

1.4.5.4 MCC protection, MPR, VFD, Soft Starter

Refer to	3.11.02	Test Specifications and Certifications,
	3.11.31	Source Tests
	3.16	Protection
	3.26	Infra – Red Thermography

All necessary tools like oscilloscope, laptop, programs with license shall be used by supplier to comply with site configuration.

1.4.5.5 Instrumentation

All necessary tools like oscilloscope, laptop, programs with license shall be used by supplier to comply with site configuration.

1.4.5.6 PLC, HMI, RTU

Refer to	3.22.25	Factory Acceptance Tests (FAT)
	3.22.27	Source Tests
	3.22.28	Field Tests

Control philosophy shall be tested, Commissioning of Digital and Analog signals field to PLC to HMI to RTU.

All necessary tools like oscilloscope, laptop, programs with license shall be used by supplier to comply with site configuration.

1.5 Part 5 Pre-Condition Pac**1.5.1 Pre-Conditions for the Issue PAC Certificate**

The PAC - Certificate will be issued only after the Contractor has complied with all the below listed conditions, in addition to other conditions mentioned elsewhere in the Contract:

- a. Hydraulic performance tests
- b. Contractual trial tests
- c. Snag list of outstanding items to be completed
- d. O&M manuals & as-built documentation including catalogues etc.
- e. Workshop laboratory & safety equipment, tools and instruments,
- f. Spare parts, consumables