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| **From (Section)** | **DGM & I/c**  | **To** | **DGM & I/c (PC&A)** |
| **Assignment No.**  |  | **Issue date**  |  |
| **Title :-**  | **By when required**  |  |
| **Name of engineer to be contacted for clarifications:** |  |

1. **Brief description of the job with all necessary input information:**

**(In a big project, like complete Blast furnace or CRM, HSM, etc. which involves a number of sub-areas, brief description of scope of work in each area to be furnished)**

**Scope of work for Automation and Control along with process flow diagram in the form of drawing or sketch.**

**Area-wise list of measurement and control parameters in tabular format to be furnished.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S. No. | Measurement | **Location** | Line/Header size | Parameters |
|  |  |  |  | Max. | Normal | Min. |
| 1. | Pressure |  |  |  |  |  |
| 2. | Temperature |  |  |  |  |  |
| 3. | Flow |  |  |  |  |  |
| 4. | Level |  |  |  |  |  |
| 5. |  |  |  |  |  |  |
| Sl. No. | Control parameters | **Location** | **Line/Header size** | **Control loop details** |
|  |  |  |  |  |
|  |  |  |  |  |

1. **Any special measurements which has a major cost implication to be mentioned separately.**
2. **CCTV Systems for Surveillance**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sl. No. | Premises/ Area of camera location | **No. of Cameras** | **Indoor/ Outdoor** | **Location of Control Unit** |
|  |  |  |  |  |

1. **Fire detection and alarm**
2. Details of rooms, their sizes & type of rooms in which FDA is to be considered.
3. Details of cable vaults, tunnels, galleries, basement in which FDA is to be considered.
4. **CO detection**
5. Details of rooms, their sizes, type of rooms in which CO detection is to be considered.
6. Details of areas other than rooms where CO detection is to be provided.
7. **Telecommunication system**

Details of rooms, type of rooms in which telephone facility is to be provided.

***(Note: Requirements mentioned under C, D, E should be given by the technology or electrical section depending upon the type of room and other areas)***

1. **Levels of Automation required:**

Level-1: PLC/DCS/Panel based controls where the operator enters the set-points of process control.

Level-2: Requirement of mathematical models in which the set-points are downloaded to the Level-1 system from level-2 process servers.

***Level-3 & level-4: To be considered by C&IT and hence requirement to be given to C&IT.***

1. **Inputs required specifically from electrical section:**
2. Type of MCC envisaged and communication issues
3. Philosophy of connectivity of electrical signals with PLC/MCC
4. Requirement of I/Os of electrical system and redundancy in I/O modules
5. Requirement of marshalling relay panel for electrical I/Os.
6. Type of VFD envisaged and communication issues
7. UPS related issues to be discussed mutually