



Work instruction

Ref:	AOR-HF-ENG-003	Rev:	1
Description:	Decanting Blowing Agent into ISO tanker		
Effective Date:	09/03/23	Revision Date:	09/03/26
Approved By:	GD	Developed by:	CP, JP

Mandatory PPE:								
Hazards		Manual Handling		Slips/trips/falls (same Height)				
		Forklift trucks and other vehicles		Fall from height				
		Cold surfaces		Highly flammable substance – blowing agent				
	WARNING: Only trained and competent personnel can carry out this activity.							
	In the event of a spill or significant leak: Close line by pulling remote shut off valves and vacate area. DO NOT return to the area until it is safe to do so.							
	<ul style="list-style-type: none"> Wearing of a face shield or face covering is a personal choice. 							
	<ul style="list-style-type: none"> The use of Radios or Mobile Phones is prohibited during times when the decanting is taking place. 							
	<ul style="list-style-type: none"> Always report incidents however small to your manager immediately. If in doubt, stop and ask your manager. Report any damage observed. Always follow site rules and safety signs. 							

Reference's

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WORKING PROCEDURE:

Preparation of working area

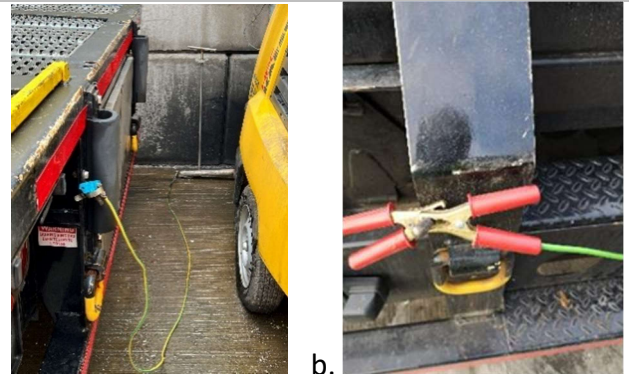
1. Make sure the gate to the compound is secure to prevent any unauthorised persons entering the area whilst decanting.



2. Place the full bottle onto the scales.
(All bottles requiring decanting will have a **RED** full label attached).



3. Connect the earthing clips:
 - a. Grounding rod to the ISO tanker.
 - b. Pump to the ISO Tanker.
 - c. Pump to the gas bottle.





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Notice: Check condition of earthing clips and connection points. DO NOT proceed if cables or clips are damaged.

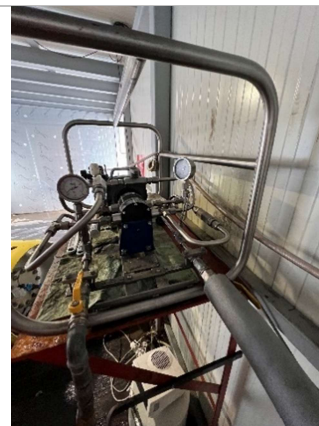
4. Connect hose from generator to pump air inlet.



5. Switch the generator on.



6. Connect the hose from the pump gas outlet to the ISO Tanker inlet.





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Operation

1. Check vacuum valve is in correct position.



2. Pull the remote shut of valve cables and then secure them in position



3. Open both blue valves on the ISO Tanker





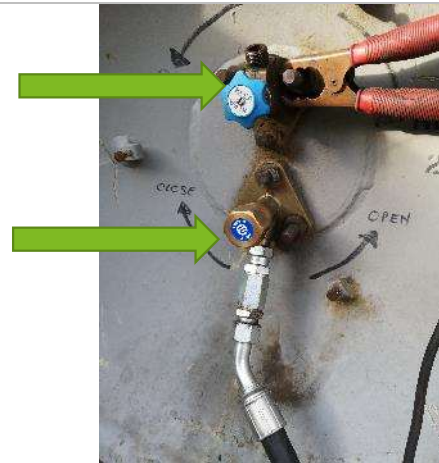
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4. Open both the yellow ISO tanker inlet valves.



5. Connect the outfeed pump to the gas bottle from the pump. The pipe MUST be connected to the lower tap.
6. Then connect the earthing clip to the tap.



7. Open the gas outlet valve.

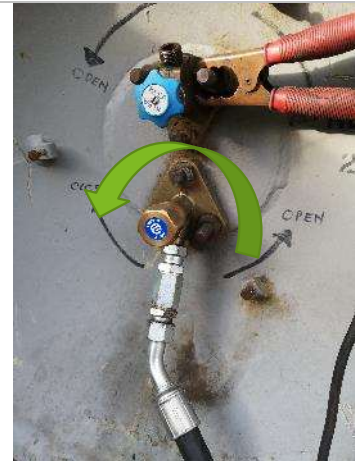




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8. Open the bottle valve by turning the tap anti-clockwise



9. Using the portable gas detector check for any leaks from the outlet pipe.



Warning: If a leak is detected, close gas bottle valve and vacate area until safe to re-enter area by using the leak detector until this shows no leak alarm. Once safe to enter, recheck hose connection to gas bottle.

**10. Place the gas detector on the ISO tanker.
(This is to continually monitor the area during the decanting of the bottles)**

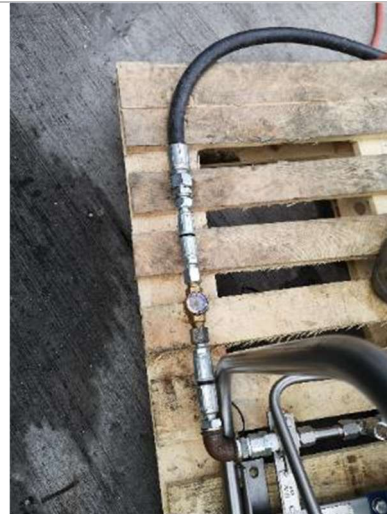




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11. Firstly, gravity feed blowing agent into ISO – check sight gauge to make sure of transfer.

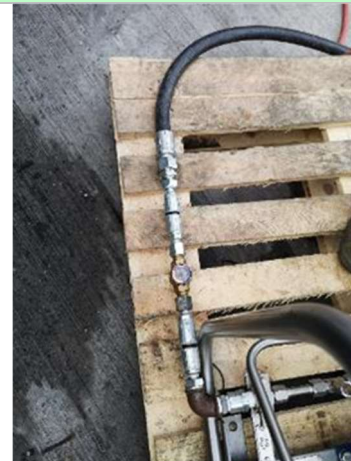


12. Turn the pump control valve anti-clockwise a ¼ of a turn to increase transfer rate. Recheck sight gauge to make sure transfer is taking place.



13. Increase flow rate by turning pump control valve anti-clockwise.

14. Continually monitor flow rate by regularly checking sight gauge, adjusting pump flow if required.

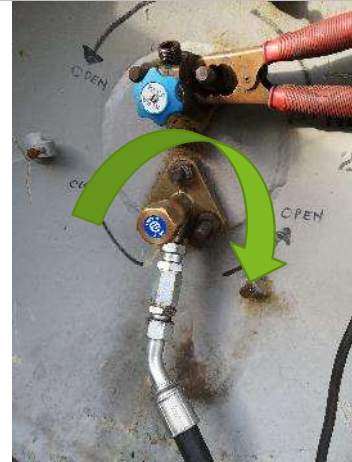




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15. When gas bottle is empty, close bottle valve by turning tap clockwise.



16. Turn vacuum valve to put pump into vacuum mode.



17. Leave in vacuum mode for 2 minutes. When pump rate increases and pump unit starts making a knocking sound, vacuuming is complete.

18. At the same time, close pump control valve and turn vacuum valve back to default (pumping) position.





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19. Close gas outlet valve.



20. The Earthing clip and connecting hose can now be removed from the gas bottle.



21. Using FLT move the bottle and store away for the MEWA department to use.
Make Sure you place the empty **GREEN empty** sign on the bottle.





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22. Repeat the process until all bottles are decanted

Clearing a blockage on the system.

1. If there is no movement in the sight gauge this will indicate there is a blockage in the line.
2. The blockage is due to 'pentane ice' – this is caused by a vacuum developing in the line (pumping rate too fast).

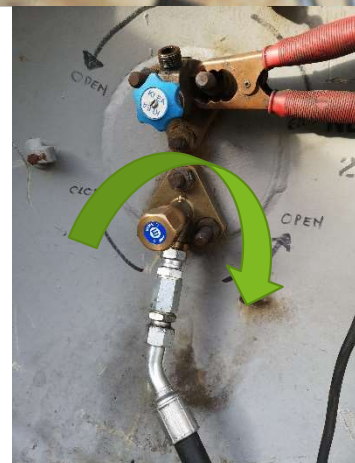
3. Close ISO tanker inlet valves by turning yellow handles.



4. Turn off pump flow control valve.



5. Close bottle valve.





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6. Pour warm water along the pipe work to defrost the ice. Repeat as necessary until normal flow rate take place.

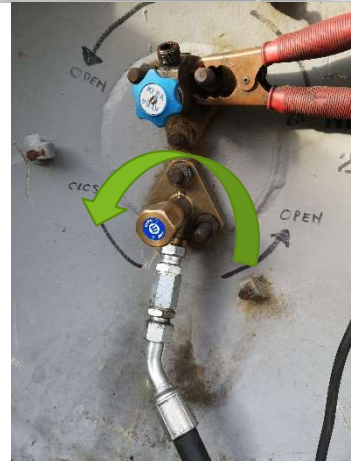


WARNING:
Highly flammable substance – blowing agent. No sources of ignition in area.

7. Open ISO tanker inlet valves.



8. Open bottle valve.



Post Operation

After the last bottle has been decanted, **MAKE SURE** the following is completed:

1. Close all valves.
2. Close gas compound store.
3. Remove earthing clips and visually check condition of clips etc.



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- 4. Stow hoses safely in their appropriate storage areas.**
- 5. Clean up area and store ancilliary equipment safely in their appropriate storage areas.**
- 6. Visually check area to make sure the area is clean and tidy.**

As an employee of AO Recycling, I confirm that I have been given training covering the Work Instruction above and have read through or had this explained through an interpreter. I will follow this Work Instruction and if in any doubt will stop and ask my Co-ordinator/ Supervisor.

Name of Recipient	Sign	Date	Training Delivered by: