



Pressure Vacuum Truck Machinist IC

Practical workbook
Participant

Introduction

You use this practical workbook at the company to work on your practical experience. An important part of the training for the profession Machinist Pressure Vacuum Truck Industrial Cleaning (IR).

The entire training consists of the following parts:

- Obtaining the mandatory certificates
- Obtaining the recommended certificates
- **Carrying out the practical assignments and gaining practical experience**
- Completing the module with a final assessment

In the overview you can see all the requirements that belong to Pressure Vacuum Truck Machinist IC. The indicated certificates have been established as standard by the Orsima sector. In individual cases, it is possible for companies to deviate from this in a substantiated manner.

You will also see which career opportunities there are within the Industrial Cleaning sector.

Pressure Vacuum Truck Machinist IC
Core tasks
1. Preparing cleaning activities 2. Performing cleaning activities 3. Functional leadership 4. Driving the vehicle
Legal professional requirements
Rijbewijs C Vakbekwaamheid (Code 95)
Industrial requirements (mandatory)
Basisveiligheid VCA SIR Adembescherming AB-B SIR Druk Vacuüm Machinist ADR/VLG
Industrial requirements (recommended)
VOL VCA Cursus Begeleiden (Orsima) BHV Gasmeten Verplaatsen van lasten (ABvL) Werken als buitenwacht (mangatwacht) Rijbewijs E bij C
Language requirements Dutch or English as a native language
'Listening' level 3 'Conversations' level 3 'Reading' level 3 'Writing' level 2
Language requirements Dutch or English as a second language
'Listening' level 2 'Conversations' level 2 'Reading' level 2 'Writing' level 2
Growth opportunities
Allround Machinist IC Assistent Supervisor IC (Assistent) Site Manager

Description of the language levels:

1. Is able to understand and use simple messages.
2. Is able to understand frequently used expressions. Can communicate on everyday issues.

3. *Is able to understand key points from clear standard texts on familiar topics. Can express himself orally in most common situations. Can describe experiences, events and opinions.*
4. *Is able to understand the main idea of a complex text. Can express himself fluently and carry on a conversation without difficulty. Can write texts, can give an opinion and can argue.*
5. *Is able to understand long and difficult texts and can express himself fluently and spontaneously. Can use the language flexibly and effectively and can produce detailed texts.*

Get started with practice

This workbook contains practical assignments with which you can practice your skills. You carry out these assignments at your workplace.

During the training you will have the support of your practical supervisor. He will help you with taking steps and if you have any questions.

You can expect the practical supervisor to:

- Support you at all times
- Help you with making a study plan
- Answer your questions and consult with you
- Provide instruction on how to carry out practical assignments
- Assess assignments and indicate points for improvement
- Indicate when you are ready to take the final test

Each assignment you have completed must be signed off by your practical supervisor. You start with the introductory assignment.

Introductory assignment

What does the profession of Pressure Vacuum Truck Machinist IC look like?

In this chapter the profession of the Pressure Vacuum Truck Machinist IC is described.

1. Read the text about the profession carefully.

What does the Pressure Vacuum Truck Machinist IC do?

The Pressure Vacuum Truck Machinist is a professional who works at companies in Industrial Cleaning sector. The Machinist drives the vehicle. He operates the cleaning equipment (pressure vacuum truck, vacupress or suction dredger) and can also unload hazardous substances. The Machinist moves the unit and drives it to the location where the work has to be performed.

The Machinist works at the location of the client with a team that can change daily. He handles the equipment carefully and instructs the team about the work to be performed. He directs the employees involved and monitors their safety. He can also act as a supervisor for young/new colleagues.

The Machinist is responsible for driving the vacuum truck.

He drives the Truck from the home location to the work location and back again.

When driving, the Driver is expected to participate in traffic in a professional manner and that his vehicle is suitable for the transport of the load.

The Machinist prepares the installation on his vehicle and ensures that tools are correctly connected.

He cleans by vacuuming products and/or storing contaminants. The cleaning can take place internally, for example in tanks. Cleaning can also be done externally.

The Machinist is environmentally conscious and economical with materials and equipment. He monitors safety and communicates easily with colleagues and other stakeholders. The Machinist knows the procedures and safety regulations and applies them properly.

He is constantly vigilant and immediately calls for help if there are problems or if he sees problems coming that he cannot solve himself.

As a Pressure Vacuum Truck Machinist you can be deployed flexibly at multiple workplaces and you have the ability to adapt. You can deal with changes in the cleaning process.

What do you need to do the job well?

To do your job well, it is important that you:

- Obtained driving license 'Rijbewijs C'
- Obtained 'Code 95'
- Has a 'chauffeurskaart' (due to digital tachograph)
- Can understand and speak Dutch and/or English.
- Obtained the 'Basisveiligheid VCA' certificate.
- Obtained the SIR 'Adembescherming AB-B' certificate.
- Obtained the SIR 'Druk Vacuum Machinist' (DVM) certificate.
- ADR / VLG certificate (if you work with hazardous substances).
- Are at least 18 years old.
- Can be responsibility for the work as a work permit holder.
- Has at least 120 hours of experience (e.g. to be shown via the 'chauffeurskaart')

The industry also advises you to complete the following training:

- Certificate 'VOL VCA'
- Orsima's Course: 'Begeleiden'
- 'BHV' certificate
- Certificate 'Gasmeteren'
- Certificate 'Verplaatsen van Lasten (ABvL)'
- 'Werken als buitenwacht' (manhole guard)
- Driving license 'Rijbewijs E bij C'

In the profession of Pressure Vacuum Truck Machinist IC you perform cleaning work. You are dealing with:

- Preparing for the cleaning activities
- Performing the cleaning activities
- Functional leadership
- Driving the vehicle

When performing the work:

- Always check whether all employees can work safely.
- Always take into account the guidelines, procedures and safety regulations.
- Are you continuously vigilant for unexpected disruptions and call for help if you cannot solve it yourself.

Collect contact information*

[2. Fill in the contact details.](#)

Personal information

First name:

Last name:

Date of birth:

Company data

Company name:

Name of practical supervisor:

Phone number / Email address:

** This information is only used to support the execution of the module and to be able to issue a certificate as proof of passing this module.*

[Create a step-by-step plan](#)

To become an experienced Pressure Vacuum Truck Machinist IC you have to perform the work a number of times. This way you gain more and more experience in the work and you know increasingly well what to do at what time.

Before you start work you will receive an instruction from the practical supervisor. When you have performed the work, the practical supervisor will give you feedback. This way you learn step by step to perform the work independently and well.

The step-by-step plan helps to consciously take learning steps. The mentor or company draws up the step-by-step plan. The practical supervisor will help you with the implementation of the step-by-step plan. You perform each practical assignment at least three times. The practical supervisor will indicate when it is sufficient.

There are a total of 16 different assignments.

Assignment 1. Line-up pressure-vacuum unit.

Assignment 2. Suction liquids from tank.

Assignment 3. Suction liquids from a well.

Assignment 4. Suction with N₂ (nitrogen) recirculation.

Assignment 5. Prepare scrubber for operation.

Assignment 6. Discontinuous suction.

Assignment 7. Unload with N₂ (nitrogen).

Assignment 8. Unload with gravity or an external pump.

Assignment 9. Discharge with air.

- Assignment 10. Unloading toxic and/or corrosive substances.
- Assignment 11. Unloading in big bags.
- Assignment 12. Unloading of dry substances.
- Assignment 13. Sampling.
- Assignment 14. Small maintenance vehicle.
- Assignment 15. Execute ride: Discharge to landfill
- Assignment 16. Execute ride: Transport to final processor

3. Complete the step-by-step plan part 1 together with the practical supervisor.

- Determine a week in which you will start.
- Think about how many assignments you will do in one week.
- Agree with the practical supervisor when he assesses and gives feedback.

Step-by-step plan part 1 – Name:				
Schedule Date/week	Assignment	Done yes/no	Assessed yes/no	Sufficient yes/no
	First time 1. Line-up pressure-vacuum unit.			
	First time 2. Suction liquids from tank.			
	First time 3. Suction liquids from a well.			
	First time 4. Suction with N2 (nitrogen) recirculation.			
	First time 5. Prepare scrubber for operation.			
	First time 6. Discontinuous suction.			
	First time 7. Unload with N2 (nitrogen).			
	First time 8. Unload with gravity or an external pump.			
	First time 9. Discharge with air.			
	First time 10. Unloading of toxic and/or corrosive substances			
	First time 11. Unloading in big bags.			

	First time 12. Unloading of dry substances.			
	First time 13. Sampling.			
	First time 14. Minor maintenance vehicle.			
	First time 15. Execute ride: Discharge to landfill			
	First time 16. Execute ride: Send to final processor			
	Feedback/assessment moment			
Schedule Date/week	Assignment	Done yes/no	Assessed yes/no	Sufficient yes/no
	Second time 1. Line-up pressure-vacuum unit.			
	Second time 2. Suction liquids from tank.			
	Second time 3. Suction liquids from a well.			
	Second time 4. Suction with N2 (nitrogen) recirculation.			
	Second time 5. Prepare scrubber for operation.			
	Second time 6. Discontinuous suction.			
	Second time 7. Unload with N2 (nitrogen).			
	Second time 8. Unload with gravity or an external pump.			
	Second time 9. Discharge with air.			
	Second time 10. Unloading of toxic and/or corrosive substances			
	Second time 11. Unloading in big bags.			
	Second time 12. Unloading of dry substances.			

	Second time 13. Sampling.			
	Second time 14. Minor maintenance vehicle.			
	Second time 15. Execute ride: Discharge to landfill			
	Second time 16. Execution trip: Transport to final processor			
	Feedback/assessment moment			
Schedule Date/week	Assignment	Done yes/no	Assessed yes/no	Sufficient yes/no
	Third time 1. Line-up pressure-vacuum unit.			
	Third time 2. Suction liquids from tank.			
	Third time 3. Suction liquids from a well.			
	Third time 4. Suction with N2 (nitrogen) recirculation.			
	Third time 5. Prepare scrubber for operation.			
	Third time 6. Discontinuous suction.			
	Third time 7. Unload with N2 (nitrogen).			
	Third time 8. Unload with gravity or an external pump.			
	Third time 9. Discharge with air.			
	Third time 10. Unloading of toxic and/or corrosive substances			
	Third time 11. Unloading in big bags.			
	Third time 12. Unloading of dry substances.			
	Third time 13. Sampling.			

	Third time 14. Minor maintenance vehicle.			
	Third time 15. Execute ride: Discharge to landfill			
	Third time 16. Execution trip: Transport to final processor			
	Feedback/assessment moment			

Also make a step-by-step plan for the mandatory certificates.

- How long does the training take?
- When can you start the training?
- How much time do you need to prepare for the exam?
- When can you take the exam?

4. Complete the step-by-step plan part 2.

Step-by-step plan part 2 – Name:			
Schedule Date/week	Basisveiligheid VCA	Done yes/no	Sufficient yes/no
	Training started		
	Education completed		
	Exam done		
Schedule Date/week	SIR Adembescherming AB-B	Done yes/no	Sufficient yes/no
	Training started		
	Education completed		
	Exam done		
Schedule Date/week	SIR Druk Vacuüm Machinist	Done yes/no	Sufficient yes/no
	Training started		
	Education completed		
	Exam done		
Schedule Date/week	ADR / VLG	Done yes/no	Enough yes / no
	Training started		
	Education completed		
	Exam done		

And of course you can also include one or more recommended certificates in the step-by-step plan.

- How long does the training take?
- When can you start the training?

- How much time do you need to prepare for the exam?
- When can you take the exam?

5. Complete the step-by-step plan part 3.

Step-by-step plan part 3 – Name:			
Schedule Date/week	VOL-VCA	Done yes/no	Sufficient yes/no
	Training started		
	Education completed		
	Exam done		
Schedule Date/week	Begeleiden (Orsima)	Done yes/no	Sufficient yes/no
	Training started		
	Education completed		
	Exam done		
Schedule Date/week	BHV	Done yes/no	Sufficient yes/no
	Training started		
	Education completed		
	Exam done		
Schedule Date/week	Gasmeten	Done yes/no	Sufficient yes/no
	Training started		
	Education completed		
	Exam done		
Schedule Date/week	Verplaatsen van lasten (ABvL)	Done yes/no	Sufficient yes/no
	Training started		
	Education completed		
	Exam done		
Schedule Date/week	Werken als buitenwacht (mangatwacht)	Done yes/no	Sufficient yes/no
	Training started		
	Education completed		
	Exam done		
Schedule Date/week	Rijbewijs E bij C	Done yes/no	Sufficient yes/no
	Training started		
	Education completed		
	Exam done		

Assignment 1. Line-up pressure-vacuum unit

Description

You prepare the Pressure Vacuum Truck for operation. You pay attention to the regulations and instructions that apply. You choose the right hoses and fittings to suit the job. You can explain why you made these choices. You base your choices on the product data sheets or SDS Sheets (Safety Data Sheets) or a Work Instruction card (for hazardous substances).

Preparation

You think about which hoses and fittings you need for the work and you choose the right materials.

1. You choose the right hoses and fittings to prepare the Pressure Vacuum Truck for use.

Check:

- √ Materials chosen
- √ Personal protective equipment

2. You check whether the location where you are going to work is safe.

Check:

- √ Complete pressure vacuum checklist
- √ Own safety
- √ Other people's safety
- √ Hazardous goods safety

Performance

You connect the tools.

1. You connect the fittings and hoses.

Check:

- √ Earthing applied
- √ Hoses connected
- √ Links fitted.

2. You follow the instructions and regulations

Check:

- √ You work meticulously
- √ You work at a good pace

Completion

You check whether the pressure vacuum unit is ready for use.

1. You check the unit.

Check:

- √ Couplings secured
- √ Check if earthing installation is functioning
- √ Correct materials chosen

- √ Hoses properly connected
- √ Couplings correctly fitted

2. You ask your manager to check the work.

Check:

- √ Justify your choices
- √ Check done
- √ Unit ready for use.

Assignment 2. Suction liquids from tank

Description

You are going to suck liquid out of a tank. You make sure that the tank is sufficiently aerated. This is a responsibility of the client. The work permit or the TRA tells you how to do this. The aeration prevents you from damaging the tank. Be careful to apply the right suction power. You will check that there is sufficient aeration.

Preparation

You prepare the suction work. You get the product information from the product data sheets or SDS Sheets or the Work Instruction Card for hazardous substances.

1. You check whether the equipment and materials are ready for use.

Check:

- √ Working method aligned with product data sheets or SDS Sheets
- √ PPE aligned to product data sheets or SDS Sheets
- √ Tools and Materials
- √ Personal protective equipment

2. You check whether the location where you are going to work is safe.

Check:

- √ You have completed the pressure vacuum checklist
- √ Own safety
- √ Other people's safety
- √ Safety with hazardous substances (when working with hazardous substances)

3. You place the equipment.

Check:

- √ As little inconvenience as possible
- √ Consideration of wind direction
- √ No danger to environment

Performance

You carry out the cleaning work.

1. You suck the liquid out of the tank.

Check:

- √ Earthing applied and checked
- √ Right suction power is set
- √ Tank has been emptied
- √ Tank is undamaged

2. You follow the instructions and regulations

Check:

- √ You work meticulously
- √ You work at a good pace

Completion

You clean up the workplace and dispose of the waste safely.

1. You clean up the dirt.

Check:

- √ Sort residual waste by type.
- √ Dispose of residual waste (solid and liquid) in an environmentally conscious and safe manner.

2. You clean the materials and tools

Check:

- √ Empty suction hoses and then disconnect
- √ Disconnecting earth
- √ Cleaning materials and tools
- √ Cleaning PPE
- √ Storing materials and tools

Assignment 3. Suction liquids from well

Description

You are going to suck liquid from a well. You know there are certain physical limitations. The maximum vacuum is 0.9 bar underpressure. So when a water column of 9 meters from the liquid level is formed in a suction hose, the maximum height difference is bridged. The height of the suction pipe of the vacuum truck must also be considered. The only option to suck up liquids from larger depths is to carry false air or place air ejectors in the suction hose.

You take this into account and choose the right method to carry out the work. You pay attention to the safety of yourself and others.

Preparation

You prepare the suction work. You get the product information from the product data sheets or SDS Sheets or the Work Instruction Card for hazardous substances.

1. You check whether the equipment and materials are ready for use.

Check:

- √ Working method aligned with product data sheets or SDS Sheets
- √ PPE aligned to Product Data Sheets or SDS Sheets
- √ Tools and Materials
- √ Personal protective equipment

2. You check whether the location where you are going to work is safe.

Check:

- √ You have completed the pressure vacuum checklist
- √ Own safety
- √ Other people's safety
- √ Hazardous material safety (if applicable)

3. You place the equipment.

- √ As little inconvenience as possible
- √ Consideration of wind direction
- √ No danger to environment

Performance

You carry out the cleaning work.

1. You suck the liquid out of the well.

Check:

- √ Earthing applied and checked
- √ Vacuum hose cannot kink and does not run over sharp edges
- √ Sufficient distance between the edge of the pit and the vacuum hose coupling
- √ Correct suction power is set
- √ Well has been drained

2. You follow the instructions and regulations

Check:

- √ You work meticulously
- √ You work at a good pace

Completion

You clean up the workplace and dispose of the waste safely.

1. You clean up the dirt.

Check:

- √ Sort residual waste by type.
- √ Residual waste (solid and liquid) must be disposed of in an environmentally conscious and safe manner.

2. You clean the materials and tools

Check:

- √ Empty the suction hoses and then disconnect them
- √ Disconnect earthing
- √ Cleaning materials and tools
- √ Cleaning PPE
- √ Storing materials and tools

Assignment 4. Suction with N₂ (nitrogen) recirculation

Description

You are going to perform suction work in a room where nitrogen is present. Nitrogen is a hazardous substance. To prevent the vacuum truck from sucking up all the nitrogen from the room, you let the pressure vacuum truck recirculate. You set the pressure vacuum truck and perform the work safely and correctly. You carry out the work under the responsibility of the supervisor or assistant supervisor. You will be speaking with them during the execution.

Preparation

You prepare the suction with N₂ recirculation. You get the product information from the product data sheets or SDS Sheets or the Work Instruction Card for hazardous substances.

1. You check whether the equipment and materials are ready for use.

Check:

- √ Working method aligned with product data sheets or SDS Sheets
- √ PPE aligned to Product Data Sheets or SDS Sheets
- √ Tools and Materials
- √ Personal protective equipment

2. You check whether the location where you are going to work is safe.

Check:

- √ Own safety
- √ Other people's safety
- √ Hazardous goods safety

3. You place the equipment.

- √ As little inconvenience as possible
- √ Consideration of wind direction
- √ No danger to environment

Performance

You carry out the cleaning work.

1. You clean and recirculate the nitrogen.

Check:

- √ Earthing is applied and checked

- √ Exhaust from the vacuum pump is connected to the surrounding area
- √ Recirculation hose is connected between the vacuum unit and the space to be emptied
- √ Recirculation is set
- √ Space has been drained
- √ Nitrogen is left behind in the space

2. You follow the instructions and regulations

Check:

- √ You control the temperature of the recirculated air to prevent the temperature in the confined space from rising.
- √ You have the oxygen percentage in the confined space constantly checked
- √ You work meticulously
- √ You work at a good pace

Completion

You clean up the workplace and dispose of the waste safely.

1. You clean up the dirt.

Check:

- √ Sort residual waste by type.
- √ Dispose of residual waste (solid and liquid) in an environmentally conscious and safe manner.

2. You clean the materials and tools

Check:

- √ Empty suction hoses and then disconnect
- √ Disconnect earthing
- √ Cleaning materials and tools
- √ Cleaning PPE
- √ Storing materials and tools

Assignment 5. Prepare the scrubber for operation

Description

To prevent the emission of harmful substances, connect the exhaust of the pressure vacuum truck to a scrubber installation. The gases are cleaned and can then be disposed of safely and in an environmentally responsible manner.

You prepare the pressure vacuum truck for use. You choose the right scrubber liquid and determine the correct mixing ratio, which is specified by the fluid supplier. You pay attention to the regulations and instructions that apply to them. Can you explain what choices you have made based on the information from the product data sheets or SDS sheets or the work instruction card for hazardous substances.

Preparation

You consider which hoses and couplings you need for the work, and you choose these materials. You get the product information from the product data sheets or SDS Sheets or the Work Instruction Card for hazardous substances.

1. You choose the right hoses and couplings to connect the pressure vacuum truck to the scrubber installation. You choose the right scrubber liquid and pay attention to the correct mixing ratio.

Check:

- √ Working method aligned with product data sheets or SDS Sheets
- √ PPE aligned to Product Data Sheets or SDS Sheets
- √ Materials selected and mixing ratio checked
- √ Personal protective equipment

2. You check whether the location where you are going to work is safe.

Check:

- √ You control the air displacement of the vacuum pump and the maximum flow of the scrubber
- √ Own safety
- √ Other people's safety
- √ Hazardous goods safety (if applicable)

3. You place the equipment.

- √ As little inconvenience as possible
- √ Considering of wind direction
- √ No danger to environment

Performance

You connect the tools.

1. You connect the couplings and hoses to the scrubber installation.

Check:

- √ Earthing is applied and checked
- √ Fluid level and scrubber operation checked
- √ Hoses connected
- √ Links fitted.
- √ Scrubber installation is ready for use.

2. You follow the instructions and regulations

Check:

- √ You work meticulously
- √ You work at a good pace

Completion

You check whether the pressure vacuum truck is safely and properly connected to the scrubber installation.

1. You control the unit.

Check:

- √ Right materials chosen
- √ Hoses well connected
- √ Couplings fitted correctly

2. You ask your manager to check the work.

Check:

- √ Explanation of choice made
- √ Check done
- √ Unit ready for use.

Assignment 6. Discontinuous suction

Description

You will be working with highly flammable products and/or foaming products (note! These are almost always hazardous substances). During the suction work you want to prevent unnecessary substances from being released into the environment. You limit the emission of gases and vapors and you minimize the risk of static discharge. You do this by sucking discontinuously. You prepare the pressure vacuum truck and apply this method correctly. You carry out the work safely and correctly.

Preparation

You prepare the discontinuous suction. You get the product information from the product data sheets or SDS Sheets or the Work Instruction Card for hazardous substances.

1. You check whether the equipment and materials are ready for use.

Check:

- √ Working method aligned with product data sheets or SDS Sheets
- √ PPE aligned to product data sheets or SDS Sheets
- √ Tools and Materials
- √ Personal protective equipment

2. You check whether the location where you are going to work is safe.

Check:

- √ You have completed the pressure vacuum checklist
- √ Own safety
- √ Other people's safety
- √ Hazardous goods safety

3. You place the equipment.

- √ As little inconvenience as possible
- √ Considering of wind direction
- √ No danger to environment

Performance

You carry out the cleaning work.

1. You suck out the substances using the discontinuous suction method.

Check:

- √ Earthing has been applied and checked
- √ Small diameter suction hose is connected to the vacuum truck discharge connection/suction to prevent build-up of static electricity from the suction speed and drop height.
- √ Start the vacuum pump and apply vacuum to the vacuum tank.
- √ Stop vacuum pump without aerating the tank.
- √ Open the suction valve and suck up the liquids until the atmosphere inside and outside the vacuum truck is equal.
- √ Repeat operations until the suction work is completed.
- √ Space has been sucked empty

2. You follow the instructions and regulations

Check:

- √ You work meticulously
- √ You work at a good pace

Completion

You clean up the workplace and dispose of the waste safely.

1. You clean up the dirt.

Check:

- √ Sort residual waste by type.
- √ Residual waste (solid and liquid) must be disposed of in an environmentally conscious and safe manner.

2. You clean the materials and tools

Check:

- √ Cleaning materials and tools
- √ Cleaning PPE
- √ Storing materials and tools

3. You clean the unit / equipment

- √ Vacuum the vacuum truck
- √ Subsequently empty the discharge hoses
- √ Disconnect and rinse hoses
- √ Disconnect earthing

Assignment 7. Unload with N2 (nitrogen)

Description

You usually dissolve highly flammable products by gravity. If you can't use gravity, you discharge the tank with nitrogen. The emptying is done with a minimum overpressure and considering the locking of the couplings. You only work with approved discharge hoses with double-acting couplings. You use the pressure vacuum truck correctly and you take the safety procedures into account.

Preparation

You prepare the unloading with N2. You get the product information from the product data sheets or SDS Sheets or the Work Instruction Card for hazardous substances.

1. You check whether the equipment and materials are ready for use.

Check:

- √ Working method aligned with product data sheets or SDS Sheets
- √ PPE aligned to Product Data Sheets or SDS Sheets
- √ Tools and Materials
- √ Personal protective equipment

2. You check whether the location where you are going to work is safe.

Check:

- √ Wear correct PPE before starting work, as described in the SDS Sheets
- √ Filling in pressure vacuum checklist before starting work
- √ Own safety
- √ Other people's safety
- √ Hazardous goods safety

3. You place the equipment.

- √ As little inconvenience as possible
- √ Considering of wind direction
- √ No danger to environment

Performance

You dissolve the highly flammable products.

1. Unloading products

Check:

- √ Nitrogen connection to the vacuum truck and to the nitrogen hose checked (these must connect well with the correct M/F connection)
- √ Earthing has been applied and checked
- √ Liquid level in the unloading tank has been checked. (maximum discharge height at 3 bar working pressure is 30 meters).
- √ Emptying only with approved discharge hoses with double acting couplings
- √ Client opens nitrogen connection to the installation.
- √ Emptying the tank with nitrogen

- √ When the vacuum truck is almost empty, adjust the nitrogen pressure to the discharge conditions as much as possible to prevent blowing off a large volume through the discharge hoses or to the atmosphere.

2. You follow the instructions and regulations

Check:

- √ You work meticulously
- √ You work at a good pace

Completion

You clean up the workplace and dispose of the waste safely.

1. You clean up the dirt.

Check:

- √ Sort residual waste by type.
- √ Dispose of residual waste in an environmentally conscious and safe manner.

2. You clean the materials and tools

Check:

- √ Cleaning materials and tools
- √ Cleaning PPE
- √ Storing materials and tools

3. You clean the unit / equipment

- √ Vacuum the vacuum truck
- √ Subsequently empty the discharge hoses
- √ Disconnect and rinse hoses
- √ Disconnect earthing

Assignment 8. Unload with gravity or an external pump

Description

You discharge highly flammable products by gravity or with an external pump, if the set-up allows. You unload the product with the Pressure Vacuum Truck without spilling. You pay extra attention to emptying and possibly flushing the hoses.

Preparation

You prepare the unloading with gravity. You get the product information from the product data sheets or SDS Sheets or the Work Instruction Card for hazardous substances.

1. You check whether the equipment and materials are ready for use.

Check:

- √ Working method aligned with product data sheets or SDS Sheets
- √ PPE aligned to Product Data Sheets or SDS Sheets
- √ Tools and Materials

- √ Personal protective equipment

2. You check whether the location where you are going to work is safe.

Check:

- √ Wear correct PPE before starting work, as described in the SDS Sheets
- √ Complete the Pressure vacuum checklist before starting work.
- √ Own safety
- √ Other people's safety
- √ Hazardous goods safety (if applicable)

3. You place the equipment.

- √ As little inconvenience as possible
- √ Considering of wind direction
- √ No danger to environment

Performance

You dissolve the highly flammable products.

1. Unload products

Check:

- √ Earthing applied and checked
- √ Empty the tank using gravity or an external pump
- √ Drain and rinse the hoses

2. You follow the instructions and regulations

Check:

- √ You work meticulously
- √ You work at a good pace

Completion

You clean up the workplace and dispose of the waste safely.

1. You clean up the dirt.

Check:

- √ Sort residual waste by type.
- √ Offer residual waste for disposal in an environmentally conscious and safe manner.

2. You clean the materials and tools

Check:

- √ Cleaning materials and tools
- √ Cleaning PPE
- √ Storing materials and tools

3. You clean the unit / equipment

- √ Vacuum the vacuum truck
- √ Subsequently empty the discharge hoses

- √ Disconnect and rinse hoses
- √ Disconnect earthing

Assignment 9. Discharge with air

Description

You empty the Pressure Vacuum Truck by discharging it with air. You use your own compressor. You determine the thrust height by the specific gravity of the product. You perform the work in a safe manner and prevent damage to the receiving tank.

Preparation

You prepare the discharging with air. You get the product information from the product data sheets or SDS Sheets or the Work Instruction Card for hazardous substances.

1. You check whether the equipment and materials are ready for use.

Check:

- √ Working method aligned with product data sheets or SDS Sheets
- √ PPE aligned to Product Data Sheets or SDS Sheets
- √ Tools and Materials
- √ Personal protective equipment

2. You check whether the location where you are going to work is safe.

Check:

- √ Wear correct PPE before starting work, as described in the SDS Sheets
- √ Complete the pressure vacuum checklist before starting work.
- √ Own safety
- √ Other people's safety
- √ Hazardous goods safety (if applicable)

3. You place the equipment.

- √ As little inconvenience as possible
- √ Considering of wind direction
- √ No danger to environment

Performance

You discharge the tank with air.

1. Unloading products

Check:

- √ Earthing has been applied and checked
- √ Use approved discharge hoses with double acting couplings
- √ Secure hoses against spinning when the vacuum tank is empty
- √ Discharge the tank with air
- √ Adjusting the thrust height to the specific gravity of the product

2. You follow the instructions and regulations

Check:

- √ You work meticulously
- √ You work at a good pace

Completion

You clean up the workplace and dispose of the waste safely.

1. You clean up the dirt.

Check:

- √ Sort residual waste by type.
- √ Dispose of residual waste in an environmentally conscious and safe manner.

2. You clean the materials and tools

Check:

- √ Cleaning materials and tools
- √ Cleaning PPE
- √ Storing materials and tools

3. You clean the unit / equipment

- √ Vacuum the vacuum truck
- √ Subsequently empty the discharge hoses
- √ Disconnect and rinse hoses
- √ Disconnect earthing

Assignment 10. Unloading toxic and/or corrosive substances

Description

You unload slightly toxic and/or corrosive substances with an external or your own compressor. Emptying is done with a minimal overpressure and you pay attention to the securing of the couplings. You prevent toxic gases and vapors from being released into the environment during unloading. You only work with approved discharge hoses with double-acting couplings. You use the pressure vacuum truck correctly and consider the safety procedures.

Preparation

You prepare to unload of substances in class 6 and 8. You get the product information from the product data sheets or SDS Sheets or the Work Instruction Card for hazardous substances.

1. You check whether the equipment and materials are ready for use.

Check:

- √ Working method aligned with product data sheets or SDS Sheets
- √ PPE aligned to Product Data Sheets or SDS Sheets
- √ Check suction and discharge hoses for suitability with corrosive substances.

- √ Tools and Materials
- √ Personal protective equipment

2. You check whether the location where you are going to work is safe.

Check:

- √ Wear correct PPE before starting work, as described in the SDS Sheets
- √ Filling in pressure vacuum checklist before starting work
- √ Own safety
- √ Other people's safety
- √ Hazardous goods safety

3. You place the equipment.

- √ As little inconvenience as possible
- √ Considering the wind direction
- √ No danger to environment

Performance

You dissolve the toxic and/or corrosive substances.

1. Unloading products

Check:

- √ Earthing has been applied and checked.
- √ Liquid level in the unloading tank has been checked. (with your own compressor you consider: maximum discharge height at 2 bar working pressure is 20 meters).
- √ Emptying presses only with approved discharge hoses with double acting couplings.
- √ When the vacuum truck is almost empty, adjust the pressure as much as possible to the unloading situation to prevent blowing off a large volume through the discharge hoses or to the outside air.
- √ Prevent gases or vapors from escaping to the environment.

2. You follow the instructions and regulations

Check:

- √ You work meticulously
- √ You work at a good pace

Completion

You clean up the workplace and dispose of the waste safely.

1. You clean up the dirt.

Check:

- √ Sort residual waste by type.
- √ Offer residual waste for disposal in an environmentally conscious and safe manner.

2. You clean the materials and tools

Check:

- √ Cleaning materials and tools

- √ Rinse hoses well to remove residues
- √ Cleaning PPE
- √ Storing materials and tools

3. You clean the unit / equipment

- √ Vacuum the vacuum truck
- √ Subsequently empty the discharge hoses
- √ Disconnect and rinse hoses
- √ Disconnect earthing

Assignment 11. Unloading in big bags

Description

You unload the substances in big bags with a vacupress or suction excavator or from silos, so that the products can be transported to another location. You use a screw pump or you dump the substances with gravity.

You choose the best method to release the substances and you make sure that the substance does not spread unnecessarily.

Preparation

You're preparing to unload in big bags. You get the product information from the work permit.

1. You choose the method and check whether the equipment and materials are ready for use.

Check:

- √ Work method tailored to work permit
- √ PPE tailored to work permit
- √ Choose method
- √ Tools and Materials
- √ Personal protective equipment

2. You check whether the location where you are going to work is safe.

Check:

- √ Complete the pressure vacuum checklist before starting work.
- √ Wear correct PPE before starting work
- √ Earthing connected
- √ Own safety
- √ Other people's safety
- √ Hazardous goods safety (if applicable)

3. You place the equipment.

- √ As little inconvenience as possible
- √ Considering of wind direction
- √ No danger to environment

Performance

You unload the substances.

1. Unloading substances into big bags

Check:

- √ You check the attachment of the big bags to the vacupress or suction excavator
- √ You prevent dust formation to the environment
- √ You avoid too high a filling weight of the big bags
- √ You ensure that the big bags remain upright and do not collapse
- √ Unloading with gravity
- √ Prevent unnecessary spread of the substance

2. You follow the instructions and regulations

Check:

- √ You work meticulously
- √ You work at a good pace

Completion

You clean up the workplace and dispose of the waste safely.

1. You clean up the dirt.

Check:

- √ Sort residual waste by type.
- √ Dispose of residual waste in an environmentally conscious and safe manner.

2. You clean the materials and tools

Check:

- √ Cleaning materials and tools
- √ Cleaning PPE
- √ Storing materials and tools

3. You clean the unit / equipment

- √ Vacuum the vacuum truck
- √ Subsequently empty the discharge hoses
- √ Disconnect and rinse hoses
- √ Disconnect earthing

Assignment 12. Unloading of dry substances

Description

You unload dry substances with the Pressure Vacuum Truck, vacupress or vacuum cleaner.

You choose the best method for unloading the substances and you make sure that the substance does not spread unnecessarily. You choose to blow or dump the dry substances.

You unload the substances at the location designated by the client, in a silo or at a location where you can dump.

Preparation

You prepare the discharge of dry substances. You get the product information from the work permit.

1. You choose the method and check whether the equipment and materials are ready for use.

Check:

- √ Work method tailored to work permit
- √ PPE tailored to work permit
- √ Tools and Materials
- √ Personal protective equipment

2. You check whether the location where you are going to work is safe.

Check:

- √ Complete the ressure vacuum checklist before starting work.
- √ Wear correct PPE before starting work
- √ Earthing connected.
- √ Own safety
- √ Other people's safety
- √ Hazardous goods safety

3. You place the equipment.

- √ As little inconvenience as possible
- √ Considering the wind direction
- √ No danger to environment

Performance

You unload the substances.

1. Unloading dry substances

Check:

- √ Silo unloading: unloading with external air or the own bulk compressor
- √ Silo unloading: handling proper hoses and couplings
- √ Loose dumping: avoid contaminating the environment
- √ Prevent unnecessary spread of the substance

2. You follow the instructions and regulations

Check:

- √ You work meticulously
- √ You work at a good pace

Completion

You clean up the workplace and dispose of the waste safely.

1. You clean up the dirt.

Check:

- √ Sort residual waste by type.
- √ Dispose of residual waste in an environmentally conscious and safe manner.

2. You clean the materials and tools

Check:

- √ Cleaning materials and tools
- √ Cleaning PPE
- √ Storing materials and tools

3. You clean the unit / equipment

- √ Vacuum the vacuum truck
- √ Subsequently empty the discharge hoses
- √ Disconnect and rinse hoses
- √ Disconnect earthing

Assignment 13. Sampling

Description

You prepare the Pressure Vacuum Truck to take a sample. The sample is taken by the party processing the substance (final processor).

You ensure that the sample can be taken safely.

When sampling through a manhole, make sure that the sampler always wears fall protection and is secured to an approved attachment point.

You check whether entry of the vacuum tank is permitted or not at the client's premises. If entry is not permitted, make sure that other devices can be used (for example, escalators or platforms).

Preparation

You prepare the Pressure Vacuum Truck so that a sample can be taken by the receiving party.

1. You choose a working method that is permitted by the client.

Check:

- √ Choose method
- √ Tools and Materials
- √ Personal protective equipment

2. You check whether the location where you are going to work is safe.

Check:

- √ Fall protection secured to approved attachment point (when sampling via manhole)
- √ Platforms or escalator present (in case entering the vacuum tank is not permitted)
- √ Own safety

- √ Other people's safety
- √ Hazardous goods safety (if applicable)

Performance

You have the final processor take a sample of the contents.

Check:

- √ Sampling performed
- √ Close the manhole cover after sampling

Completion

You clean up the materials and equipment.

1. You clean the materials and tools

Check:

- √ Cleaning materials and tools
- √ Cleaning PPE
- √ Storing materials and tools

Assignment 14. Minor maintenance vehicle

Description

You perform minor maintenance on the Pressure Vacuum Truck. Minor maintenance can include checking fluid levels, changing cooling water and cleaning the Pressure Vacuum Truck. Lubricating all grease nipples is also part of minor maintenance.

Preparation

You prepare the minor maintenance.

1. You assess which minor maintenance must be performed.

Check:

- √ Determine minor maintenance.
- √ Check equipment (also pay attention to the presence of valid certificates and inspection stickers)
- √ Tools and Materials
- √ Personal protective equipment

2. You check whether the location where you are going to work is safe.

Check:

- √ Check last product transported in pressure vacuum truck
- √ Check if the pressure vacuum truck has been cleaned
- √ Own safety
- √ Other people's safety
- √ Hazardous goods safety

Performance

You carry out minor maintenance.

1. Perform minor maintenance

Check:

- √ Check fluid levels
- √ Change cooling water
- √ Lubricate grease nipples
- √ Pressure Cleaning Vacuum Truck

2. You follow the instructions and regulations

Check:

- √ You work meticulously
- √ You work at a good pace

Completion

You clean up the workplace and dispose of the waste safely.

1. You clean up the dirt.

Check:

- √ Sort residual waste by type.
- √ Dispose of residual waste in an environmentally conscious and safe way.

2. You clean the materials and tools

Check:

- √ Cleaning materials and tools
- √ Cleaning PPE
- √ Storing materials and tools

Assignment 15. Execute ride: Discharge to landfill.

Description

You transport substances to a landfill with the pressure vacuum truck. You check the filling degree. A filling degree of at least 20% or more than 80% is required if there are no bulkheads. The maximum filling rate is 90%. You have the right vehicle documents. An ordner with the correct certificates and user manuals is available in the cap. You will go through the checks on access to the site and checks when leaving the location. After unloading make sure that you deliver the equipment clean to the home location.

Preparation

You prepare the ride

1. You check the documents.

Check:

- √ Vehicle documents

- √ Ordner with certificates and user manuals

2. You check the vehicle.

Check:

- √ Check filling degree
- √ Fuel level
- √ Operation unit is working

Performance

You drive the vehicle to the location.

1. Drive to delivery location

Check:

- √ Register freight at unloading location
- √ Drive up the weighbridge at walking pace and do not brake too hard

2. You follow the instructions and regulations

Check:

- √ You work meticulously
- √ You work at a good pace

3. You unload the load and carry out the checks before leaving the site

- √ Unloading cargo
- √ Signed empty and uncleaned

Completion

You drive the vehicle back to the home location

1. You clean the vehicle.

Check:

- √ Clean up the cab.
- √ Clean the exterior of the vehicle.
- √ Clean the tank if you performed a single ride

2. You stall the vehicle at the indicated location

Check:

- √ Car is refueled
- √ Existing material is secured.
- √ Car is ready for next use.

Assignment 16. Execute ride: Send to final processor.

Description

You transport hazardous or harmful waste to a final processor with the pressure vacuum truck. You check the filling degree. A filling degree of at least 20% or more than 80% is

required if there are no bulkheads. The maximum filling degree is 90%. You have the right vehicle documents. An ordner with the correct certificates and user manuals is available in the cap. You will go through the checks on access to the site. You open the manhole cover for sampling. You wait for permission to unload the waste at the indicated unloading point. After unloading, drive to the weighbridge and collect the return documents. You deliver the vehicle clean to the home location.

Preparation

You prepare the ride

1. You check the documents.

Check:

- √ Vehicle documents
- √ Ordner with certificates and user manuals

2. You check the vehicle.

Check:

- √ Check filling degree
- √ Fuel level
- √ Operation unit is working

Performance

You drive the vehicle to the location.

1. Drive to delivery location

Check:

- √ Register freight at unloading location
- √ Drive up the weighbridge at walking pace and do not brake too hard
- √ Open manhole cover for sampling

2. You follow the instructions and regulations

Check:

- √ You work meticulously
- √ You work at a good pace

3. You unload the waste and carry out the checks when driving off

- √ Permission to unload at unloading point
- √ Connect earthing.
- √ Connecting correct certified pressure hoses with double-acting couplings
- √ Discharge by gravity or external pump
- √ Drive onto weighbridge after unloading
- √ Collect return documents (note document empty/ uncleaned with name of substance and possibly ADR hazard class)
- √ If the vehicle has not been cleaned, keep the ADR label on the vehicle

Completion

You drive the vehicle back to the home location

1. You clean the vehicle.

Check:

- √ Clean up the cab.
- √ Clean the exterior of the vehicle.
- √ Clean the tank if you performed a single ride

2. You stall the vehicle at the indicated location

Check:

- √ Car is refueled
- √ Existing material is secured.
- √ Car is ready for next use.

Final assessment Pressure Vacuum Truck Machinist IC

The last step to complete the practical skills is taking the final test.

In this test you show that you are skilled in working as a Pressure Vacuum Truck Machinist IC in practice.

You will discuss with your practical supervisor when you can take the final test.

On the day of the final test you will receive an assignment from the practical supervisor that you will carry out.

The practical supervisor and sometimes another assessor look at how you do this. They will assess your work on the following points:

Core task 1: Preparing cleaning activities			
1.1 Collecting required material, tools and equipment	I	G	N
Ensures that materials and tools are collected. <ul style="list-style-type: none">• Collects and interprets relevant information• Determines the resources and people required to carry out the work• Knows the possible uses of materials and resources• Sets goals and priorities			
Checks that the necessary materials are ready for use. <ul style="list-style-type: none">• Indicates to others the risks of unsafe situations• Checks own PPE• Organizes the work of colleagues			
1.2 Preparing equipment and connecting aids	I	G	N
Prepare the equipment for use <ul style="list-style-type: none">• Works according to safety procedures regulations and work instructions• Connect tools correctly• Works accurately			
Performs a check. <ul style="list-style-type: none">• Determines when deviations or faults must be reported			

<ul style="list-style-type: none"> Asks for necessary information Sends a message briefly and clearly 			
Checks the security of the location <ul style="list-style-type: none"> Identifies and reports an unsafe situation Clearly indicates what can and cannot be done Holds colleagues accountable 			
Core task 2: Performing cleaning activities			
2.1 Performs cleaning work	I	G	N
Performs the cleaning work optimally <ul style="list-style-type: none"> Works meticulously and at a good pace Monitors the progress and results of the work process Works in accordance with regulations for safety, working conditions and the environment 			
Use the equipment correctly <ul style="list-style-type: none"> Works according to procedures and regulations Instructs colleagues to act being mindful of quality Makes responsible use of the equipment 			
2.2 Disposes (hazardous) substances	I	G	N
Disposes of the residues according to regulations. <ul style="list-style-type: none"> Disposes of waste/residual material in accordance with regulations Appeals to others for unsafe and/or non-environmentally conscious behaviour Makes suggestions in non-environmentally conscious actions 			
2.3 Completion of work	I	G	N
Cleans up the used materials and tools. <ul style="list-style-type: none"> Cleans used tools after use Checks whether tools are still functioning properly Checks if materials are not exhausted Safely stores materials and resources 			
2.4 Minor maintenance and remedying (minor) faults	I	G	N
Performs daily maintenance on equipment and tools <ul style="list-style-type: none"> Detects equipment-related deviations Consults the manual Performs daily maintenance of materials and resources according to company standards 			
Performs daily maintenance on equipment <ul style="list-style-type: none"> Checks the safety devices on the equipment Plans easy minor maintenance Ensures that maintenance work is carried out 			
Core task 3: Functional leadership			
3.1 Provides instruction and guidance	I	G	N
Instructs employees about the work to be performed. <ul style="list-style-type: none"> Defines assignments for employees Involves employees in the organization of the work process Provides employees with the necessary information 			

Supports employees at work. <ul style="list-style-type: none"> Clearly states what is expected of employees Takes into account the qualities of employees when distributing the work Creates working conditions with optimally functioning employees 			
3.2 Checks and resolves issues	I	G	N
Checks the work of employees. <ul style="list-style-type: none"> Monitors the progress of the work and sets priorities Holds employees accountable for their responsibility Takes differences between employees into account when dealing with them 			
Provides feedback on the outcome of checks. <ul style="list-style-type: none"> Signals tensions and acts accordingly. Discusses problems and looks for solutions 			
Core Task 4: Driving the vehicle			
4.1 Preparation before driving	I	G	N
Fit for driving <ul style="list-style-type: none"> Guards his health Is free of substances that affect driving ability 			
Performing checks correctly <ul style="list-style-type: none"> Performs the roadworthiness check before departure Checks whether the correct vehicle documents are present Checks whether the correct cargo documents are present 			
4.2 Drive to work location	I	G	N
Performs the ride safely and efficiently <ul style="list-style-type: none"> Respects traffic rules Anticipates weather and traffic conditions Adopts an energy-efficient driving style 			
Load has been unloaded in the right place and safely <ul style="list-style-type: none"> Arrives at the destination at the agreed time Unloads the load according to instructions at the unloading point Handles the administration 			
4.3 Acts in case of incidents	I	G	N
The incident has been handled successfully <ul style="list-style-type: none"> Engages the right emergency services Informs supervisor about the incident Takes measures to ensure safety and limit damage 			
I: Insufficient G: Good N: Not observed Total assessment final test: Pass / Fail*			