



„TOMIKA-METAL” JSCo

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Declaration of conformity, No 085



We, The Manufacturer:	„Tomika-Metal” JSCo, 176 Brezovsko shosse str., Plovdiv, Bulgaria		
hereby certify that the pressure equipment:	Bright beer tank V=2,16 m3 with torispherical head and bottom , on three supporting legs and insulation.		
serial No:	11324805	Year of manufacture:	2014
main drauing No:	B-K 0133.00.00.00		
with following technical characteristics:			
Geometrical volume, (l)	2160	Capacity, (l)	1745
Maximum allowable pressure, PS, (MPa)	0,3	Test pressure, PT, (MPa)	0,45
Maximum allowable temperature, TS, (°C)	20	Minimum allowable temperature, (°C)	0

is in conformity with the essential protection requirements of the Directive 97/23/EC (PED)

Equipment category	III	Conformity assessment procedure	G
Notified body for the Certification of Pressure Equipment	Germanischer Lloyd AG, Brooktorkai 18, 20457 Hamburg, Germany		
Identification No.	0098	Certificate No.:	88482-14HH
Notified body monitoring Quality Management System	Germanischer Lloyd AG, Brooktorkai 18, 20457 Hamburg, Germany		
Identification No.	0098	Certificate No.:	QS-2259 HH
Harmonized standards	EN 13445-3; -4; -5		
Other standards applied	EN 1672-2		

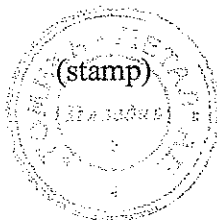
Manufacturer:

Milko Tsvetkov

General Manager

Date issued:

30.01.2014



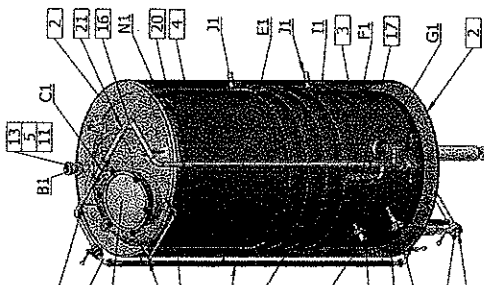
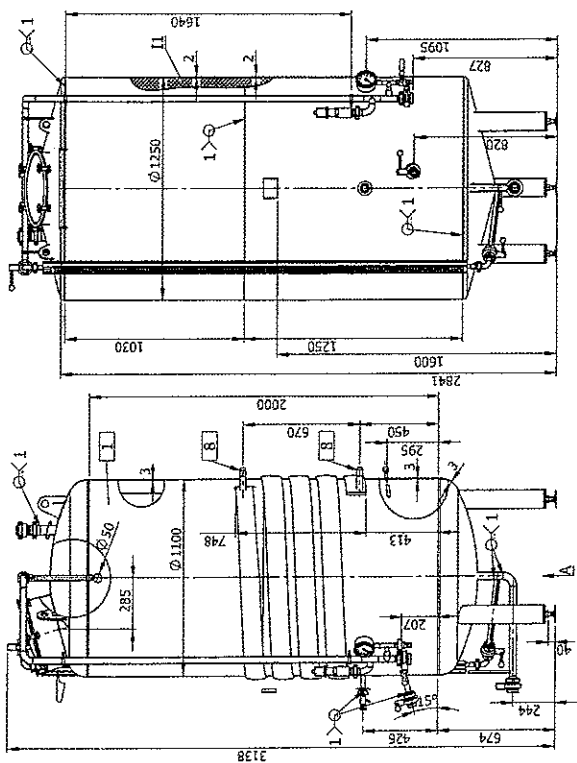
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„TOMIKA-METAL” JSCo, Plovdiv, Bulgaria
EN ISO-9001, Certificate No. QS-2259 HH



TGA-2M-07-91-00
Accredited by TGA

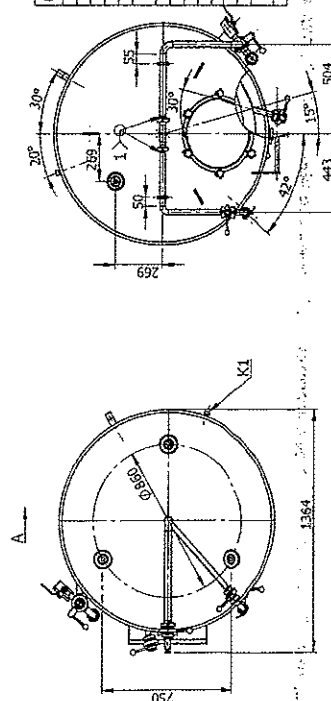


Remarks in the letter to be observed

GL **Examined**

Hamburg 2013-12-11 Ref.-No. 13-107083

Item	Description	Qty.
A1	UPPER MANHOLE DN400 LAVAGGI AT DTG	1
B1	VACUUM VALVE DN50 ON TANK TOP	1
C1	STATUS SPRAY BALL Ø50	1
D1	LEVEL INDICATOR CONNECTED WITH THE SPRAY BALL AND TANK BOTTOM	1
E1	SIGNAL FOR CHANGING UP TO BUTTERFLY PIPE DN32	1
F1	MAXIMUM FILLING CAPACITY 2300LIT (CO2) PIPELINE MISSELMANN FOR MANOMETER ON CIP (CO2) PIPELINE	1
G1	GRIP FOR LADDER	1
H1	COOLING CHANNEL JACKET ON TANK SHELL F-1 SIZE: Phlego-Uster	1
I1	TEMPERATURE SENSING JACKET ON TANK STEELJUP TO WELDING NIPPLE G1"	1
J1	INSULATION (TEMPERATURE SENSOR IT NOT INCLUDED)	2
K1	MANUAL SAMPLE VALVE MISSELMANN DN10	1
L1	TWO OUTLET DN40 UP TO BUTTERFLY PIPE DN40	1
M1	TEN FIRE INSULATION PERIM POLYURETHANNE AND STAINLESS STEEL (TISI 304)	1
N1	WELDED CHAIRS 8X 6X 10X CM POLYURETHANE	1



Item	Code	Drawing number	Description	Qty./ Body.	Material	Note
1.	2.	3.	4.	5.	6.	7.
2	B-K	B-K 0133.01.00.01	Алюм прѣа конѣ/ Landing cone	1	А513 304	
3			cladding cone	1	А513 304	
4			Manure/ Manure	121250		
5	32107	Бѣз гнѣхѣ/	cladding D1250 321212/121030*	1	А513 304	
6	32134	Бѣз гнѣхѣ/	Hand. padlock / Welding male DN50	1	А513 304	
7			Hand. padlock / Welding male DN20	1	А513 304	
8	2136	Бѣз гнѣхѣ/	KPAP. nippers / Simple coil 20	2	Kieselmann	
9			Hand. nipple 6"	1	А513 304	
10	B-K	B-K 0133.01.00.02	Тѣлѣтка цѣпѣрка / Valve plate	1	А513 304	
11			Manure/ Manure	121250		
12			Manure/ Manure	121250		
13			Рѣзѣтка / Roseette 280x822	1	А513 304	
14			Вакуум. станѣк/ Vacuum valve DN50	1	14301	
15	B-K	B-K 0133.01.00.03	Рѣзѣтка/ Резерв. / Legal indicator	1	14301	
16	B-K	B-K 0133.01.00.04	Сѣтѣ. тѣлѣнка/ Sintered plate	1	14301	
17			Вакуум. станѣк/ Vacuum valve DN50	1	14301	

[illegible]

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[illegible][illegible]

14. Hazard analysis

1. Design

1.1. Design for adequate strength

The pressure equipment is designed for loadings appropriate to its intended use and other reasonably foreseeable operating conditions. In particular, the following factors must be taken into account:

- *Internal/external pressure*
 - Internal pressure — 0,3 MPa
 - External pressure — No
- *Ambient and operational temperatures*
 - Ambient temperature — 25°C ÷ +40°C
 - Operational temperature — 5°C ÷ +20°C
- *Static pressure and mass of contents in operating and test conditions*
 - Operating conditions
 - Static pressure — 0,3 MPa
 - Mass of content — 1740 kg
 - Test conditions
 - Static pressure — 0,3MPa
 - Mass of content — 2160 kg
- *Traffic, wind, earthquake loading*

Risk type	Yes/No	Safety requirements
Traffic	No	The equipment is assembling up to concrete foundation
Wind	No	-
Earthquake	No	-

- *Reaction forces and moments resulting from the supports, attachments, piping, etc.*

Risk type	Yes/No	Safety requirements
Support reaction forces and moments	No	-
Attachments reaction forces and moments	No	-
Piping reaction forces and moments	No	-

- *Corrosion, wear, fatigue, etc.*

Risk type	Yes/No	Safety requirements
Corrosion	No	The material of the tank is completely resistant of the corrosion of the fluid
Wear	No	-
Fatigue	No	Loads on the elements of the tank is assumed to be static

- *Decomposition of unstable fluids* – There is no unstable fluids in the product beer, which could decompose at the operational pressure.

1.1.1. Design for adequate strength must be based on:

Risk type	Yes/No	Safety requirements
Calculation method	Yes	The EN 13445-3 standard, harmonized in DIRECTIVE 97/23/EC, was applied for design calculations
Experimental design method	No	-

1.6. Wear

Risk type	Yes/No	Safety requirements
Wear	No	Regular check of the wall thickness

1.7. Provisions for filling and discharge

a) On filling:

Risk type	Yes/No	Safety requirements
Overfilling	No	A safety valve preventing overfilling of the tank.
Overpressure	No	A safety valve preventing overpressure of the tank Regular calibration required in the Operation Manual.

b) On discharge:

Risk type	Yes/No	Safety requirements
The uncontrolled release of the pressurized fluid	Yes	The flow-rate of the safety vacuum valve is enough to prevent damage of the tank if uncontrolled release of content occurs.
<i>Icing inside.</i> If the tank is not filled up to nominal level icing inside is possible. When melting ice can spoil stored product or can damage tank mechanically.	Yes	If the tank is possible to be used when not filled up to nominal level with cooling working, the User should provide control of each single jacket.

1.8. Protection against exceeding the allowable limits of pressure equipment

Risk type	Yes/No	Safety requirements
Suitable protective devices, preventing exceeding of the allowable limits of pressure into the tank	Yes	A safety valve is installed preventing excessive pressure into the tank.
Suitable protective devices, preventing exceeding of the allowable limits of pressure into the pipeline	Yes	A safety valve installed by the User to prevent excessive pressure in the pipeline.

1.9. Safety accessories

Technical characteristics of the safety valve corresponding with tank design. The Company-manufacturer of these accessories certifies that they satisfy stated technical requirements.
The User must check its operation regularly.

1.10. External fire

Devices or any means preventing damages from external fire are not necessary to be installed on the tank.

2. MANUFACTURING

2.1. Manufacturing procedures

Manufacturing procedures are in accordance with the requirements stated into the standard EN 13445-4.

2.1.1. Preparation of the component parts

According verified welding procedures of the Manufacturer (WPS, WPQR).

2.1.2. Permanent joining

Welding procedures are drawn up and verified according the requirements stated in "Design" section of the 97/23/EC directive and harmonized standards (EN 15614-1).

Welding materials have Certificate of Conformity applied according EN 10204. Permanent (Welded) joints are performed in accordance with these verified welding procedures of the Manufacturer.

2.1.3. Non-destructive tests

Non-destructive tests are carried out according EN 473.

2.1.4. Heat treatment

It is not necessary to carry out any heat treatment before, during or after manufacturing of the tank.

2.1.5. Traceability

Traceability is guaranteed by the Management system of the manufacturing company being in force and certified according ISO 9001:2008.

2.2. Final assessment

2.2.1. Final inspection

Prescribed visual control and tests are carried out during manufacturing and the results are recorded in protocol.

2.2.2. Proof test

Tests of the tank under hydrostatic pressure and under test pressure were performed. The results are recorded in protocol.

2.2.3. Inspection of safety devices

2.3. Marking and labeling

The identification plate contains all the necessary data according PED 97/23/EC and CE mark.

2.4. Operating instructions

— Manual for operation and maintenance including assembling of different units of pressure equipment

3. MATERIALS

All material used are relevant to the actual European standards and to the standards harmonized in Directive 97/23/EC.

1.1.2. Calculation method

a) Pressure containment and other loading aspects

Risk type	Yes/No	Safety requirements
Design by formula	Yes	EN 13445-3
Design by analysis	No	-
Design by fracture mechanics	No	-

1.2. Provisions to ensure safe handling and operation

Particular attention was paid to the units, following:

Risk type	Yes/No	Safety requirements
Closures and openings	Yes	The tank is equipped with a manhole which provides easy and smooth operation
Dangerous discharge of pressure relief blow off	No	Operation position of the safety valve prevents any danger during exhausting.
Devices to prevent physical access whilst pressure or a vacuum exists	No	
Surface temperature taking into consideration the intended use	No	The tank is insulated so its outside temperature is not dangerous
Decomposition of unstable fluids	No	There are no unstable fluids in the product (beer).

1.3. Means of examination

Risk type	Yes/No	Safety requirements
Openings provide easy physical access inside the tank.	Yes	The tank is equipped with a manhole which provides easy and smooth operation
Substance contained has harmful effect on the environment.	No	-
Wall thickness check	Yes	Regular wall thickness check required in the Manual for operation and maintenance

1.4. Means of draining and venting

Risk type	Yes/No	Safety requirements
Water hammer	No	A safety valve preventing excessive pressure or vacuum into the tank. Operation manual for the equipment
Vacuum collapse	No	A safety valve preventing excessive pressure or vacuum into the tank. Operation manual for the equipment
Corrosion	No	The material of the tank is completely resistant of the corrosion of the fluid
Uncontrolled chemical reactions	No	There are no unstable fluids in the product beer.
Cleaning, inspection and maintenance in a safe manner	Yes	A possibility for integrating the tank with automatic CIP system is provided

1.5. Corrosion or other chemical attack

Risk type	Yes/No	Safety requirements
Corrosion	No	Regular check of the wall thickness