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INSTRUCTION, USE AND MAINTENANCE HAND - BOOK



Machine: STEAM CLEANER Type: GP.21.AR.00

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The present instruction hand-book informs about the basic requirements for THE SAFETY AND HEALTH OF THE USERS.
These requirements are stated by the MACHINE DIRECTION 2006/42/EC

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SIDE I WARNINGS, PRECAUTIONS AND GENERAL ADVICES

1.1.1 WARNINGS



Before connecting the plug of the OMEC STEAM CLEANER TYPE GP.21.AR into the current intake check the feeding voltage which must be the same as the voltage written on the machine plate.
Example: machine plate VOLT 230-HZ 50 = feeding voltage VOLT 230-HZ 50.
Do not dip machine into the water.
Do not let the supply electric wire hang.

1.1.2 PRECAUTIONS



a) The OMEC STEAM CLEANER TYPE GP.21.AR must be used ONLY AND EXCLUSIVELY to clean articles and goods manufactured by dental technicians and goldsmiths.
b) Before checking or controlling the machine, TAKE OFF the plug which connects the machine to the intake.
c) Never take away the plug by pulling the supply wire.
d) Make sure that your electrical equipment is in conformity with the EC 2006/95/EC Standards - LOW VOLTAGE.

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1.1.3 GENERAL ADVICES



a) On receiving the unit check the package integrity and then make sure that the machine is perfect and not damaged (due to bad carrying).
b) Follow carefully the instructions for installing the machine.
c) The OMEC STEAM CLEANER TYPE GP.21.AR must be used only by a skilled worker, and therefore use the machine ONLY AFTER HAVING READ CAREFULLY and understood the instruction hand book.
d) The machine is supplied complete with the following accessories:
   - no. 1 pistol with actuator
   - no. 1 unloading water cock
   - no. 1 instruction hand-book which must ALWAYS go together with the machine even if it is sold as a second-hand machine
   - no. 1 warranty certificate
   - no. 1 conformity declaration

SIDE II PRODUCT DESCRIPTION

2.1.1 TECHNICAL DATA



OMEC STEAM CLEANER TYPE GP.21.AR

Absorbed power	: Kw 1.8
Supply	: A. Current - Volt 230
Absorbed current	: Amp. 7
Frequency	: Hz. 50/60
Nominal tank capacity	: 5 litres
Pressure	: 5 bar

2.1.2 EXTERNAL BODY DESCRIPTION

The OMEC STEAM CLEANER TYPE GP.21.AR has an external structure of iron sheet, it is fire painted by epoxy resins (powder).

2.1.3 BOILER DESCRIPTION

The boiler is made of stainless steel type AISI 304 and tested at 8 (eight) atmospheres.

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2.1.4 HEATING ELEMENT DESCRIPTION

The heating element is made of stainless steel type AISI 321 high efficiency INCOLOJ.

2.1.5 MACHINE BUILT-IN SAFETY DEVICES



The pressure and temperature checking is made by an air pressure switch and by a thermostat rated by the manufacturer. In case one of these two components or both are out of service they inter-work: the loading water plug works for the air pressure switch (34) - pict. 2 TAV B - page 6/10 - while in case of water shortage and the consequently raise of temperature there is a manual reset thermostat which stops all machine functions and works a sound alarm.

2.1.6 SAFETY CHECK DESCRIPTION

The OMEC STEAM CLEANER TYPE GP.21.AR has to pass a first general check (electrical - mechanical) during its assembly. The final conformity of the machine is stated and confirmed by an electronic system which checks automatically the safety of the machine by itself.

SIDE III ASSEMBLING, INSTALLATION AND USE INSTRUCTIONS

INTRUDUCTION

Before starting-up the machine, follow precisely the following instructions.

Please refer to pict. 1 - page 4/10.

3.1.1 WARNINGS AGAINST WORK-RISKS



a) Make sure that your electrical equipment has a good earth and that it is in conformity with the 2014/35/UE Standards - Low voltage.

b) We recommend to use the OMEC STEAM CLEANER TYPE GP.21.AR with DEMINARALIZED water or with water coming from the hydro plant through a anti-lime/water softener. ABSOLUTELY AVOID using any liquid or detergent which will make the machine DANGEROUS.



c) During the working of the OMEC STEAM CLEANER TYPE GP.21.AR a high temperature is produced inside it, some of it is transmitted by conduction to the case of the machine and it could cause (if touched) severe scalds. So the machine MUST be handle WITH CARE and users must be warned about dangers (steam under pressure, hot water, etc.).

d) Be present when the machine is working (do not abandon it).

e) The actuator (1) and (2) on the pistol works in series with the actuator (7). The latter must be on any time you want to use the pistol. When you finish using it, it is recommended to disconnect the actuator (7) placed on the front panel of the machine. This is in order to avoid the coming out of the steam in case the actuator placed on the pistol is pushed by accident. **It is strictly recommended to check if the nozzle of the pistol is towards the user**

f) In case you are using the STEAM CLEANER and it happens that any steam comes out from the loading plug (3), or the pressure steam gauge shows a pressure further to the max. point of working 5 bars, immediately switch off the machine and ask the intervention of the OMEC authorized assistance centre.



THE MACHINE MUST BE DISCONNECTED WHEN:

a) Before loading or unloading the water into the boiler.

b) Before leaving the room, even if for little time.

c) Before each cleaning or maintenance intervention

DO NOT START THE MACHINE WHEN:

a) The supply wire or the steam pipe is damaged.

b) The machine has fallen down and is visibly damaged.

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3.1.2 ASSEMBLING INSTRUCTIONS

Put the OMEC STEAM CLEANER TYPE GP.21.AR on a piece of furniture assuring a good stability to the machine. The rear part of the machine must have a distance of at least 10 cm. from the wall. This helps the air circulation. Check the plate data of the machine. They must be same as those one of your electric equipment. In case of anomaly, immediately apply to your supplier informing him about the nature of the defect. Should you have any doubt about the safety of the machine DO NOT USE it.

3.1.3 USING INSTRUCTIONS

All under mentioned operations must ALWAYS be DONE when the machine is COLD. Refer to Picture No. 1 - Page 4/10:

a) IMPORTANT BEFORE FIRST USE

a. In order not to damage the pump when the Automatic Refill STEAM CLEANER IS USED FOR THE FIRST TIME AND ANY TIME THAT THE TANK IS EMPTIED, IT IS MANDATORY to fill the tank with at least 4 litre of water before switching ON the steam cleaner.

b) Connecting Water Supply:

a. Connect one end the supplied pipe to the quick connector placed at the back part of the steam cleaner and the other end to the tap.
b. Open the water tap: water pressure must be between 2 and 3 bar (this pressure is generally the one of household and lab plants).

c) Screw the water loading plug cap (3) properly.

d) Switch on the right hand Main Heater On switch (actuator)(5)

e) Wait until the machine reaches the optimal pressure of about 4.5-5 bars which will be indicated by the steam pressure gauge (11), the lighting up of the Green led (12)

f) Switch on the left hand Main Green Steam On switch (actuator)(7) and handle the pistol. When pushing on the left button (1) the steam comes out. When pushing the right button (2) on the pistol, water mixed with steam comes out. The cock (10) controls the quantity of steam and the cock (4) controls the quantity of water mixed with steam.

g) When the Red led (7) lights up this means that the water level inside the machine is low and at minimum level. The incoming water pump will then activate and allow more water into the tank.

a. If you cannot hear the pump working or the Red led (7) does not turn off there may be an issue with the inlet water. Consequently you must turn off the machine immediately and refill the water. Check that the tap is on and water supply is available. If water level has dropped to low, you will need to manually refill the tank first through the loading plug (3) first.

3.1.4 DANGER NOTICES

The lighting up of the led (13) means the water level inside the tank is below minimal. If the sound alarm (hum) plays, the red led (13) lights up meaning the total absence of water in the tank. In this event the machine must be immediately switched off.

Machine Safety features: The steam generator has 3 safety levels against the burning of the heating element due to low water or blocked water supply.

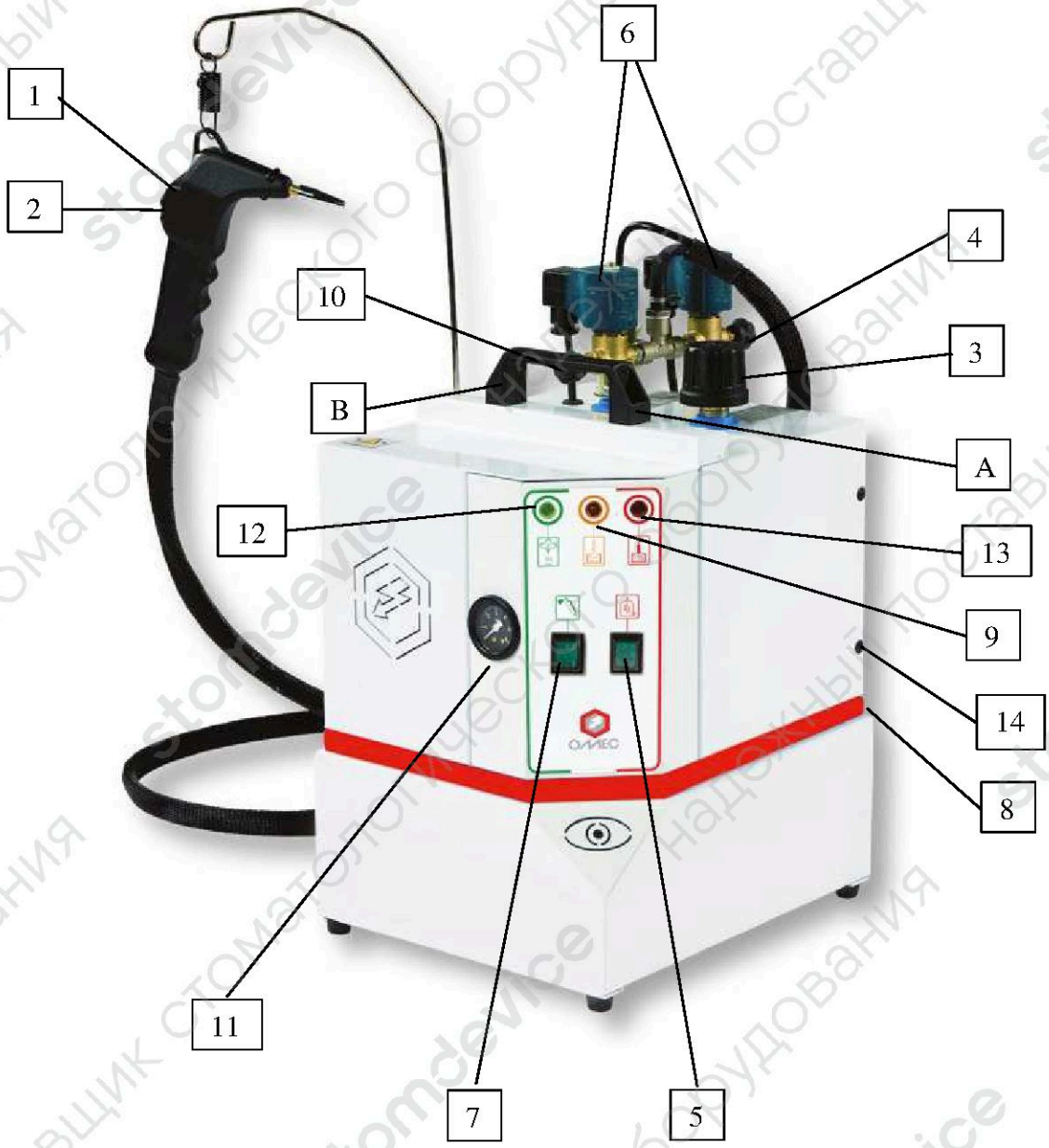
1st - Visual advice - the Red light on
2nd - Acoustic advice - sound alarm start
3rd - Electric advice - if the first two warning are ignored and water level is critical the electronic mother board cut off the power of steam generator to prevent any damage. In this event the machine must be immediately switched off, given time to cool down. Once machine is cool, manually refill the tank with water through the loading plug (3)

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3.1.5 PICTURE NO. 1

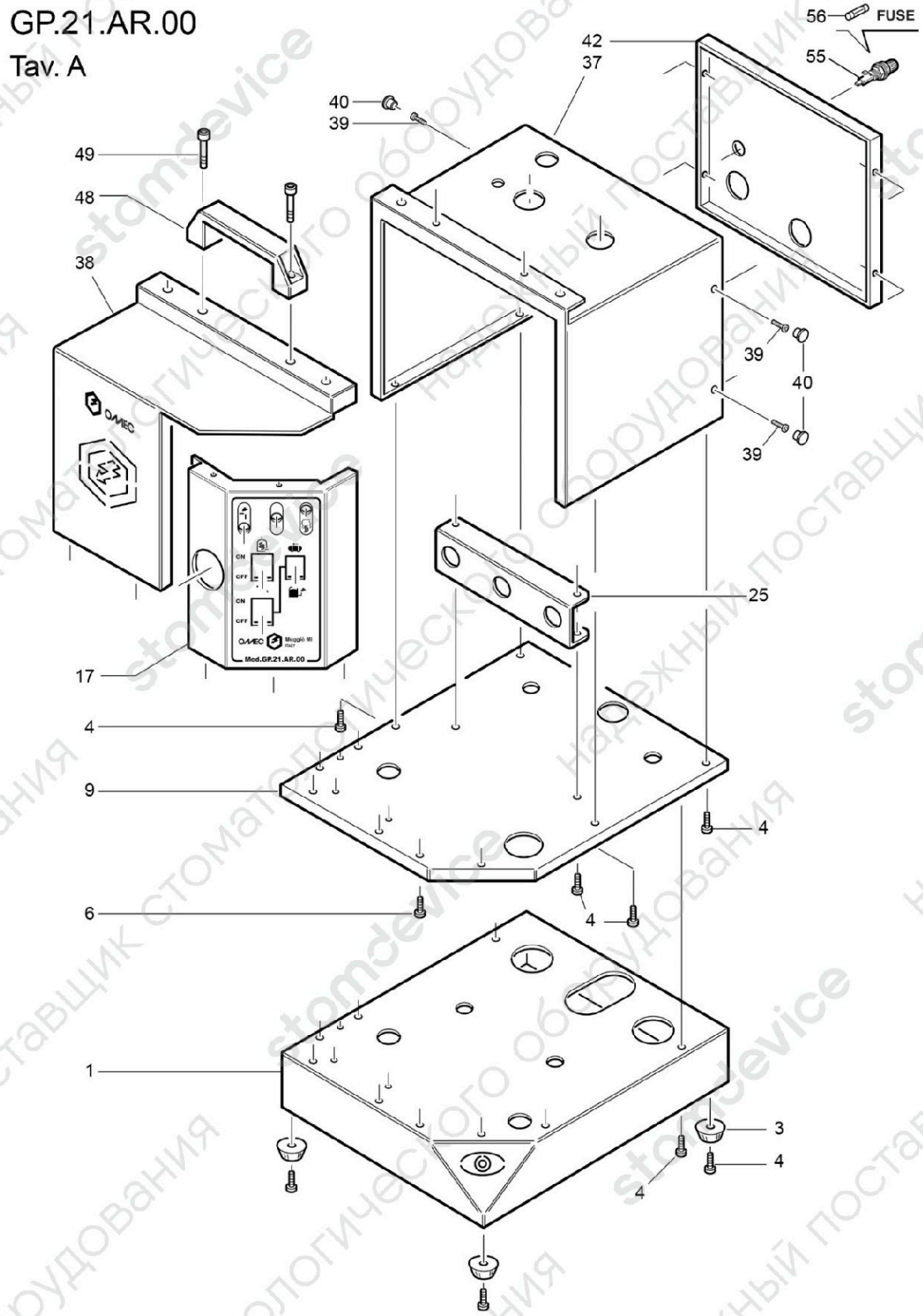


1 – OUTGOING STEAM ACTUATOR
2 – WATER OUTGOING ACTUATOR
3 – SAFETY WATER LOADING PLUG
4 – QUANTITY STEAM REGULATING COCK
5 – WATER HEATING ACTUATOR
6 – ELECTRO VALVE
7 – PISTOL STEAM ACTUATOR
A – FASTENING SCREW OF THE FRONT
8 – FUSE
9 – HEATING ELEMENT
10 – WATER QUANTITY REGULATING COCK
11 – STEAM PRESSURE GAUGE
12 – MAX. PRESSURE LED
13 – NO WATER LED
14 – WATER UNLOADING COCK
B – PANEL

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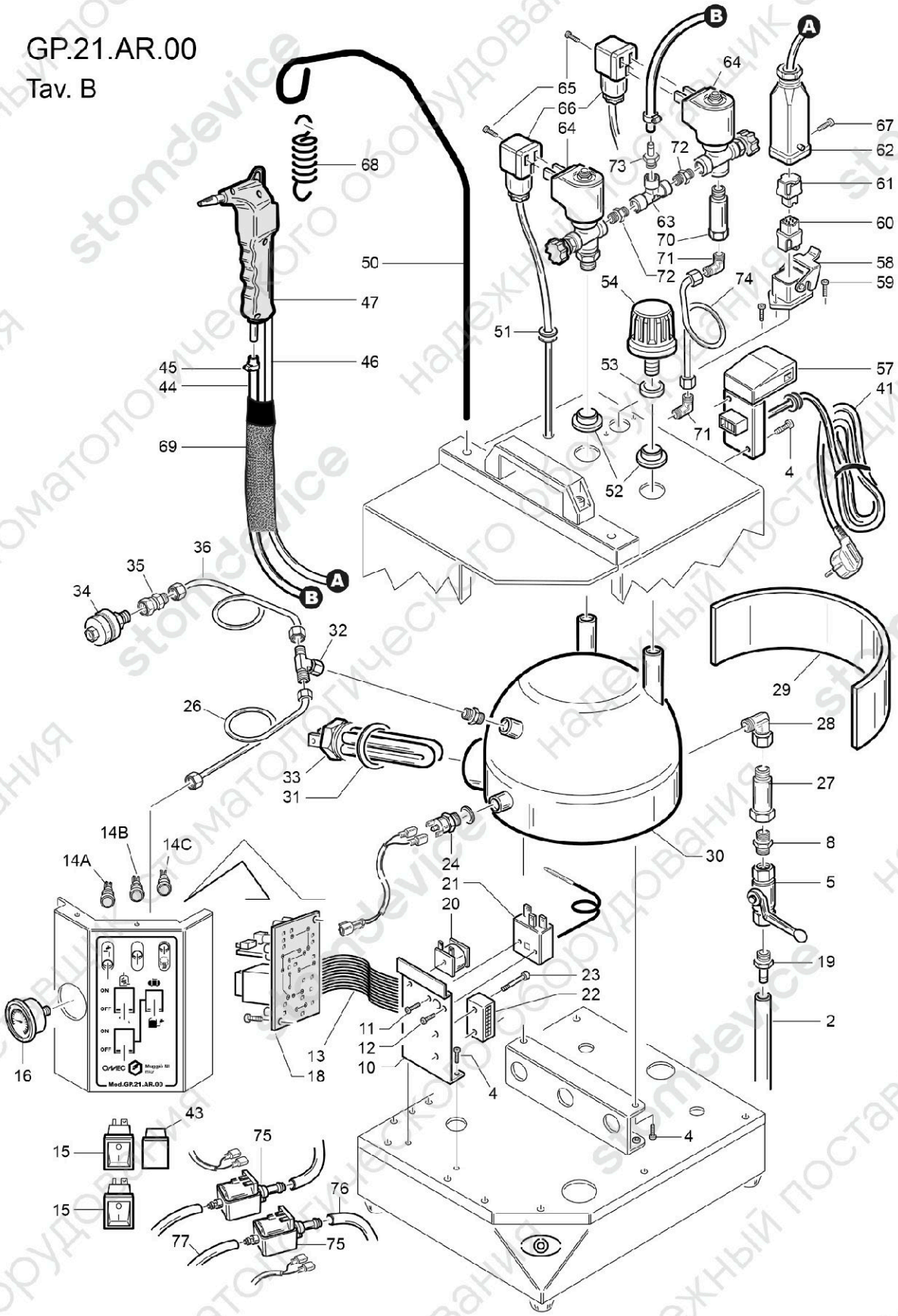
3.1.6 PICTURE NO. 2 – TAV A



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3.1.7 PICTURE NO. 2 – TAV B



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3.1.8 SPARE PART LIST

1	TAV A	GP.92.4.01	BASE
2	TAV B	GP.92.3.72	UNLOADING PIPE DIAM. 10 X 7 X 300
3	TAV A	GP.92.3.16	RUBBER FOOT 19X13-ART. 730
4	TAV A/B	GP.92.4.14	SCREW 4x10 TCR
5	TAV B	GP.92.3.69	BALL COCK 1/4 " F/F C/BLOCK
6	TAV A	GP.92.4.15	SCREW 4x20 TCR
7	TAV B	GP.92.4.16	STICKER (6PCS)
8	TAV B	GP.92.3.19	NIPPLE M/M CO. ¼"
9	TAV A	GP.92.4.05	CENTRAL BASE
10	TAV B	GP.92.4.09	ELECTRIC PLANT BOARD
11	TAV A	GP.92.4.17	SCREW 3x5 TCR
12	TAV A	GP.92.4.18	SCREW 4x5 TCR
13	TAV B	GP.92.4.22	ELECTRIC PLAN
14A	TAV B	GP.92.4.32	RED LED D.10 FASTON
14B	TAV B	GP.92.4.31	ORANGE LED D.10 FASTON
14C	TAV B	GP.92.4.30	GREEN LED D.10 FASTON
15	TAV B	SD.84.53	BLACK BIPOLAR ACTUATOR. GREEN LED
16	TAV B	GP.21.B.06	WATER GAUGE DIAM. 40
17	TAV A		CONTROL PANEL
18	TAV B	GP.21.B.03	LOW TENSION CIRCUIT BOARD V.18
19	TAV B	GP.92.3.70	UNION ATT. 9 X ¼"
20	TAV B	GP.92.3.53	SOUND ALARM FOR WATER LEVEL
21	TAV B	GP.92.3.28	CAPILLARY THERMOSTAT 50'/200'x6x100
22	TAV B	GP.92.4.06	CARBON TERMINAL N.6 PA27
23	TAV B	GP.92.4.07	PIN FOR CARBON TERMINAL PA27-PIN PA197
24	TAV B	GP.92.3.67	MANUAL RESET THERMOSTAT 165'FASTON
25	TAV A	GP.92.4.10	BOILER REST
26	TAV B	GP.92.3.25	COPPER SPIRAL(FOR MANOMETER)D.3 1/8F-1/M
27	TAV B	GP.92.3.22	CORNER (EXTENSION) ¼" M/F X 50
28	TAV B	GP.92.3.27	CORNER UNION M/F ¼"
29	TAV B	GP.92.3.54	BOILER COATING LT. 5
30	TAV B	GP.21.B.04	STAINLESS STELL BOILER 5L
31	TAV B	GP.92.4.03	VITON SEAL DIAM. 52X41,2X3
32	TAV B	GP.92.3.73	UNION "T" 6X1/8" - M - X ¼" F
33	TAV B	GP.92.3.24	HEATING ELEMENT 1'1/4"INOX W.1800xL.175
34	TAV B	GP.92.3.18	AIR PRESSURE SWITCH 1/8" - 4 BAR
35	TAV B	GP.92.3.71	STRAIGHT FEMALE UNION-346-6X1/8"-1100
36	TAV B	GP.92.3.20	AIR PRESSURE SERPENTINE DIAM. 6xL.170
37	TAV A	GP.92.4.11	CENTRAL FRAME
38	TAV A	GP.92.4.12	FRONT PANEL
39	TAV A	GP.92.3.17	SCREW 4x15 TCR TRILOBATA
40	TAV A	GP.92.3.75	COVER HOLE CAP DIAM. 8
41	TAV B	GP.92.3.56	ELECTRIC WIRE 3x1,5 SCHUKO 16 AMP.MT.2
42	TAV A	GP.92.4.13	REAR PANEL
43	TAV B	SD.84.53.01	PROTECTION FOR BIPOLAR ACTUATOR
44	TAV B		STEAM PIPE
45	TAV B	GP.92.3.04	FASTENING IRON SCREW TCR
46	TAV B	GP.92.3.60	CABLE 4 X 1-MT. 2,5
47	TAV B	MC.009.56	COMPLETE STEAM GUN WITH TUBE
48	TAV B	GP.92.3.15	HANDLE
49	TAV B	GP.92.4.19	SCREW 8x20 TCE
50	TAV B	GP.92.3.37	CABLE HOLDER ROD 4 X L.535
51	TAV B	GP.92.3.57	CABLE RUBBER PROTECTION DIAM. 11
52	TAV B	GP.92.3.06	GASKET EUR 28x22
53	TAV B	GP.92.4.33	PLUG VITON GASKET
54	TAV B	GP.92.4.08	LOADING CAP-PLUG 3/8"-4,3BAR +/- 0,3
55	TAV A	GP.92.4.23	FUSE HOLDER 15A-6,3x32 FASTON MOD.1886
56	TAV A	GP.92.4.24	FUSE 16A 6,3x32 MOD.GF CERAMIC
57	TAV B	GP.92.3.62	CABLE PLASTIC PROTECTION PA 244-C
58	TAV B	GP.92.3.38	CABLE STRAIGHT CASE 3/4/6 P
59	TAV B	GP.92.4.20	SCREW 3x10 TCR TRILOBATA
60	TAV B	GP.92.3.21	PLUG 3P + T
61	TAV B	GP.92.3.66	INTAKE 3P + T
62	TAV B	GP.92.3.36	CABLE MOVABLE CASE 3/4/6 P
63	TAV B	GP.21.B.07	UNION "T" 4000 - ¼" F - ⅛" F - ¼" F
64	TAV B	GP.92.3.03	SOLENOID WITH REGULATION 1/4"- D.2,8
65	TAV B	GP.92.4.21	SCREW 3x30 TCR
66	TAV B	GP.21.74	UNION WITH CABLE 45 CM.
67	TAV B	GP.92.4.25	SCREW 3x5 TPS CR
68	TAV B	MC.000.62	SPRING
69	TAV B		TUBE COVER
70	TAV B	GP.92.3.22	CORNER (EXTENSION) ¼" M/F X 50
71	TAV B	GP.21.28	CORNER UNION 9280 - ¼"M - 6M
72	TAV B	GP.92.3.19	NIPPLE M/M CO. ¼"
73	TAV B	GP.21.08	UNION ATT. 3040 - 7 X ¼"
74	TAV B	GP.21.B.08	COPPER SPIRAL(FOR SOLENOID)
75	TAV B		WATER PUMP
76	TAV B		TUBE WATER IN
77	TAV B		TUBE WATER OUT

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SIDE IV MAINTENANCE INSTRUCTIONS

When you start the machine for the first time you may smell an acrid smell. This is perfectly normal and disappears using and using the machine.

4.1.1 BOILER CLEANING

If the machine is not used over a long period of time we recommend to empty the boiler it and to wash it.

The evacuation of the stagnant water or of eventual solid rests is emptied by the water unloading cock (14) - pict. 1 - page 4/10 - that is placed at the back of the machine. This operation must be carried out when the machine is OFF, the cable is disconnected from the current intake and the pressure indicated by the steam pressure gauge (11) is 0 (zero).

4.1.2 ROUTINE MAINTENANCE

To get a good and constant working of the boiler and a safety working, each 6 (six) months it is compulsory to check-up carefully the machine. This check-up has to be carried out by an OMEC authorized skilled man who will hand over a document mentioning the intervention.

- Any other intervention, if necessary, must be done at OMEC factory.

4.1.3 SURVEY OF MAIN ANOMALIES

This chapter is integrant part of the instruction hand-book. All intervention mentioned in this chapter must be carried out ONLY AND EXCLUSIVLY BY SKILLED STAFF or at OMEC factory. Please refer to pict. 1 and 2 TAVA/TAVB - page 5/10, 6/10, 7/10.

TROUBLES:

The actuator lights (5 and 7) - pict. 1 - page 4/10 - do not light up and the OMEC STEAM CLEANER TYPE GP.21.AR does not work.

CAUSES:

a) The supply plug is not connected properly.
b) The fuse-holder cover is loose.
c) The fuse is out of service

REMEDIES:

a) Check whether the supply plug is connected properly into the current intake.
b) Screw the holder-fuse cover properly.
c) Replace the fuse with one of the same value.

TROUBLES:

The OMEC STEAM CLEANER TYPE GP.21.AR does not heat the water and does not reach the pressure.

CAUSES:

a) The manual reset (24) - pict. 2 TAV B - page 6/10 - has worked due to a too high temperature happened previously.
b) The heating element (33) - pict. 2 TAV B - page 6/10 - has burned out and it is of a white colour and has some little eruptions along the superficies of the heating elements.
c) The heating element and minimal level checking thermostat (21) is out of service.

SOLUTIONS:

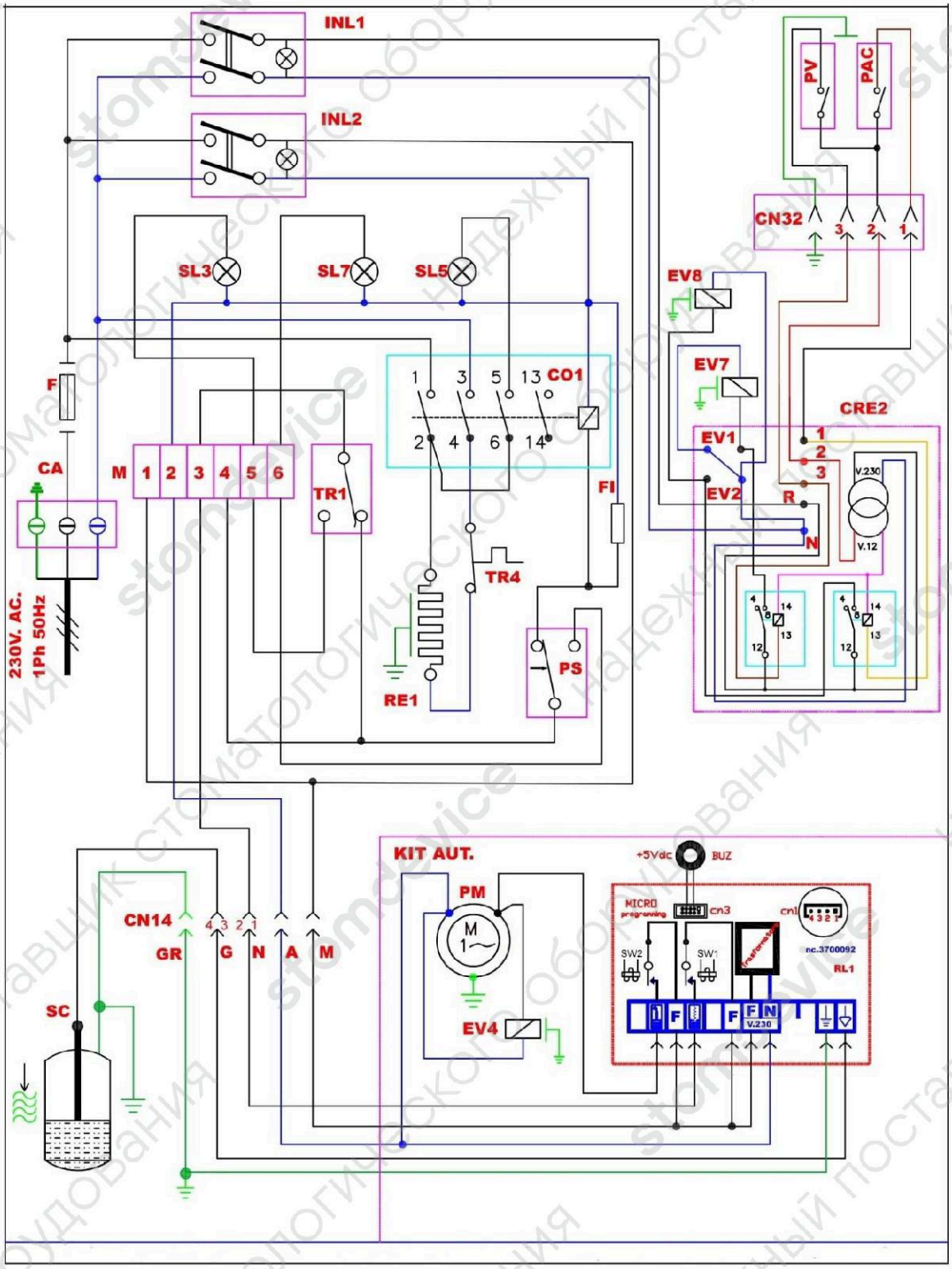
a) Reset the thermostat manual reset (24) - pict. 2 TAV B -page 6/10 - by pushing the little push-button reset button on the thermostat (button colour maybe red or grey depending on the part fitted) . When you start the STEAM CLEANER again its pressure shown on the pressure gauge is to be within 5.5 bar. in case the pressure is exceeding 5.5 bar, call for a service centre to adjust the thermostat.
b) Clean the boiler and pickle the inner walls before replacing a new heating element (33) - pict. 2 TAV B - page 6/10.
c) Check carefully the working of the boiler heating element thermostat (21) - pict. 2 TAV B - page 6/10. In case replace it.

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SIDE V ELECTRIC DIAGRAM

5.1.1. ELECTRIC DIAGRAM



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BUZ	SOUND ALARM	M	TERMINAL BLOCK
CA	SUPPLY TERMINAL BLOCK	PAC	STEAM AND HOT WATER GUN MICROSWITCH
CN14	AUTOMATIC FEED TERMINAL HOLDER	PM	PUMP
CN32	PISTOL TERMINAL BLOCK	PS	AIR PRESSURE SWITCH
CO1	CONTACTOR	PV	STEAM GUN MICROSWITCH
CRE2	LOW TENSION MOTHER BOARD	RE1	BOILER HEATING ELEMENT
EV1	STEAM ELECTRO VALVE	RL1	WATER LEVEL MOTHER BOARD
EV7	STEAM AND HOT WATER ELECTRO VALVE	SC	WATER LEVEL PROBE
EV8	WATER ELECTRO VALVE	SL3	RED LED - END WATER WARNING
F	FUSE 16A	SL5	GREEN LED - MAX. PRESSURE WARNING
FI	FILTER	SL7	ORANGE LED BOILER HEATING WARNING
INL1	PISTOL ACTUATOR	TR1	BOILER THERMOSTAT
INL2	BOILER ACTUATOR	TR4	MANUAL RESET THERMOSTAT

SIDE VI STANDARDS AND WASTE

6.1.1 STANDARDS

Our STEAM CLEANER TYPE GP.21.AR is manufactured in accordance with the Machine Directive:

- 2006/42/EC

with the following Standards:

- 2014/30/UE EMC (Electro-magnetic Compatibility)
- 2014/35/UE (Low Voltage)
- EC 9368
- UNI EN 60204-1
- UNI EN 60204-1/A1
- PED 97/23 - EC 87/404 (Pressure European Directive)

6.1.2 WASTE

The MACHINE life essentially depends on the preservation, using, maintenance and life time of its components. Above all it is important that the MACHINE is preserved under suitable environment and climatic conditions: environment is to be dry, not dusty and without any exhalation caused by acid solutions employed which may affect electronic pieces. It is also important that the use the machine is meant to is the same as the one declared by the manufacturer and that the operator uses it according to the instructions in the hand-book and fully respects all maintenance prescriptions. At last, it is also very important that only original or approved by manufacturer parts are used for any intervention of repair all along the MACHINE life
The demolition of the machine must be arranged in compliance with the Laws in force where the demolition is carried out. Before disassembling any parts, REMEMBER to disconnect the MACHINE from the electric feeling. The demolition of the machine must be arranged in compliance with the Laws in force where the demolition is carried out. Before disassembling any parts, REMEMBER to disconnect the MACHINE from the electric feeling

WARNING

ALL PARTS MUST BE DISASSEMBLED AND GROUPED ACCORDING TO THEIR COMPOSITION

Material essentially composing the MACHINE:

1 steel frame
2 aluminium panel and mechanical components
3 insulating materials
4 electronic parts (circuit board)
5 electrical parts (wires)
6 copper parts
7 plastic parts

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