9.2 Field Instrumentation

Static testing and calibration should be done in a specifically designed site workshop prior to installation in the plant.

CONTRACTOR shall ensure that :

The calibration procedure demonstrates a proper and accurate method of performing static testing and alignment operations of the instrument, as well as full range (and overrange) capabilities according to the manufacturers specifications.

All testing and calibration is to be witnessed by the ADWEA's/ENGINEER’s representative and documented on approved test-sheets. Appropriately, "defects" should also be recorded.

A full record is submitted to the ADWEA's representative following calibration completion.

9.3 Instrument Calibration

The purpose of instrument calibration is to obtain a permanent record of the equipment precision and to verify that it measures, indicates, and records within the tolerances guaranteed by the manufacturer. Instrumentation shall be calibrated using conventional output signals measured, adjusted to correlate with the relevant input signals.

As far as possible instrument re-installation testing and calibration shall be carried out in a dedicated workshop located near to the plant area. This workshop will be equipped with all necessary testing materials, tools and consumable media (clean instrument air, nitrogen, temperature bath oil etc.). Portable calibration equipment will also be available for testing instrumentation not destined to be removed from it’s site location.

All the test and measuring instruments shall be certified with ADWEA/ENGINEER recognised testing laboratory. Proposed list of Test and Measuring instruments shall be listed in the bid documents by the CONTRACTOR.

9.4 Calibration Guidelines

Electronic instrumentation shall be energised for a suitable "warm-up" period prior to calibration tests.

All field mounted analogue signalling instruments will be calibrated by simulating an appropriate process signal. Outputs will be recorded at (5) selected intervals corresponding to 0% - 25% - 50% - 75% - 100% of input range. This calibration will be recorded for rising as well as falling input signals.

Digital on/off devices such as pressure switches need only be checked at the required set-point (with either rising or falling input as specified in the detailed specification). The resetting value will be verified and any hysteresis within acceptable manufacturing limits accepted.

All calibrations shall be witnessed by the ADWEA's/ENGINEER’s representative at his discretion.