

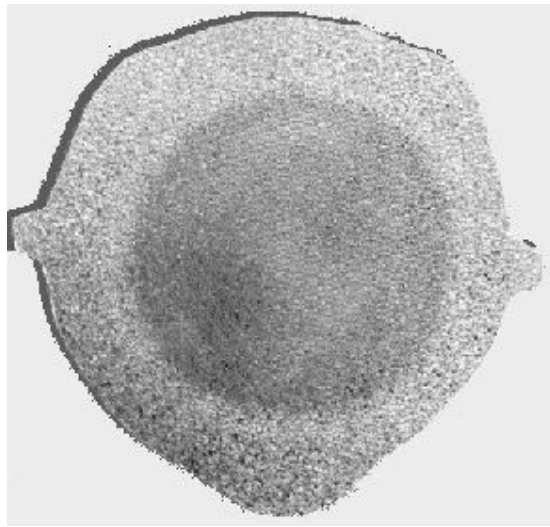
The TEMPCORE™ Process

The TEMPCORE Process has been developed in the early seventies by C.R.M. in order to manufacture high yield strength weldable concrete reinforcing bars from mild steel, without V or Nb additions : the TEMPCORE™ rebar.

Principle:

It consists in subjecting the hot rolled steel to an in-line heat treatment in 3 successive stages:

- as soon as it leaves the final mill stand, the product is rapidly and energetically cooled through a short cooling installation, where it undergoes surface hardening (martensite layer)
- as soon as this quenching operation is stopped, the surface layer is TEMpered by using the residual heat left in the CORE of the bar (self tempering of the martensite layer) ; hence the name TEMPCORE
- the third stage takes place while the product lies on the cooling bed where the bar is subjected to normal cooling down to ambient temperature (transformation of the residual austenite in the core)



TEMPCORE is the Best Process for the Production of High Quality Rebars:

Costly alloying elements (Vanadium, Niobium) are replaced by low-cost ... water, in order to obtain from low C-Mn steel, concrete reinforcing bars with :

- high mechanical properties (DIN 488 IVS, FeE500, BS4449-97, ...)
- excellent weldability
- excellent ductility and bendability

