

Procedure

Working in confined spaces - VBVBE

1. Basic rules

Working in confined spaces is risky. You may only start when you are certain that:

- you know which confined space you will be working in.
- the space is safe to enter.
- the escape route is clear and accessible.
- your work does not endanger anyone else, including in another space or further along in the ship.

If you are not sure, stop and carry out the check first.

2. When this procedure applies

This procedure applies to any space with limited access and poor ventilation, such as:

- Tanks
- Double bottoms
- Pipe tunnels
- Chain lockers
- Small engine rooms and technical spaces
- Enclosed compartments
- Pits and peak spaces
- Other spaces where gas, vapors, or oxygen deficiency may occur.

3. Stop immediately if you notice these signals

Stop immediately and leave the space if you notice any of the following:

- personal gas detector alarm
- unusual smell, vapor, or smoke
- lighting failure
- ventilation failure
- dizziness, nausea, headache, or stinging eyes
- you notice that hot work, painting, grinding or cleaning is taking place elsewhere at the same time
- you do not know if someone else is still in this space or in a connected space
- you hear the firealar or evacuationalarm

4. Rescue and emergency situations

Before work begins it must be clear:

- how someone can be quickly removed from the space
- how help will be called
- who will supervise outside the space
- how contact will be maintained with the person inside the space
- the site supervisor and teamleader have been informed

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5. De basis. The 10 minute check before you start

You always carry out this check. **Even if the job is “quick”**. Keep the LMRA at hand and follow the steps.

Step 1. Is it really a confined space

Limited access + poor ventilation + risk of gas, vapor, or oxygen deficiency.

If yes, follow the next steps.

Step 2. Look from the outside first. Do not enter yet.

Check:

- Is the space clean and free of flammable materials (no sludge, rust, paint, cleaning rags, solvents, oil. Also outside the confined space)
- Are there pipes and hoses running in or out of the space
- Is the exit (escape route) clear
- Is it dark, wet, slippery, or cluttered

If in doubt. Do not enter.

Step 3. Check whether your work could affect others

Ask yourself:

- Can smoke, vapors, or gases move to other spaces
- Are you creating an ignition source (grinding, welding, burning)
- Could you affect ventilation, power supply, or pipelines
- Could you trap someone
- Could something fall down

If in doubt, check first and only then start.

Step 4. Check whether other people are in or around the space

Check whether someone else is working in the space or in adjacent spaces.

At minimum do the following:

- Look at the access point to see if tools are present
- Call out loudly: “Is anyone in this space?”
- Listen carefully for a response
- Tap on steel and listen
- Look as far as you can

Not sure? Do not start.

Step 5. Measure the air

Before entering:

- Measure with a multigas detector
 - Oxygen between 19.5% and 21%
 - Flammable gas lower than 10% LEL
 - Toxic values within safe limits
- Turn on your personal meter

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No meter or no one able to measure? Then you do not enter.

Ventilation alone is not a guarantee.

Step 6. Ventilation

- Provide ventilation before and during the work
- Ventilation must remove smoke, vapors, and gases
- Position compressors and exhausts so they do not draw in contaminated air

If ventilation stops, you stop as well.

Step 7. Lighting and electrical tools

- Use safe voltage (maximum 50 V AC – 120 V DC) or approved transformers (NEN3140)
- Use explosion-proof (ATEX) equipment where there may be an explosion risk
- Where possible use pneumatic tools
- Power supply must be outside the confined space
- Cables must be intact, dry, and not pinched
- Do not use damaged plugs or cables

Step 8. Supervision during high-risk work

During high-risk work someone must supervise outside the space.

This applies for example to:

- Welding, grinding, blasting or burning
- Working with paint or solvents
- Cleaning with chemicals or high pressure
- Doubts about ventilation
- Working deep inside the ship

This person:

- remains at the entrance
- maintains contact with the employee inside
- can call for help
- does not enter without protection

No supervision means no high-risk work.

Step 9. Personal protective equipment

Basic PPE

- Safety helmet
- Safety shoes
- Gloves
- Safety glasses

Additional PPE depending on the work

- Positive-pressure welding helmet for welding
- Grinding helmet with overpressure for grinding
- Hearing protection for noise
- Supplied breathing air where there is risk of vapors or oxygen deficiency

If there is doubt about the air quality, do not enter the space.

Step 10. Only start when everything is correct

If one step is not correct, you do not start.

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6. During work

- Keep verbal contact with the person supervising.
- Work tidily and do not leave waste behind.
- Stop immediately if you feel unwell or if the gas detector alarms.
- Monitor the physical condition of the employee in the confined space.
- Continue measuring and ventilating.

7. After work

- Check that no one is still in the space.
- Check that there is no fire risk (after hot work).
- Remove all tools, cables, and hoses from the space.
- Remove everything from the space, leave nothing behind.
- Securely close openings.
- Report any unusual situations to the supervisor (air conditions, leaks, near-incident).

8. Rule for everyone on the shipyard

Your work must never surprise anyone else.

If you are working with sparks, smoke, fumes, pressure, electricity, or pipes (shut-of valves, taps)?
Always check whether someone else could be put at risk somewhere else.

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LMRA – Working in confined spaces

<p>First check. Then enter.</p> <p>If in doubt, always treat it as a confined space</p>	<p>This is a confined space if:</p> <ul style="list-style-type: none"> • access is limited • ventilation is insufficient • there is a risk of gas, vapor, or oxygen deficiency 			
<h3>The 10-minute check (always)</h3>				
<p>1</p>		<p>Look first, do not enter yet Clutter, sludge, rust, paint, pipes, wet or slippery floor, poor lighting.</p>		
<p>2</p>		<p>Can my work affect others Smoke, vapors, gas, sparks, valves, ventilation, or falling material.</p>		
<p>3</p>		<p>Is anyone in or near the space Call out, look, listen, and check adjacent spaces.</p>		
<p>4</p>		<table border="1" style="width: 100%;"> <tr> <td style="width: 50%;"> <p>Has the air been measured O₂ 19,5–21% Flammable gas < 10% LEL Toxic levels acceptable</p> </td> <td style="width: 50%;"> <p>No meter means do not enter. Abnormal values mean do not enter.</p> </td> </tr> </table>	<p>Has the air been measured O₂ 19,5–21% Flammable gas < 10% LEL Toxic levels acceptable</p>	<p>No meter means do not enter. Abnormal values mean do not enter.</p>
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<p>5</p>		<p>Ventilation on and stays on If ventilation stops, you stop.</p>		
<p>6</p>		<p>Electrical equipment and lighting safe Cables intact and dry, no damaged plugs, use safe voltage.</p>		
<p>7</p>		<p>Supervision outside during high-risk work Ensure contact is possible (voice, radio, or line of sight). For welding, grinding, painting, cleaning, or if ventilation is uncertain.</p>		
<p>8</p>		<p>Correct PPE Basic PPE and additional PPE available. For air hazards only use independent breathing air.</p>		
<p>9</p>		<p>Do I know how to get out Escape route clear and accessible. No obstacles.</p>		
<p>10</p>		<p>Everything OK? Yes means start. No or doubt means do not start.</p>		
<p>Stop immediately if:</p> <ul style="list-style-type: none"> • the gas detector alarms • you smell, see, or hear something unusual • you feel dizzy, nauseous, or light-headed • ventilation stops • you hear that high-risk work is taking place elsewhere at the same time • you are no longer sure if someone is nearby <p>Leave the space immediately and make sure the situation is safe first.</p>				