



Standard Operating Procedure - Cooling Tower Panel Operation

ID: SOP/PSIPL/CT-Axis

Rev: 1.3

Issue Date: 4th November 2018

(1) : Objectives



1.1 Purpose

Operation of cooling tower panel

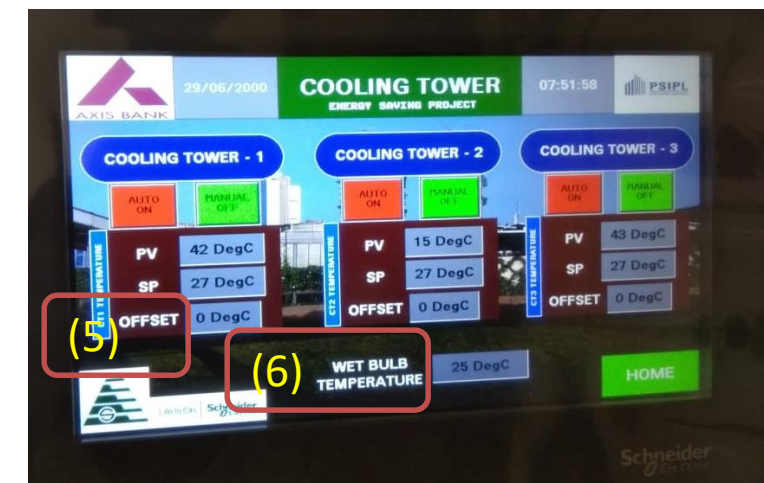
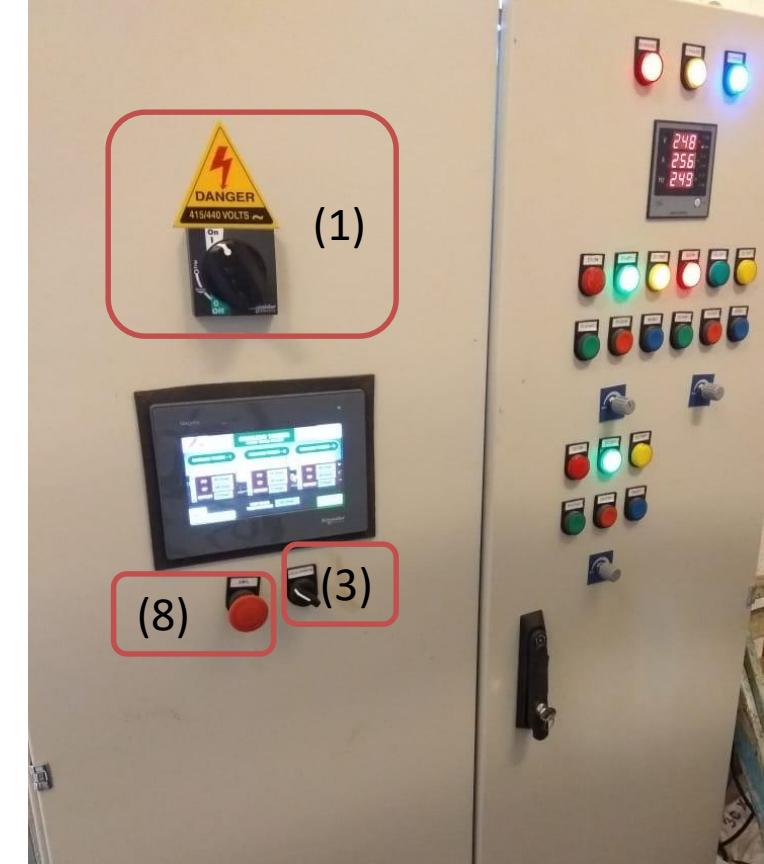
1.2 Standards of Delivery

To operate cooling tower fans as required for facility operations



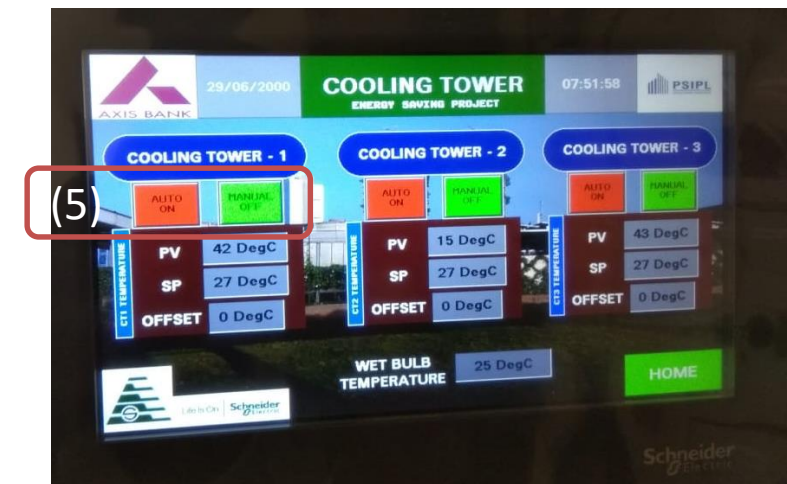
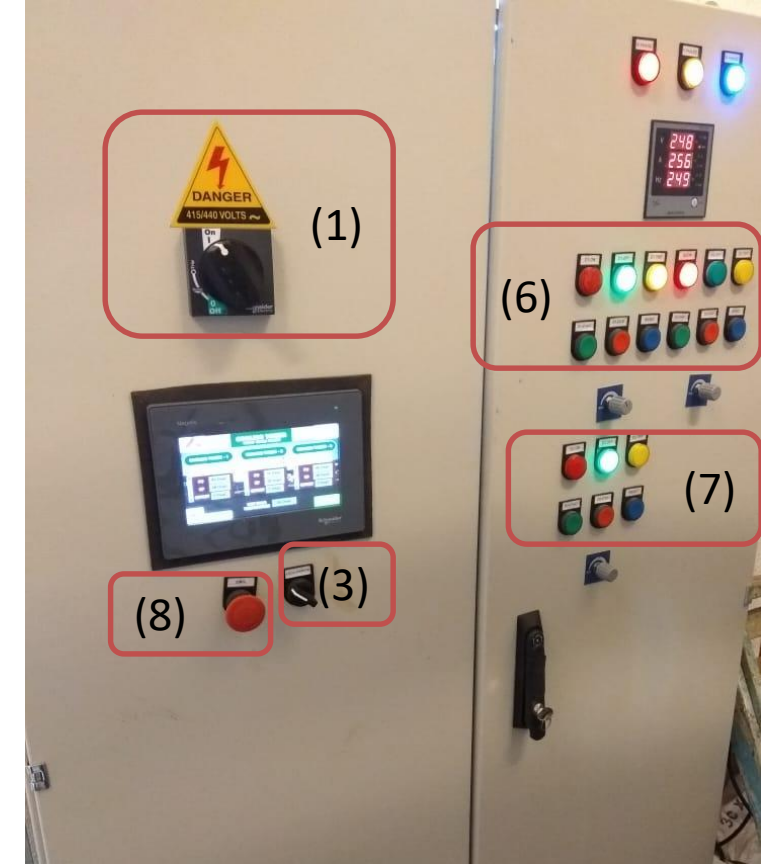
(2) : Procedure for Normal operations

SOP	Reference
1. Keep the Mains Incoming switched ON at all times	As shown in the picture – (1)
2. There are 2 modes of operations : “REMOTE” thru BMS and “LOCAL” thru push buttons on Panel	-
3. For normal operations, please keep the selector switch in “REMOTE” mode	As shown in the picture – (3)
4. In REMOTE mode, the cooling towers can be Switched ON/OFF through BMS as it was operated earlier.	
5. In REMOTE mode, the fan speed will be controlled automatically through the PLC based on OFFSET which is currently defined between 3-5 degC	As shown in the picture – (5)
6. The OFFSET is nothing but required cooling tower approach & the Cooling tower Setpoint-SP is “WET BULB TEMPERATURE + OFFSET”	As shown in the picture – (6)
7. For any emergency situations, press the “Emergency Push Button” on the panel immediately	As shown in the picture – (8)



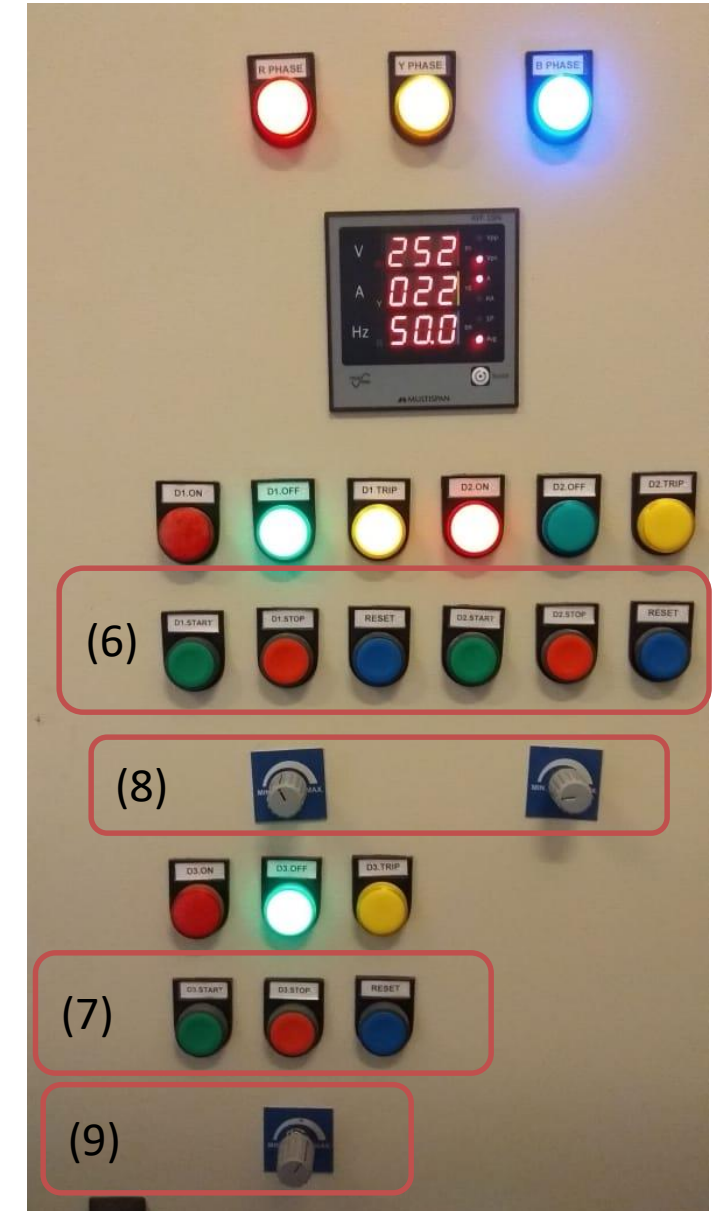
(3) : Procedure incase of BMS Breakdown – Local ON/OFF

SOP – Incase of building BMS is not functional	Reference
1. Keep the Mains Incoming switched ON at all times	As shown in the picture – (1)
2. Incase of BMS breakdown, keep the selector switch in “LOCAL” mode and select the “AUTO” option from HMI	As shown in the picture – (3) & (5)
3. After switch is set to LOCAL and AUTO option is selected in HMI, the cooling towers should be Switched ON/OFF through push buttons given on the new panel as per the facility’s requirements	As shown in the picture – (6) & (7)
4. In AUTO option, the fan speed will be controlled automatically through the PLC based on WET BULB TEMPERATURE & OFFSET entered in the HMI	
5. For any emergency situations, press the “Emergency Push Button” on the panel immediately	As shown in the picture – (8)



(4) : Procedure incase of one-by-one CT Servicing & simultaneous partial CT operations

SOP	Reference
1. Keep the Mains Incoming switched ON	As shown in the picture – (1) in previous page
2. Incase of one-by-one CT maintenance, keep the selector switch in “LOCAL” mode and select the “Manual” option from HMI	As shown in the picture – (3) & (5) in previous page
3. Now the cooling towers can be Switched ON/OFF through push buttons given on the new panel as per the facility’s requirements	As shown in the picture – (6) & (7)
4. The cooling tower speed can be controlled using potentiometers given on the panel & the VFD speed can be seen inside the panel on each VFDs	As shown in the picture – (8) & (9)
5. For any emergency situations, press the “Emergency Push Button” on the panel immediately	As shown in the picture – (1) in previous page



(5) : Procedure for LOTO (Lock-Out Tag-Out) of Cooling tower panel/fans

SOP	Reference
1. Switch OFF the MAINS incoming	As shown in the picture – (1)
2. Keep the selector switch in LOCAL MODE as an added safety	As shown in the picture – (3)
3. Please ensure that the panel is switched OFF and locked by the authorized electrician as per the instruction of FM-Technical or shift engineer	
4. Press the “Emergency Push Button” on the panel as a 3 rd level of redundancy & safety. Emergency Push button can be released once the LOTO is removed	As shown in the picture – (8)

