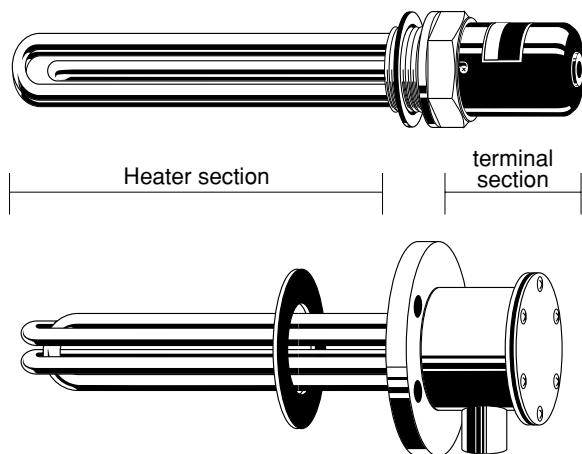


INSTRUCTION MANUAL FOR CAUTIONS ON USES

Observe this instruction manual without fail for using the pipe heater correctly and safely.

Please read this instruction manual carefully before starting use, and use the pipe heater correctly. Keep this manual to be ready for reading it whenever necessary after reading it.

PLUG HEATER / FLANGE HEATER FOR OIL



 **HAKKO ELECTRIC MACHINE WORKS CO., LTD.**

WARNING

- **Turn off the power supply at once when oil has come out to an end of the vessel.**

Turn off the power supply at once if oil have come to the end due to a oil leak from the vessel.

Supply oil at once if the heater can be seen on the oil surface. Keep the heater submerged into oil at all time, otherwise a fire may occur.



- **Use the heater at the correct voltage.**

Never use the heater at a power voltage other than specified, otherwise it causes a fire or an electric shock accident.



- **Connection of power supply.**

Connect the power cord by fastening it securely to the crimp style terminals, otherwise it causes a fire or an electric shock accident.



- **Connect the earth without fail.**

Connect the grounding wire to the vessel without fail before use, otherwise negligence of this caution may cause a fire or an electric shock accident.



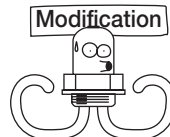
- **Don't use any liquid other than oil.**

Never use any liquid other than oil, otherwise it causes a fire or an electric shock accident.



- **Never modify the heater.**

Never modify the heater profile, otherwise it causes a fire or an electric shock accident.



- **Don't use any vessel which leaks oil.**

Mount the heater to a vessel without turnig on the power supply before filling the vessel with oil, full the vessel with oil and then make sure that no oil leaks.

If oil has come to an end due to a oil leak, a fire or an electric shock accident may occur.



● **Don't insert the entire heater into oil in the vessel.**

Don't put the entire heater directly into the vessel, otherwise it causes an electric shock accident.



● **Don't apply the heater to any resin vessel.**

Don't use any vessel other than a metallic vessel, otherwise it causes a fire or an electric shock accident.



CAUTION

● **For leaving the mounting site for a long time.**

Turn off the power supply without fail for safety if the automatic oil feeder is not provided.



● **Caution on use in overseas countries.**

Don't use this heater at a voltage other than specified, otherwise it causes a fire and an electric shock accident.



● **Don't use the heater in the following cases.**

Otherwise it causes a fire, an electric shock accident, or an electric leak failure.

- A place where the heater is put into under oil sediment.
- Foreign substances are attached to the heater surface.
- The heater is protruded above the oil level.
- Heater terminals are submerged into oil.



● **Turn off the power supply before replacing the heater.**

For replacing the heater, turn off the power supply and drain oil from the vessel. Then take the heater out of the vessel.

Don't put the heater on a combustible substance soon after taking it out, otherwise it may cause a fire.

Don't grip the heating part of the heater soon after taking it out, otherwise you may get burnt.



● **Don't spray any oil or water to the terminal cap.**

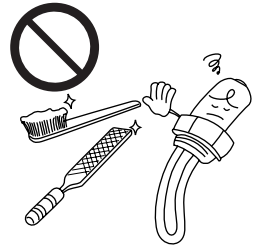
If the moistened terminal cap is used as it is, it causes an electric shock accident or an electric leak.



RECOMMENDATION

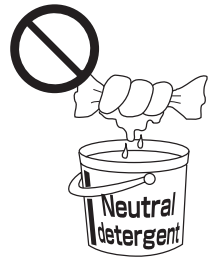
● Heater maintenance

For cleaning the heater, turn off the power supply and wait for a while until the heater cools down to normal temperature. If a substance is attached to the heater, wipe it off sufficiently with a neutral detergent. Clean the heater surface with a plastic cleaning material. Don't use any metallic brush or file.



● Maintenance for terminals

For cleaning the terminals, turn off the power supply. Remove dust completely with a cleaner. Don't use any cloth moistened with water or a neutral detergent.



AFTER-SALES SERVICE

● If any queries arise,

If a question has arisen, please contact our sales agent from which you brought your equipment or HAKKO CO.

■ HAKKO CO.,LTD. THERMAL DEVICE SALES DIVISION

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