

APPENDIX 18
FORCE VENTILATION FOR TRANSFORMER ROOM AT BASEMENT
(Refer section 11 of regulations)

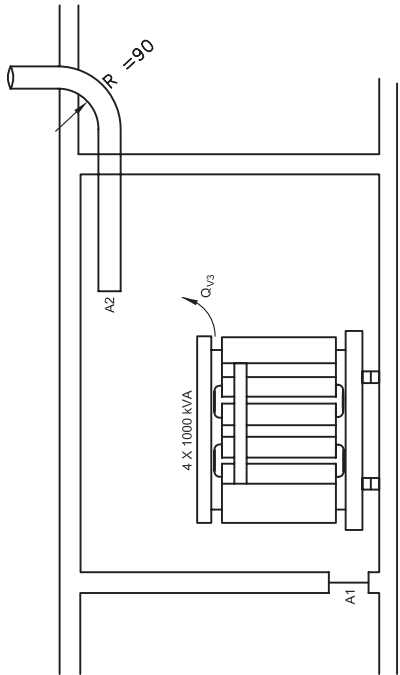


DIAGRAM OF THE FORCED VENTILATION
SYSTEM FOR WORKED EXAMPLE

WORK EXAMPLE
THE INSTALLATION COMPRESS :
4 TRANSFORMERS OF 1000 kVA EACH
TOTAL LOSSES
 $Q_{V3} = \Sigma P_v = 4 \times 12.9 \text{ kW} = 51.6 \text{ kW}$
THE MAXIMUM AMBIENT AIR INLET TEMPERATURE IN DUBAI IS 48°C
THE TEMPERATURE DIFFERENCE OF $\Delta\theta_L = 7\text{k}$
THE FOLLOWING VALUES ARE OBTAINED FROM THE FIGURE
COOLING AIR FLOW RATE $23,000 \text{ m}^3/\text{h}$
DUCT CROSSING SECTION $.055 \text{ m}^2$
AIR VELOCITY 10 m/g
AIR INLET CROSS SECTION 2.6 m^2

