

NOTES:—

1. ALL FIRE ALARM PANELS AND REPEATER PANELS SHALL BE WALL MOUNTED TYPE.
2. EACH FIRE ALARM PANEL/REPEATER PANEL SHALL BE PROVIDED WITH 24 V D.C BATTERY BACKUP, COMPRISING OF 2x100% CHARGERS AND 2x100% SMF LEAD ACID BATTERIES.
3. FIRE ALARM PANELS AND REPEATER PANELS SHALL HAVE A BATTERY BACK UP FOR 48 HRS NORMAL OPERATION AND 30 MIN. OF ALARM CONDITION.
4. ALL DETECTORS SHALL BE LOOPED AS PER IS: 2189.
5. DELUGE VALVE, HOOTERS AND STROBES ARE INTERFACED WITH THE FIRE ALARM SYSTEM THROUGH CONTROL MODULE (CM).
6. 10% OF EACH LOOP CAPACITY SHALL BE LEFT FREE IN EACH OF THE LOOP FOR FUTURE ADDITION. ATLEAST ONE LOOP SHALL BE PROVIDED IN EACH FIRE ALARM PANEL.
7. SIREN SHALL HAVE CAPACITY TO COVER 10 KM RANGE AND SHALL BE MOTOR OPERATED WITH THREE PHASE DESIGN.
8. FIRE ALARM CABLES USED FOR LOOPING & POWERING OF DEVICES SHALL BE HRPVC TYPE—C STRANDED ANNEALED PLAIN COPPER FRLS ST—2.
9. MAIN FIRE ALARM PANELS SHALL BE PROVIDED WITH NECESSARY CONTACTS / INTERFACING MODULES FOR INITIATING REQUIRED ALARM / OPERATION OF DELUGE VALVE AND TRIPPING OF HVAC, PACKAGE AIR CONDITIONER, CONVEYOR MOTOR, ETC.
10. THE NUMBER OF LOOPS AND DEVICES/DETECTORS ARE INDICATIVE ONLY. ACTUAL DETAILS SHALL BE FURNISHED DURING DETAIL ENGINEERING
11. AS PER CL. NO. 8.8.1 OF IS 3034 (FIRE SAFETY OF INDUSTRIAL BUILDINGS – ELECTRICAL GENERATING & DISTRIBUTION STATIONS), HVWS SHALL BE PROVIDED FOR ALL TRANSFORMERS OF RATING GREATER THAN 10 MVA OR OIL CAPACITY MORE THAT 2000 LITERS.
12. FAULT ISOLATORS SHALL BE PROVIDED AS PER IS 2189/OEM RECOMMENDATION.
13. SPACING OF DETECTORS AND MANUAL CALL POINTS SHALL BE AS PER IS 2189.
14. THE FOLLOWING SIGNALS SHALL BE TAKEN FROM INERT GAS PANEL TO MAIN FIRE ALARM PANEL LOCATED IN CER THROUGH POTENTIAL FREE CONTACTS/MODULES:—
 - (a) PRE ALARM
 - (b) GAS DISCHARGE SIGNAL
15. HOOTER CUM STROBE SHALL BE PROVIDED ALONG WITH INDOOR MANUAL CALL POINTS.
16. OPERATOR WORKSTATION LOCATED IN CONTROL ROOM & FIRE WATER PUMP HOUSE SHALL BE OF THE FOLLOWING CONFIGURATION:—
 - (a) 24” TFT COLOUR MONITOR
 - (b) MINIMUM I3 PROCESSOR OR EQUIVALENT
 - (c) ONE 4 GB RAM
 - (d) ONE 500 GB HARD DISK
 - (f) BLACK & WHITE NETWORK BASED LASER PRINTER (A4 SIZE), QWERTY KEYBOARD AND OPTICAL MOUSE
17. BACK LIT EXIT SIGN BOARDS SHALL BE PROVIDED IN ALL BUILDINGS AT FLOOR EXITS.
18. THE FOLLOWING SIGNALS SHALL BE TAKEN FROM MAIN FIRE ALARM PANEL TO DCS:—
 - (a) SYSTEM HEALTHY
 - (b) SYSTEM FAULT
 - (c) SYSTEM UNDER FIRE
19. IN COAL CONVEYORS OPTICAL LHS CABLE SHALL BE LAID IN ZIG ZAG FASHION FOR BOTH FORWARD AND RETURN BELT. FOR CABLE GALLERIES LHS CABLE SHALL BE LAID IN STRAIGHT LINES IN THE CENTER OF CABLE TRAY.
20. EACH COAL CONVEYOR SHALL BE PROVIDED WITH 3 INFRARED EMBER DETECTORS WITH INBUILT AIR PURGING UNIT.
21. MFAP—6 SHALL BE SUPPLIED BY BHEL—TBG. INTERCONNECTION OF THIS PANEL IN THE RING ALONG WITH CABLE SHALL BE IN THE SCOPE OF BHEL—TBG.
22. ALL FIRE ALARM PANELS, REPEATER PANELS, OPERATOR WORK STATIONS (OWS) SHALL BE CONNECTED BY A DEDICATED FAULT TOLERANT LOCAL AREA NETWORK (LAN) THROUGH REDUNDANT FIBER OPTIC COMMUNICATION CABLE.

REFERENCE DRAWINGS:—

1. PLOT PLAN
2. DESIGN MEMORANDUM FOR FIRE PROTECTION SYSTEM (PEMC-05480)

[illegible]

CUSTOMER		 TELANGANA STATE POWER GENERATION CORPORATION LTD.																							
PROJECT		4 x 270 MW BHADRADRI TPS																							
CONSULTANT		DESEIN CONSULTING ENGINEERS																							
		BHARAT HEAVY ELECTRICALS LTD. HYDERABAD PROJECT ENGR & SYSTEMS DIVISION				<table><tr><td>DRN.</td><td>NAME</td><td>SIGN.</td><td>DATE</td><td rowspan="3">NO.OF VAR.</td></tr><tr><td>CHD.</td><td>POORNIMA</td><td>—SD—</td><td>18.05.15</td></tr><tr><td>APPD.</td><td>K. GUNJAN</td><td>—SD—</td><td>18.05.15</td></tr></table>		DRN.	NAME	SIGN.	DATE	NO.OF VAR.	CHD.	POORNIMA	—SD—	18.05.15	APPD.	K. GUNJAN	—SD—	18.05.15					
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TITLE		SCHEMATIC DIAGRAM FOR FIRE DETECTION AND ALARM SYSTEM				CARD CODE NA																			
10		11				12																			
						SHT. No. 02 No. of SHT. 02 SIZE - A1																			