

QUESTIONNAIRE:

For a new built / retrofit ship loading or unloading facility

1 Customer

1.1	Company name	
1.2	Address	
1.3	Contact person (Position, name)	
1.4	Phone	
1.5	Fax	
1.6	E-Mail	
1.7	Address (if not 1.2)	
1.8	Date	

1. **Design of the facility** according (Norm)

2. **New construction** of a: loading unit unloading unit

Retrofit of a: loading unit unloading unit

3. **Tank ship - data:**

• Inland vessel max. tys DWT

• Ocean liner max. tys DWT

4. **Jetty-Data**

- Height of Jetty m
- Normal water level m
- Maximal water level m
- Minimal water level m

5. **Configuration of Ship loading arm**

Ship loading arm shall be equipped with:

- manual operated:
- hydraulic operated:
- Stipping system :
- Shut down flange connection:
- Safety decoupler:
- integrated vapour return:
- Quick closing valve:

Working area of the ship loading arm:

- horizontal m
- vertical m

Constant Position Monitoring system:

- yes
- no

Design pressure:

- PN 10 bar
- PN 16 bar
- PN 40 bar

Temperature:

- Design temperature °C
- max. temperature °C
- min. temperature °C

Nominal diameter:

- DN 150 / 6"
- DN 200 / 8"
- DN 250 / 10"
- DN 300 / 12"
- DN 350 / 14"
- DN 400 / 16"

Placement of the Electric-, Hydraulic- and Operation - Systems:

- Inside Ex-area:
- Outside Ex-area:

6. Product - Data:

Which products shall be loaded/unloaded?

- Gasoline A – 78
- A – 92
- A – 96
- Diesel
- Heating oil (light)
- Heating oil (heavy)
- Mazut
- JET A1
- Crude oil
- Liquid gas (LPG)
- Others

7. Loading rates / Flow-Rate:

- Inland vessel: m³/h to/h
- Ocean liner : m³/h to/h

8. Data acquisition system:

- Official calibrated
- Not Official calibrated
- Volume measurement V₂₀ m³
- Mass metering to
- Tank metering mm
- Full automatic
- Partly automatic
- Manual

9. **Vapour return:**

- Vapour pendulum with fixed roof tank
- Vapour return to VRU
- No Vapour return

10. **Vapour recovery system (VRU)**

- VRU - Yes
- VRU - No
- Gas storage tank – Yes
- Gas storage tank – No

If VRU:

- VRU – Membrane technology
- VRU – Hydrocarbon technology

11. **Product pumps:**

Product pumps are requested?

- Yes
- No

Design:

- Double mechanical seal
- Magnet-coupled pumps
- Necessary discharge head

12. Electrical Data:

- Existing power supply:* 690 / 660 V
- 400 / 380 V
- 230 / 220 V
- Planned control voltage:* 230 V
- 48 V
- 24 V

13. Engineering:

- Basic Engineering
- Detail engineering

Planning in detail:

Construction works:

- Jetty
- Pump stand
- Electrical- and control room
- Foundation for vapour storage
- VRU - foundation and collecting space

Steel construction:

- Pipe bridges
- Technological steel construction
- Roofing Pump house
- Roofing VRU

Piping:

- Jetty piping
- Measurement line system
- Pump housing
- VRU
- Vapour pendulum system
- Connection piping
- Slop - system

Electric:

- Electrical room
- Pump housing
- Jetty
- Field lighting
- VRU
- Vapour storage tank

Control / Data acquisition system:

- Control room
- Measurement line
- Tank measurement
- Pumps
- Jetty
- VRU
- Vapour storage tank

14. Erection of the Ship loading/unloading facility:

Turnkey erection Yes No

Erection by customer:

Supervision by contractor Yes No

Commissioning by contractor Yes No

Training by contractor Yes No

15. Short description of the planned facility:

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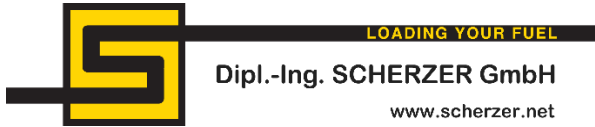
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Dipl.-Ing. Scherzer GmbH
Adlerstrasse 16 a
D – 45307 Essen
Phone : + 49 201 855 14 - 0
Fax : + 49 201 55 14 04
E-Mail : info@scherzer.net

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