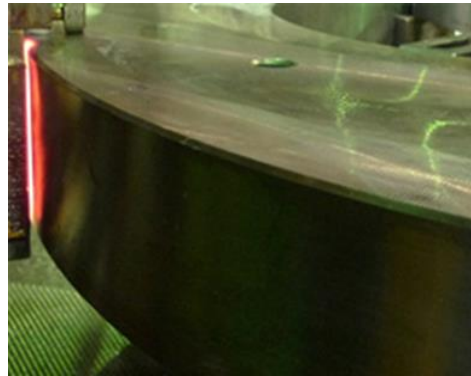


IH quenching of cams

DHF provides the IH quenching service to cams, which hardens outer surface of cams. DHF can especially implement IH quenching of large size cams by using NC controlled IH quenching equipment which realizes zone heating and quenching by moving along the surface of the irregular shaped cam.



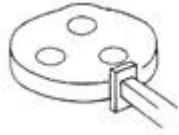
Cam mounted on the IH equipment



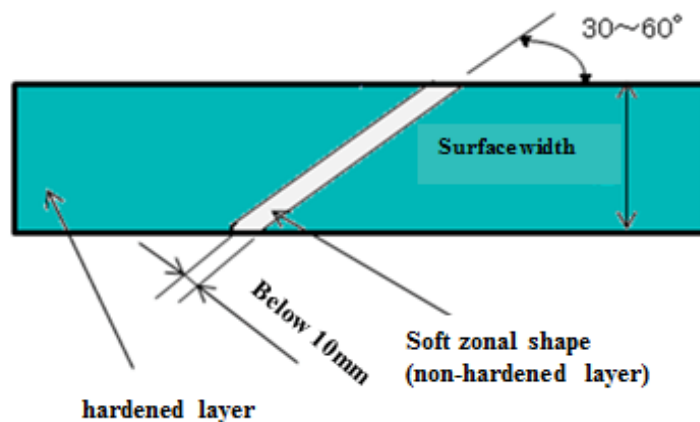
Moving zone quenching of outer surface of large cam

Characteristics of zone moving quenching of large cam

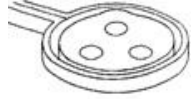
- Stable quality: Uniform hardness and hardened depth all over the cam surface by NC controlled IH quenching
- Soft-zone stability: Can be set at any angle at narrow width
- Low thermal distortion: Low thermal distortion due to relatively small heat input uniform depth of hardened layer
- Short delivery time: Zone quenching requires small inductors, which take short time to be made
- Competitive price: Low production cost of inductors, as well as low quenching cost

Quenching	Radius min-max (mm)	Approximate round distance (mm)	Zone height (mm)	Maximum weight (kg)	Characteristic	Configuration between cam and inductor
Zone (horizontal) quenching	150-2000	6000	50-300	5000	Soft zone exists Suitable to large cam	

Pattern of Soft zone (non-quenching zone)



Other heat treatment methods

Types	Radius min-max (mm)	Approximate round distance (mm)	Zone height (mm)	Maximum weight (kg)	Characteristic	Configuration between cam and inductor
One-time quenching	Below 500	3000	20-100	5000	No soft zone exists Deep hardened layer Suitable to medium and small cam	
Zone (vertical) quenching	Below 600	4000	80-450	5000	No soft zone exists Deep hardened layer Suitable to all size cam	