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"CARBURITE" GAS CARBURISING FLUID

CARBURITE is specially developed for carburising low carbon steels to impart controlled carbon case depths.

"CARBURITE Gas Carburising Fluid is the result of extensive and advanced technological research and formula, manufactured from the highest quality of chemicals to achieve superior quality case depth in steels. It has extensive advantage over other modes of carburising. It gives better results and has many advantages over other liquid carburisers besides being most competitive.

The fluid is fed in driplet form to a target plate in the furnace, where it volatizes almost instantaneously. The vapour dissociates thermally to provide a carburising atmosphere containing carbon monoxide, carbon dioxide, hydro carbon and water vapour. The flow of liquid to the target plate is adjusted manually or automatically to obtain desired carbon potential. In an airtight furnace careful adjustment of the flow of liquid permits accurate control of carbon potential.

Forced fan circulation serves to distribute the atmosphere evenly throughout the furnace and to promote temperature uniformity. The fan circulates the "spent" gas which acts as a carrier gas and dilutes the rich gas to prevent excessive sooting.

"CARBURITE" is most suited for carburising highly stressed parts such as engine crankshafts, gear etc. needing no grinding after hardening and case depth and carbon gradients are held to within very close limits.

The rate of feed of CARBURITE depends on the size of furnace and quantity of charge. Normally a furnace of size 7 ft. by 36 dia, requires 1.8 to 2.0 pints per hour of Carburite at 900° C. to 920° C.

The case depth can be achieved from low to 2mm or more depending on temperature and timing. Case depth and carbon contents depend on temperature, time and flow of liquid. The desired results can be achieved by controlling all these. General relationship of time, temperature and case depth are illustrated in the following chart.

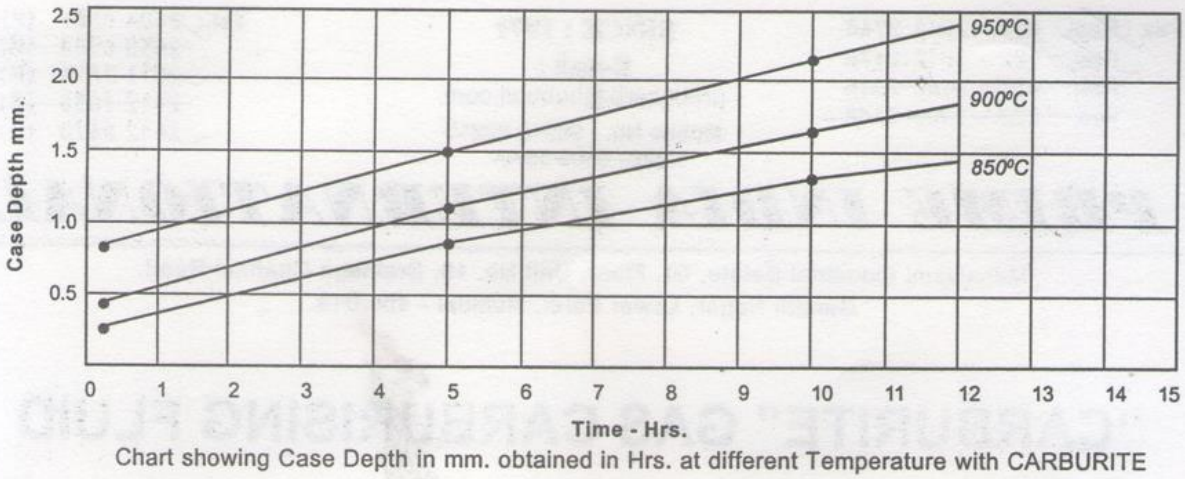

Chart showing Case Depth in mm. obtained in Hrs. at different Temperature with CARBURITE

General Working hints about the operation to achieve proper and constant results as under:

1. Charge load into the furnace at 850° C. along with the test plece.

2 Tighten the lid air-tight and ensure that the air used for feeding liquid in furnace is free from moisture.

3. Check leakage through lid.

4. Feed the liquid at 700° C. from slow rate to required feed.

5. Put on the fan to circulate the atmosphere uniformally.

6. Set fire to the waste gas.

7. Control the temperature, time and feed as required,

8. Take out the test piece for checking case depth.

9. After having achived the required case depth, stop the flow or keep at low rate for diffusion.

10. Quench or cool in the furnace as per required results.

To achieve best results:

1. Use proper trays, baskets and fixtures.
2. Loading should be done to avoid contact between parts and fixtures except point contact.
3. Clean and dry fictures to be used.
4. Remove all contaminants and oil etc. from workload and fixtures,
5. Use of Copper or Stainless Steel tank to be Made.