

## 1. SCOPE

This Specification covers the general requirements for the handling and installation of control system and instrumentation equipment as laid down in the design, drawings, technical specification, bill of quantities and all the other related documents. Handling includes storing, protecting, transporting, etc. required for the installation of the equipment. Installation includes the physical mounting, process connection, instrument air routing and connections, and cable routing and terminations, as required, to produce a complete functional instrumentation and control system as defined in the project drawings and documents.

## 2. STANDARDS & CODES

Equipment, materials and services provided for this project must comply with all applicable local and national codes, standards, regulations and the like. The CONTRACTOR shall determine what codes, standards etc. apply to items within the scope of this specification.

Specific applicable industry codes and standards to be used, are indicated in project specifications.

Compliance with the applicable portions of all project specifications shall be the responsibility of the Contractor.

Any conflicts between the referenced documents shall be identified to ADWEA/ENGINEER in writing for resolution.

CONTRACTOR shall refer to all project-related drawings and documents to carry out the stated activities.

## 3. SITE CONDITIONS

- a) The site location of this project has a dust laden atmosphere. The temperature at night drops considerably, resulting in condensation. These conditions attack instrumentation electric terminals, contacts, etc. for which the CONTRACTOR must design protective measures. Any instrumentation not in an air conditioned atmosphere shall be supplied with waterproof, dust tight enclosures. In addition, local instrument cabinets shall also be weatherproof and equipped with space heaters.
- b) It is the CONTRACTOR's responsibility to design, furnish and install the instruments and control equipment to withstand and operate properly under the prevailing ambient conditions described in the project General Technical Requirements of this Contract. This Specification serves as a guideline to the CONTRACTOR. The CONTRACTOR shall make recommendations and include all the necessary equipment or protecting devices based on his previous experience on similar installations.
- c) All transmitters, electric/pneumatic converters, switches and other electrical devices which provide input signals to control systems must be housed in waterproof, insulated, dust-tight and heated (as required) local instrument cabinets to protect against corrosion, humidity and condensation. Sun shades shall also be provided and designed to protect cabinets from direct rays of the sun.



Client	ADWEA
Project:	STANDARD SPECIFICATIONS FOR WATER WORKS
Title:	SPECIFICATION FOR INSTRUMENTATION & CONTROL SYSTEMS INSTALLATIONS