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BLAAUW PRODUCTS BV

Consultancy, Design &
Production of Kilns

ROUTINE MAINTENANCE

Routine maintenance is service you can do to optimize the performance of your Blaauw gas kiln and minimize the potential for future repair. We recommend maintaining spark plugs, UV sensors, and thermocouples.

When completing the following tasks, take note that you will be working near the air and gas lines. Be carefull to never alter any valves or regulators along these lines.

SPARK PLUGS

We recommend cleaning your sparkplugs whenever carbon builds on the electrode. Depending on the make up of your gas, maintence may be required once a month, to once a semester.

1. Turn off the kiln by rotating the red lock-out switch to the off position.
2. Locate spark plugs on your kiln. There is a spark plug attached to each burner. For each spark plug, perform the following steps:

    a. Detach the boot and the ignition wire from spark plug. Inspect boot for damage (fig. 1).
    b. Use a socket wrench on the hex nut to remove spark plug from burner (fig. 2).
    c. Inspect spark plug electrode. Gap should be set at approximately 1/8".
    d. Wire brush any carbon deposit off the electrode. Wire brush any corrosion off threads and terminal (fig. 3).
    e. Return spark plug to burner and tighten hex nut until snug.
    f. Reattach spark plug boot.


fig.1


fig. 2


fig. 3

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UV SENSORS

We recommend cleaning your UV sensors once a semester.

1. Turn off the kiln by rotating the red lock-out switch to the off position.
2. Locate the UV sensor assemblies on your kiln. Burner A, and if present burner B, will have a UV sensor assembly. For each UV sensor assembly, perform the following steps:

    a. Unclip clip with a flat head screwdriver, and disconnect electrical coupling.
    b. Using your hand, firmly grip the barrel. Unscrew and remove assembly from connecter to burner.
    c. Use a wrench to unscrew the hex head cap from the barrel.
    d. Withdraw from the barrel the spacer, socket, bulb, and rubber ring (fig. 1). Use compressed air to ensure barrel is free of debris.
    e. Grasp socket in hand and unplug bulb. Sand prongs if darkened (fig. 2). Clean glass of bulb with a mild glass cleaner. Reinsert bulb into socket.
    f. Inspect rubber ring for damage. Clean and reinsert into barrel.
    g. Clean off residual thread seal tape from the threads of the hex cap. Reapply thread seal tape. Use three passes.
    h. Reinsert bulb, socket and spacer into barrel. While tightening the hex head with a wrench, periodically inspect barrel end to ensure rubber ring sits centered and flat (fig. 3).
    i. Tighten hex head until UV bulb barely moves when wiggled.
    j. Use compressed air to ensure connecter to burner is clear of debris.
    k. Clean off residual thread seal tape from the threads of the barrel. Reapply thread seal tape. Use three passes.
    l. Screw barrel into burner. Tighten by hand until firm.
    m. Reattach electrical coupling and secure clip.

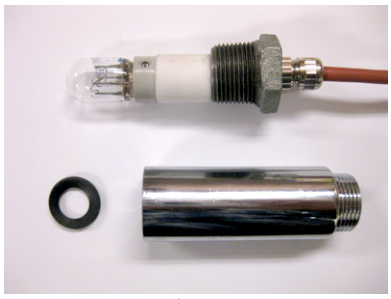
fig.1

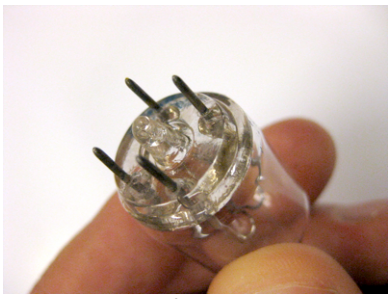
fig. 2

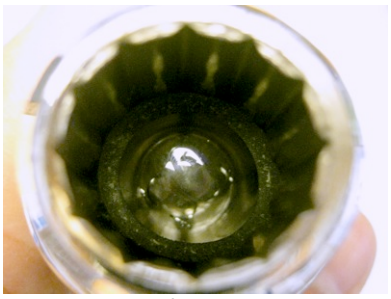
fig. 3

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THERMOCOUPLES

We recommend you check your thermocouples once a semester. The purpose of checking thermocouples is to detect compromises to the protective tube before damage can occur to the platinum wires. Thermocouples are fragile; handle with care.

1. Turn off the kiln by rotating the red lock-out switch to the off position.
2. Locate thermocouples on kiln. Typically, there are two or three inserted into the kiln wall. For each thermocouple, perform the following steps:

    a. Loosen screws on locating flange, if present (fig. 1).
    b. Carefully withdraw thermocouple from kiln.
    c. Inspect protective ceramic tube for hairline cracks, fissures, holes, or breaks. Replace protective tube if compromised. Do not fire with a compromized tube as it will shorten the life of the thermocouple.
    d. Slide thermocouple through locating flange into kiln. Do not any force as the thermocouple is fragile. Tighten screws on locating flange until snug.
    e. Open cap on thermocouple head (fig. 2).
    f. Check that terminals are tight and that the white, orange, and platinum wires are neither cross each other nor touching the housing (fig. 3)
    g. Reattach cap to thermocouple head.

3. Once all thermocouples are checked, turn on kiln.
4. Once in command mode, use the TEMP button to read thermocouple A, then B (the screen will show °A or °B). Use a lighter on the tip of each thermocouple to ensure proper reading. The temperature should go up. If the thermocouple does not read correctly, contact your nearest service person. Do not fire if thermocouple is reading incorrectly. Note that thermocouple C (if present) can only be tested by your service person.

fig.1


fig. 2
(terminal positons may vary)

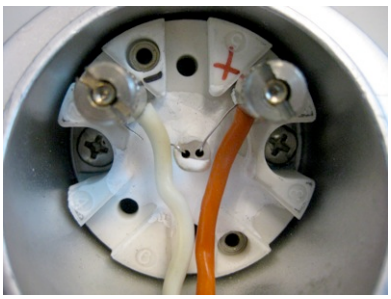
fig. 3

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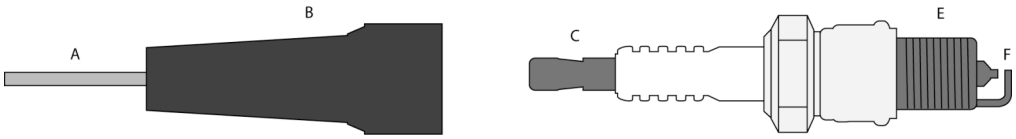
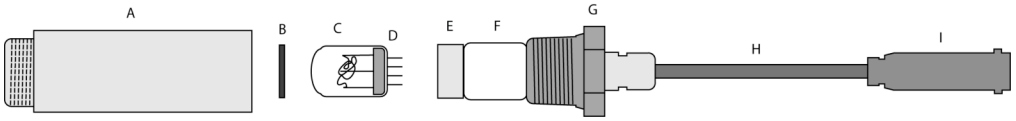
DIAGRAMS

Spark Plug



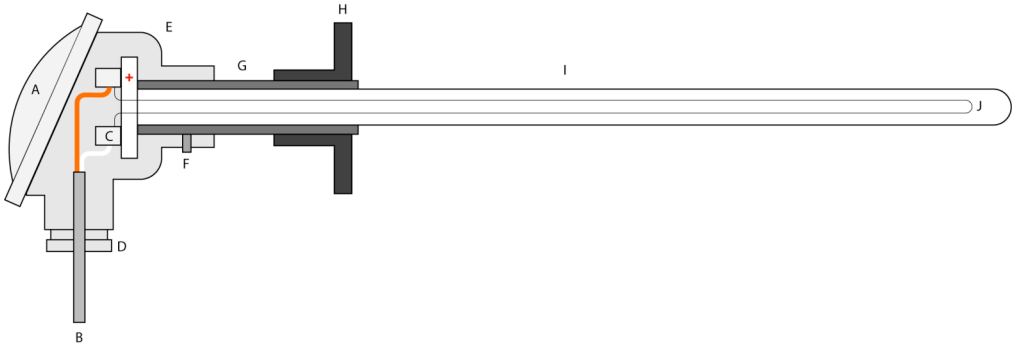
A. Ignition wire
B. Boot
C. Terminal
D. Hex nut
E. Threads
F. Electrode

UV Sensor Assembly



A. Barrel
B. Rubber ring
C. Bulb
D. Prongs
E. Socket
F. Spacer
G. Hex cap
H. Cable
I. Electrical coupling

Thermocouple



A. Cap
B. Braided cable
C. Terminal
D. Threaded bushing
E. Thermocouple head
F. Support tube set screw
G. Support tube
H. Locating flange
I. Protective tube
J. Platinum wire