN UCP					X			X	X			
HS-115-SD-1	ESD	ESD	EMERGENCY SHUT DOWN DCS					X			X	X			
XS-115	INTERLOCK	CONTROL	START PERMIT COMPRESSOR												
PB-10001	START	BUTTON	START COMPRESSOR LCP	Note 3											
PB-10005	START	BUTTON	START COMPRESSOR UCP	Note 3											
PB-10002	STOP	BUTTON	STOP COMPRESSOR LCP												
PB-10006	STOP	BUTTON	STOP COMPRESSOR UCP												
PIT-10003	TRANSMITTER	HH	PACKAGE INLET PRESSURE HIGH HIGH					X			X	X			
PIT-10003	TRANSMITTER	LL	PACKAGE INLET PRESSURE LOW LOW					X			X	X			
PIT-10004	TRANSMITTER	LL	COMPRESSOR OIL PRESSURE LOW LOW					X			X	X			
TIT-10002	TRANSMITTER	HH	COMPRESSOR 1st STAGE TEMPERATURE HIGH HIGH					X			X	X			
TIT-10003	TRANSMITTER	HH	COMPRESSOR OUTLET TEMPERATURE HIGH HIGH					X			X	X			
VT-10001	TRANSMITTER	HH	COMPRESSOR VIBRATION HIGH HIGH					X			X	X			
PIT-10007	TRANSMITTER	HH	PACKAGE OUTLET PRESSURE HIGH HIGH					X			X	X			
PIT-10007	TRANSMITTER	LL	PACKAGE OUTLET PRESSURE LOW LOW					X			X	X			
PIT-10007	TRANSMITTER	H	PACKAGE OUTLET PRESSURE UNLOAD / STOP	Note 2											
PIT-10007	TRANSMITTER	L	PACKAGE OUTLET PRESSURE LOAD / START	Note 2											
TIT-10001	TRANSMITTER	H	PACKAGE INLET TEMPERATURE HIGH					X	X	X					
FIT-10001	TRANSMITTER	L	COOLING WATER FLOW LOW					X	X	X					
N/A	MOTOR	CONTROL	MOTOR RUNNING FEEDBACK TRIP	Note 1				X			X	X			
N/A	MOTOR	CONTROL	MOTOR FAULT					X			X	X			

Legend:



ST = Start  
SP = Stop  
I = Interlock  
X = Action  
E = Energize  
DE = De-energize

**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