



VESUVIUS®

CRUCIBLE INDUCTION MELTING GUIDELINE

- * Inspect crucibles when received. Check for possible transit damage.
- * Crucibles should be stored in a dry location.
- * Move crucibles with care. Do not drag or roll crucibles when moving from one place to another.
- * Use the proper crucible support. The base block/cast pedestal should be the same diameter as the crucible bottom.

I. INSTALLATION POSITION:

- * Horizontally, the inside bottom of the crucible should be level with the bottom active coil.
- * Vertically, the crucible should be carefully centered with regard to the coil. As a rule of thumb, the distance between the coil and the furnace wall should be about 10 % of the crucible diameter.

II. PRE-HEAT

- * **Charge:** Charge the crucible with the initial heat. It is best to put small material at the bottom, if available, such as turnings, chips or shot. Then add the heaviest, or densest material such as ingots or heavy scrap. Try to fill the crucible and put as much metal surface against the crucible wall.
BUT AVOID WEDGING!

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III. METAL FEED:

- * It is important to keep the crucible full as the charge melts to avoid blistering. Check the metal level carefully and add charges often until total meltdown is achieved.

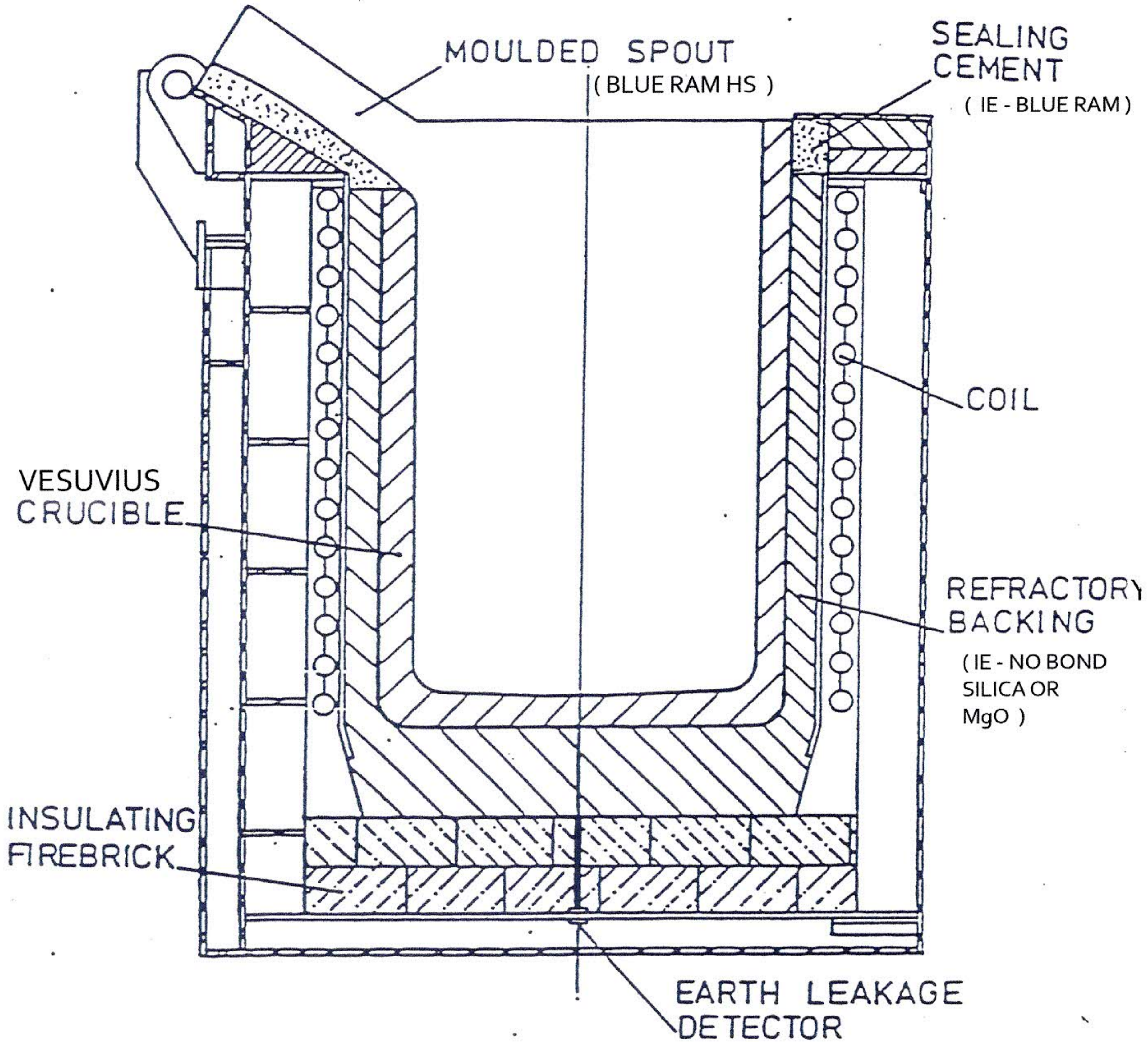
IV. MELTING:

- * Start-up of new bilge type crucibles begin at 25 KW for a 5 minute period. Increase by 25 KW each 5 minutes until optimum KW is reached. The second heat is started at 50 KW for 10 minutes and increased by 50 KW each 10 minutes until optimum KW is reached. The third heat is run as rapidly as possible. This procedure should be followed on the first heat of each working day, even on previously used crucibles. It should also follow on any crucible that is allowed to get cold and not used for long periods during the working day.
- * For tilting furnaces - the recommended steps are 50 KW for two 5 minute periods, then 50 KW in 10 minute periods until the desired power is reached.

V. POURING:

- * If a tilting furnace is involved, a quick pour is desired. If a long pour is used, do so with little or no power to avoid blistering where there is no metal.

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CORELESS TILTING FURNACE SHOWING
CYLINDRICAL SHAPE CRUCIBLE
SUPPORTED BY RAMMED REFRACTORY
BACKING

