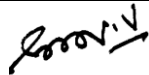
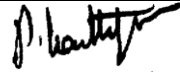


| <br><b>RANIPET</b> |                        | <b>Quality assurance</b><br><b>M/S BHEL BAP</b><br><b>RANIPET</b><br><b>TAMILNADU 632 406</b> |               | <b>STANDARD QUALITY PLAN</b>                                   |                    |                     |                   |                    |      |         |
|-----------------------------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------------------|---------------|----------------------------------------------------------------|--------------------|---------------------|-------------------|--------------------|------|---------|
|                                                                                                     |                        |                                                                                               |               | <b>ITEM/SUB SYSTEM</b><br><b>PINION (37,42,43,47,50 TEETH)</b> |                    |                     | <b>Doc No</b>     | <b>SQP APH 112</b> |      |         |
|                                                                                                     |                        |                                                                                               |               |                                                                |                    |                     | <b>Rev No.</b>    | <b>00</b>          |      |         |
|                                                                                                     |                        |                                                                                               |               |                                                                |                    |                     | <b>Date</b>       | <b>18 05 2010</b>  |      |         |
|                                                                                                     |                        |                                                                                               |               |                                                                |                    |                     | <b>Page No</b>    | <b>Page 1 of 2</b> |      |         |
| Sl No                                                                                               | Component /Description | Characteristics                                                                               | Type of check | Quantum of check                                               | Reference document | Acceptance standard | Format of Records | Agency Supplier    | BHEL | Remarks |

|                                 |                                         |                            |                 |                 |                                                     |                   |   |   |          |      |
|---------------------------------|-----------------------------------------|----------------------------|-----------------|-----------------|-----------------------------------------------------|-------------------|---|---|----------|------|
| <b>1.0 Raw material</b>         |                                         |                            |                 |                 |                                                     |                   |   |   |          |      |
| 1.1                             | Chemistry                               | Material composition       | TC verification | One no per heat | Materail specification as per APSQ/Approved drawing | Test certificate  | W | V |          |      |
| 1.2                             | Mechanical test                         | Tensile/yield /Elongation, | TC verification | One no per heat | Materail specification as per APSQ/Approved drawing | Test certificate  | W | V |          |      |
| <b>2.0 Inprocess Inspection</b> |                                         |                            |                 |                 |                                                     |                   |   |   |          |      |
| 2.1                             | Dimensional inspection(Proof machining) | Dimensions                 | Measurement     | 100%            | Approved drawing                                    | Inspection report | W | V |          |      |
| 2.2                             | Non destructive testing                 | Soundness                  | UT              | 100%            | ASTM A388 (**)                                      | -DO-              | W | V |          |      |
| <b>3.0 Final Inspection</b>     |                                         |                            |                 |                 |                                                     |                   |   |   |          |      |
| 3.1                             | Finish turning/teeth machining          | Measurement                | Measurement     | 100%            | APSQ /Approved drawing                              | -DO-              | W | W | Ref Note | \$\$ |

**(\*\*) When back wall Echo is set to 100 % of FSH in Sound area a) Defect Echo not to exceed 20 % of FSH during scan.b) Back wall Echo loss permissible is 20 % of FSH.**

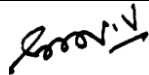
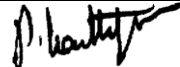
**(\$\$) 1.Faceout,2.Runout,3.Bore diameter,4.Key location,5.Key dimension,6. Diametral pitch, no of teeth, circular pitch, Total tooth depth, chrordal height , chordal width, width across 5 teeth,.**

|                                                                                     |                                                                                       |                                                                                       |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Prepared By                                                                         | Reviewed by                                                                           | Approved by                                                                           |
|  |  |  |

|                                                                                                     |                                                                                               |                                                                |                      |                         |                           |                            |                          |                        |             |                |
|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------------|-------------------------|---------------------------|----------------------------|--------------------------|------------------------|-------------|----------------|
| <br><b>RANIPET</b> | <b>Quality assurance</b><br><b>M/S BHEL BAP</b><br><b>RANIPET</b><br><b>TAMILNADU 632 406</b> | <b>STANDARD QUALITY PLAN</b>                                   |                      |                         |                           |                            |                          |                        |             |                |
|                                                                                                     |                                                                                               | <b>ITEM/SUB SYSTEM</b><br><b>PINION (37,42,43,47,50 TEETH)</b> |                      |                         |                           |                            | <b>Doc No</b>            | <b>SQP APH 112</b>     |             |                |
|                                                                                                     |                                                                                               |                                                                |                      |                         |                           |                            | <b>Rev No.</b>           | <b>00</b>              |             |                |
|                                                                                                     |                                                                                               |                                                                |                      |                         |                           |                            | <b>Date</b>              | <b>18 05 2010</b>      |             |                |
|                                                                                                     |                                                                                               |                                                                |                      |                         |                           | <b>Page No</b>             | <b>Page 2 of 2</b>       |                        |             |                |
| <b>Sl No</b>                                                                                        | <b>Component /Description</b>                                                                 | <b>Characteristics</b>                                         | <b>Type of check</b> | <b>Quantum of check</b> | <b>Reference document</b> | <b>Acceptance standard</b> | <b>Format of Records</b> | <b>Agency Supplier</b> | <b>BHEL</b> | <b>Remarks</b> |

|     |                                                                      |                              |                       |      |                                   |      |   |   |                                                                                            |
|-----|----------------------------------------------------------------------|------------------------------|-----------------------|------|-----------------------------------|------|---|---|--------------------------------------------------------------------------------------------|
| 3.2 | Teeth hardening                                                      | Type of hardening            | Hardness              | 100% | APSQ/ Approved drawing            | -DO  | W | W |                                                                                            |
| 3.3 | Surface examination                                                  | NDT                          | Dye penetrant testing | 100% | No visual defects                 | -DO- | W | W |                                                                                            |
| 4.0 | Identification                                                       | Serial no and supplier name  | Visual                | 100% | Vendor practice                   | -DO- | W | V |                                                                                            |
| 4.1 | Protective coating                                                   | Surface preparation          | Measurement           | 100% | APSQ/Approved drawing             | -DO- | W | V | Two coats Zinc phosphate on body ( 60 microns)and Sea worthy Rust preventive oil on teeth. |
|     |                                                                      | Painting/Protect ive coating | -do-                  | -do- | APSQ/Approved drawing             | -DO- | W | V |                                                                                            |
| 5.0 | Packing (Two layers - Polythene and Gunny bag in wooden box packing) | Visual                       | Visual                | 100% | BHEL appvd drawing/vendor drawing | -DO- | W | V |                                                                                            |

**Not e : Dimnessions and tolerance shall be as per respective APSQ .**

|                                                                                     |                                                                                       |                                                                                       |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>Prepared By</b>                                                                  | <b>Reviewed by</b>                                                                    | <b>Approved by</b>                                                                    |
|  |  |  |