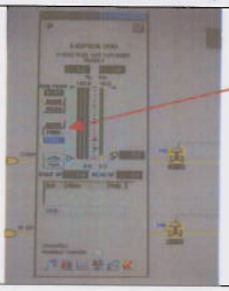
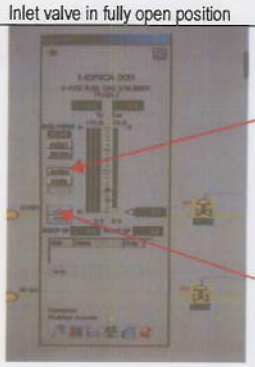
SOP.ENAG: PRESSURISATION OF FUEL GAS SYSTEM

AIM: To detail the procedure for safe pressurisation of ENAG fuel gas system.

Number of People Involved 2 Target Time 23mins

Procedure Overview *What is done*	Instructions and Explanations *How it is Done*	Reasons *Why it is done*	Key Point Images *Instruction to accompany the photo*
Start	✚ *Confirm Reset for ALL standing Trip alarms at DCS C&E prior to commencement of task.*		
1. Zero Fuel gas scrubber pressure Controller Output Takt Time: 3mins. Cycle Time: 3mins.	1.1 At DCS HMI, take the control mode of Fuel gas scrubber pressure Faceplate 145PICA-100 (Train 1), 145PICA-200 (Train 2) into Manual (MAN). 1.2 Give the Output 0% (zero percent).	To prevent sudden / over-pressurization of Fuel gas scrubber during pressurization stage.	 Manual (MAN) Mode button on Faceplate
2. Perform Inlet SDV local reset Takt Time: 5mins Cycle Time: 8mins	2.1 Field Operator should push the local reset button for 45-UZV-110A (Train 1), 45-UZV-210A (Train 2). 2.2 Confirm the valve position indicator has moved to "OPEN".	To complete Fuel gas system trip reset logic	 Local Reset Button Valve Position Indicator
3. Line up Gas Lift Inlet Manifold to the Fuel Gas System Takt Time: 10mins Cycle Time: 18mins	3.1 Open the manual valve 45-BV-003 3.2 Gradually turn counter-clockwise the Scrubber inlet manual valve to "fully open" position for the desired Fuel Gas Train.	To introduce gas into Fuel gas scrubber	 Inlet valve in fully open position
4. Pressurize Fuel gas scrubber. Takt Time: 5mins Cycle Time: 23mins	4.1 At DCS HMI, take the control mode of Fuel gas scrubber pressure Faceplate 145PICA-100 (Train 1), 145PICA-200 (Train 2) into Automatic (AUTO). 4.2 Ramp up the Set point in steps of 1Barg, up to 3.0 Barg allowing the PV settle at each step. 4.3 Leave the Set point at 3.0 – 3.5 Barg.	To ensure smooth pressurization of Fuel gas scrubber.	 Automatic (AUTO) Mode button on Faceplate Set point Ramp-up button
END			

SOP.ENAG: PRESSURISATION OF FUEL GAS SYSTEM

✓ Pre-Checks Things to Do Before Starting the Process	Key Point Images
☐ Hold toolbox meeting. ☐ Ensure that gas processing area is on stream. ☐ Check drain valves are closed and spades in place on the fuel gas unit as shown in UEFS.	

🛠 Tools and Materials Things You Need Before Starting the Process	Step	Key Point Images
☐ Gas tester ☐ Fire retardant coverall, safety shoes, hand gloves, eye goggle. ☐ Communication radios (Ex).	All All All	

🚹 🚺 People Who Is Required to Be Notified	Key Point Images
☐ Operations Team Leader ☐ Others carrying out activities within the location ☐ Operations Personnel in Flow Station	

SOP.ENAG: START-UP OF FUEL GAS SUPER HEATER

AIM: To detail the procedure for safe start-up of ENAG fuel gas system super heater.

↑ Number of People Involved 2 ⏱ Target Time 26mins

Procedure Overview *What is done*	Instructions and Explanations *How it is Done*	Reasons *Why it is done*	Key Point Images *Instruction to accompany the photo*
Start	*Confirm Reset for ALL standing Trip alarms at DCS C&E prior to commencement of task.* 1.1 Physically confirm that at least one Gas generator is running.	To achieve a positive gas flow across the heater.	
1. Ensure the Gas Generator is running Takt Time: 5mins. Cycle Time: 5mins.			
2. Perform Thyristor manual reset Takt Time: 5mins Cycle Time: 10mins	2.1 At the Thyristor Local Control Panel (LCP) in the Switchgear room, turn the "FAULT RESET" knob key clockwise and release.	To complete super heater system trip reset logic.	 Turn knob key clockwise and release
3. Zero Super heater Temperature Controller output Takt Time: 3mins Cycle Time: 13mins	3.1 At DCS HMI, take the control mode of Fuel Gas Super Heater Faceplate 145TICA-101 (Train 1), 145TICA-201 (Train 2) into Manual (MAN) 3.2 Give the Output 0% (zero percent) value.	To prevent sudden / over-heating of Fuel gas Super heater during temperature building stage.	 Manual (MAN) Mode button on Faceplate
4. Start Super heater Takt Time: 3mins Cycle Time: 16mins	4.1 At DCS HMI, call up Super heater Start/Stop Faceplate 145E-101 (Train 1), 145E-201 (Train 2) 4.2 Click on the START button.	To initiate Fuel gas Super heater.	 START button on Faceplate
5. Build temperature to operating value Takt Time: 10mins Cycle Time: 26mins	5.1 At DCS HMI, take the control mode of Fuel Gas Super Heater Faceplate 145TICA-101 (Train 1), 145TICA-201 (Train 2) into Automatic (AUTO). 5.2 Ramp up the Set point in steps of 1deg C, up to 35deg C, allowing the PV settle at each step. Leave the Set point at 35deg C.	To ensure smooth temperature gradient up to operating temperature.	 Automatic (AUTO) Mode button on Faceplate Set point Ramp-up button
END			

SOP.ENAG: START-UP OF FUEL GAS SUPER HEATER

✓ Pre-Checks Things to Do Before Starting the Process	Key Point Images
☐ Hold toolbox meeting. ☐ Ensure that gas processing area is on stream. ☐ Check drain valves are closed and spades in place on the fuel gas unit as shown in UEFS.	

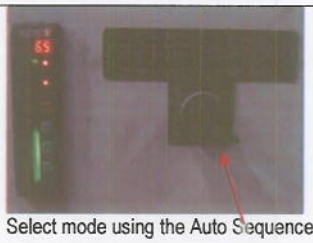
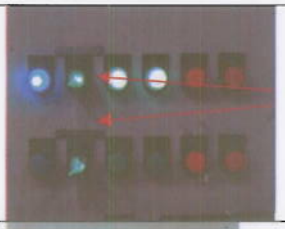
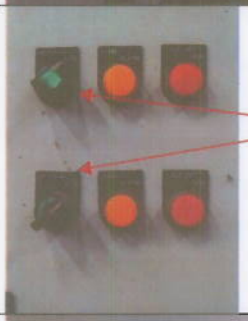
🛠 Tools and Materials Things You Need Before Starting the Process	Step	Key Point Images
☐ Gas tester ☐ Fire retardant coverall, safety shoes, hand gloves, eye goggle. ☐ Communication radios (Ex).	All All All	

🚹 🚺 People Who Is Required to Be Notified		Key Point Images
☐ Operations Team Leader ☐ Operations Personnel in Flow Station	☐ Others carrying out activities within the location	

SOP.ENAG: START-UP OF INSTRUMENT AIR COMPRESSOR

AIM: To detail the procedure for safe start-up of ENAG Instrument Air Compressor System.

Number of People Involved 2 | Target Time 27mins

Procedure Overview *What is done*	Instructions and Explanations *How it is Done*	Reasons *Why it is done*	Key Point Images *Instruction to accompany the photo*
Start	✚ *Confirm Reset for ALL standing Trip alarms at DCS C&E prior to commencement of task.*	To clear all standing alarms and give permissive to start the system.	 STOP Warning sign — Reset Tab
1. Reset Instrument Air compressor from Local Display Panel Takt Time: 5mins. Cycle Time: 5mins.	1.1 Physically confirm that at least one Gas OR Emergency Diesel Generator is running. 1.2 Use the navigation buttons to navigate to the "STOP" warning sign, select it. 1.3 Use the navigation buttons to navigate to the "Reset" Tab at the bottom of screen, select it.		
2. Select Lead / Lag Compressor Takt Time: 3mins Cycle Time: 8mins	2.1 At the Air Compressor I/O Panel, use the Auto Sequence button, select A-Mode if system is powered by Diesel Generator (any mode can be selected when system is powered by the Gas generators)	Only Instrument air compressor A is connected to diesel generator and should be selected as Lead.	 Select mode using the Auto Sequence button
3. Put the Compressors in REMOTE mode Takt Time: 2mins Cycle Time: 10mins	3.1 At the Air Compressor I/O Panel, using the Compressor LOCAL/REMOTE knob, select REMOTE for both compressor A and B.	To transfer compressor control to DCS HMI.	 Compressor LOCAL / REMOTE knobs
4. Put the Air Dryers in REMOTE mode Takt Time: 2mins Cycle Time: 12mins	4.1 At the Air Compressor I/O Panel, using the Dryer STOP / RUN knob, select RUN for both Dryers A and B.	To grant Local Override permissive to start Dryers when Compressor loads in REMOTE mode with control from DCS HMI.	 Dryer STOP / RUN knobs in RUN position
5. Toggle Compressor Faceplate Control mode Takt Time: 15mins Cycle Time: 27mins	5.1 At DCS HMI, toggle the control mode of Compressor Faceplate 146A-101 (Compressor A), 146A-201 (Compressor B) from CAS to AUTO and back to CAS. 5.2 Confirm that the Lead Compressor has started and Loaded. 5.3 Monitor the system and confirm that the Lead compressor Unloads and Loads at the correct pressures as indicated at DCS HMI.	To ensure the compressors Load and Unload automatically at the set regulation pressures.	 Confirmed Cascade (CAS) Mode on Faceplate
END			

SOP.ENAG: START-UP OF INSTRUMENT AIR COMPRESSOR

✓ Pre-Checks Things to Do Before Starting the Process	Key Point Images
☐ Hold toolbox meeting. ☐ Ensure that power generation system is online. ☐ Check drain valves are closed on the Instrument Air Compressor / Dryer unit as shown in UEFS.	

🛠 Tools and Materials Things You Need Before Starting the Process	Step	Key Point Images
☐ Gas tester ☐ Fire retardant coverall, safety shoes, hand gloves, eye goggle. ☐ Communication radios (Ex).	All All All	

🚹 🚺 People Who Is Required to Be Notified		Key Point Images
☐ Operations Team Leader ☐ Operations Personnel in Flow Station	☐ Others carrying out activities within the location	