

7. INSTRUMENT CABINETS AND PANELS

CONTRACTOR shall supply and install all required cabinets and panels. The quantity of cabinets and panels shall be determined by the CONTRACTOR. 20% spare space for future expansion shall be available in these cabinets and panels.

The cabinets shall be accessible from two sides and shall be approximately 2100 mm high, 1200 mm wide and 600 mm, deep the two opening doors at both sides shall be turnable over 180°. It shall be possible to lift the doors up and off their hinges to allow easy removal of the doors.

Cabinets and panels shall be completely wired to the terminals, requiring only connections to the external wiring circuits at site.

The cabinets shall be shop tested.

The cabinets shall be adequately ventilated through natural circulation in order that the heat generated by the equipment mounted there shall remain within the rated temperature limit, should mechanical ventilation be used, it should be an addition to the free cooling and not to bring the working temperature to the acceptable limits, the IP rating shall be to IP 54.

Extra electrical sockets for test and repair purposes shall be provided in the control panel and cabinets. These sockets shall be according to British Standards suitable for flat and round pins, instrument cabinets and panels shall also equipped with space heaters.

The door shall have separate handle and locks. Each lock shall be provided with 2 keys. Internal fluorescent type illumination shall be provided for every cabinet. Door switches shall be provided to switch off the illumination.

Internal wiring shall be adequately sized for the required voltages and currents. Cable ducts shall be provided with at least 30% spare capacity after complete wiring. Separate ducting shall be provided for the wires carrying different voltages.

Safety earth connection shall be provided for every cabinet. 2 tinned copper earth-bars for signal earth connection shall be provided one of them shall be isolated from cabinet frame, another earth bar shall be used for safety earth. They shall be wired to separate earth-pits by Contractor.

Panels shall be provided with two copper earth bars of minimum dimensions 6*25*100 mm.

The cabinets shall be fabricated of cold rolled sheet-steel and shall be rigid and stable the minimum thickness of the ground plate shall be 5 mm, for doors and other plates a minimum thickness of 2 mm.

The cabinets shall be of high standards quality in terms of visual appearance, colour, finish, smoothness of surface, etc.

Materials for nameplates shall be selected in accordance with the weather data and area conditions and shall be of the non-metallic type, with black inscriptions on white background.



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