

Pre-Qualification Requirements for Induction hardening:

PQR/Induction Hardening/Rev 01

Sl. No.	Technical Requirement	Documents / Vendor's response required	Vendor's reply
1	Vendor must have experience of induction hardening of components of high carbon/ alloy steel. Vendor must have carried out induction hardening on high carbon / alloy steel against at least one purchase order in last 5 years	<ul style="list-style-type: none"> <li>- Unpriced PO copy.</li> <li>- Details of material grade, dimension / sketch / drawing of component, requirement of case depth, hardness</li> <li>- Test certificate covering case depth, hardness and DP/MPI</li> </ul>	
2	Vendor must have in house facility for induction hardening to meet requirement of BHEL enquiry drawing and specification.	<ul style="list-style-type: none"> <li>- Details of the induction hardening facility including facility for quenching to be submitted.</li> <li>- Details of heat treatment facility to carry out tempering / stress relieving (after induction hardening) to be submitted.</li> </ul>	
3	<p>a Vendor should have testing facilities for carrying out hardness, case depth measurement and DPT / MPI of hardened surface.</p> <p>b If facilities are not available in-house, vendor to confirm to carry out testing at NABL/Govt. approved lab.</p>	<p>a Details of in-house testing facility to be submitted.</p> <p>b Vendor's confirmation is required.</p>	
4	<p>a Process qualification will be carried out to establishment of process parameter before starting main job, if not done earlier.</p> <p>b Six (06) number samples of size dia. 90, L=57 mm of enquiry material grade X22CrMoV12-1 with extension shall be provided by BHEL for process qualification – (refer sketch attached). Induction hardening is to be carried out on the samples which shall be tested against drawing requirements of case depth, hardness. Induction hardening parameter established for successful process qualification test requirements shall be repeated on another sample to confirm repeatability of the process. Process qualification test results has to be submitted to BHEL for review. These parameters shall be used for hardening of actual job.</p>	<p>a Process qualification results, if available, to be submitted else vendor's confirmation for carrying out process qualification is required</p> <p>b Vendor's confirmation required</p>	
c	Hardening on actual component shall be done only after acceptance of process qualification test results by BHEL. All the above samples (used for process qualification as well as unused samples) shall be returned to BHEL.	Vendor's confirmation required	

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