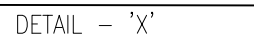


MWV SPRAY SYSTEM FOR CABLE GALLERY FOR TG BUILDING, ESP CONTROL ROOM
(TYPICAL ARRANGEMENT OF DELUGE VALVE ASSEMBLY)

MVW SPRAY SYSTEM FOR COAL CONVEYOR
(TYPICAL ARRANGEMENT OF DELUGE VALVE ASSEMBLY)



1. ALL PIPE AT THE DOWNSTREAM OF DELUGE VALVE SHALL BE GALVANIZED ONLY. OTHER PIPES SHALL BE MS ERW.
2. SET POINT OF INSTRUMENTS SHALL BE FURNISHED SEPARATELY AFTER FINALIZATION OF HYDRAULIC CALCULATION.
3. GATE VALVES SHALL BE PROVIDED FOR EACH DELUGE VALVE ON DOWNSTREAM. BYPASS LINE FOR DELUGE VALVE SHALL BE PROVIDED WITH BUTTERFLY VALVE. BUTTERFLY VALVE SHALL BE PROVIDED FOR EACH DELUGE VALVE ON UPSTREAM. Y-STRAINER SHALL BE PROVIDED AT UPSTREAM OF EACH DELUGE VALVE AFTER BUTTERFLY VALVE.
4. SYSTEM SHALL ALSO HAVE A MANUAL OVER RIDING FACILITY ALONG WITH REGULAR TESTING FACILITY
5. IN ORDER TO AVOID TOTAL FLOODING OF THE CABLE GALLERY & COAL CONVEYORS, THESE AREAS WILL BE DIVIDED INTO NUMBER OF ZONES. EACH ZONE WILL HAVE SEPARATE WATER SUPPLY NETWORK CONTROLLED BY A DELUGE VALVE.
6. AN ORIFICE PLATE (IF REQUIRED) AT EACH DV ASSEMBLY UPSTREAM SHALL BE INSTALLED TO DISSIPATE EXCESS PRESSURE OVER MINIMUM REQUIRED PRESSURE FOR SUCCESSFUL OPERATION OF SPRAY SYSTEM.
7. IN CASE OF MULTIPLE ZONES IN ANY PREMISES, LOGIC OF OPERATION SHALL BE ESTABLISHED. THE OPERATIONAL WATER REQUIREMENT SHALL NOT EXCEED THE TOTAL AVAILABLE WATER.
8. CABLE CELLARS:
 - (A) VENTILATION SYSTEM SHALL TRIP AUTOMATICALLY BEFORE ACTUATION OF SPRAY SYSTEM.
 - (B) AS THE CABLE CELLAR IS OVER GROUND , THE DRAINAGE OF THE WATER SHALL BE CONNECTED TO MAIN PLANT DRAIN THROUGH GRAVITY ONLY. NO SEPARATE DE WATERING PUMP SHALL BE PROVIDED FOR DRAINAGE PURPOSE.
 - (C) LHS CABLES SHALL BE INSTALLED IN STRAIGHT MANNER AS PER CLAUSE NUMBER 6.5.2.2 OF TAC.
9. CONVEYORS:
 - (A) CONVEYOR DRIVE SHALL TRIP AUTOMATICALLY BEFORE ACTUATION OF SPRAY SYSTEM.
 - (B) TWO NUMBER OF IR DETECTOR SHALL BE PROVIDED PER CONVEYOR (ONE AT DRIVE END AND ANOTHER AT NONDRIVE END)
 - (C) ONE RUN OF LHS CABLES SHALL BE LAID AT TOP OF THE CONVEYOR AND ONE RUN AT THE BOTTOM OF THE CONVEYOR .
10. UNDERGROUND PIPELINE SHALL BE WRAPPED & COATED TO PROTECT PIPELINE FROM CORROSION.

1. THE DETECTION IN MVWS SYSTEM SHALL BE THROUGH LHS CABLE, MULTI SENSOR, AS INDICATED IN THE SCHEMATIC OF RESPECTIVE AREA.
2. IN THE EVENT OF FIRE, THE SURROUNDING TEMPERATURE INCREASES. AS THE SURROUNDING TEMPERATURE REACHES THE SET POINT TEMPERATURE, THE DETECTION MEDIA GIVES A SIGNAL TO MAIN FIRE ALARM PANEL. WITH THE RECEIPT OF FIRE SIGNAL, THE MAIN FIRE ALARM PANEL OPENS THE SOLENOID VALVE PLACED ON DELUGE VALVE ASSEMBLY . AS THE SOLENOID VALVE OPENS, THIS CREATES A PRESSURE DROP IN DV CHAMBER.
 THE PRESSURE DROP IN UPPER CHAMBER OF DV WILL OPEN THE DELUGE VALVE AND WATER STARTS PROJECTING OUT FROM THE SPRAY NOZZLES. THIS WILL FURTHER CAUSE A DROP IN PRESSURE IN THE SPRAY HEADER FROM WHICH WATER SUPPLY IS TAKEN FOR MVWS SYSTEM. THIS PRESSURE DROP IN THE RING MAIN WILL START THE PUMPS AS EXPLAINED IN DESIGN MEMORANDUM.
3. IT IS ALSO POSSIBLE TO ACTUATE DELUGE VALVE BY OPERATING THE PUSH BUTTON PROVIDED ON LCPDV (LOCAL CONTROL PANEL OF DELUGE VALVE) OR BY OPERATING A MANUAL LEVER PROVIDED ON DELUGE VALVE TRIM ASSEMBLY.
4. PROVISION IS ALSO PROVIDED IN LCPDV(LOCAL CONTROL PANEL OF DELUGE VALVE) FOR THE REMOTE OPERATION OF THE SYSTEM THROUGH PLANT CONTROL SYSTEM.
5. AUDIBLE ANNUNCIATION OF FIRE WILL ALSO BE ACHIEVED THROUGH ALARM GONG PROVIDED ON DELUGE VALVE ASSEMBLY.

SYMBOL	DESCRIPTION
	FIRE WATER SPRAY PIPE
	CONTROL CABLE
	DELUGE VALVE
	BUTTERFLY VALVE
	GATE VALVE
	DELUGE VALVE
	Y TYPE STRAINER
	NON RETURN VALVE
	SPRAY NOZZLE
	Q.B DETECTOR
	LOCAL CONTROL PANEL FOR DV
	FIRE ALARM PANEL
	PRESSURE SWITCH
	PRESSURE GAUGE
	SOLENOID VALVE
	ALARM BELL
	MONITOR MODULE
	ANNUNCIATION
	ANGLE VALVE
	EMERGENCY RELEASE BOX
	FIRE ALARM PANEL
	MULTI SENSOR SMOKE DETECTOR WITH STANDARD BASE
	LHS CABLE
	IR DETECTOR

DEPT. I.T.O. CODE	UNTL. DIMS. GR.		SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM NO.	NO. OF ITEMS
415	G/W			-N.A.-	-N.A.-	-N.A.-	-N.A.-
TITLE				CARD CODE	DRG. NO.	REV.	
P&ID DIAGRAM FOR MVW SPRAY SYSTEM				N.A.	PY-DP-1-M087-8315-03	02P	
					CUST. DRG. NO.		
				SHT. No	01	NO. OF SHT.	01

ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED	SUMANT	REV.	DATE	ALTERED	SUMANT			
CHD/APPD			CHD/APPD			CHD/APPD			CHD/APPD			CHD/APPD			CHD/APPD			CHD/APPD		28.03.17	CHD/APPD	AMIT	01	28.03.17	CHD/APPD	AMIT
ZONE			ZONE			ZONE			ZONE			ZONE			ZONE			ZONE		REVERSED BASED ON CUSTOMER/ MRCN COMMENTS. LDO TANK DELETED			REVERSED BASED ON CUSTOMER/ MRCN COMMENTS. DATED 10.02.17.			
1			2			3			4			5			6			7		8			9			