|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **From (Section)** | **DGM & I/c** | **To** | **DGM & I/c (Mechanical Engg.)** | |
| **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:**
2. **Scope of work for with Process flow diagram and layout in form of drawing or sketch.**
3. **Area wise required input information to be filled up by Technologist/TFL:**
   1. **Material Handling** 
      1. **Crane, hoist & transfer car**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sl. No.** | **Description** | **Location** | **Qty.** | **Span(m)** | **Capacity** | | | **Lift** | **Travel(m)** |
| **MH** | **AH1** | **AH2** |
| 1 | Four Girder EOT Crane |  |  |  |  |  |  |  |  |
| 2 | Double Girder EOT Crane |  |  |  |  |  | X |  |  |
| 3 | Semi portal cranes |  |  |  |  |  | X |  |  |
| 4 | Under slung crane |  |  |  |  | X | X |  |  |
| 5 | Gantry crane |  |  |  |  |  | X |  |  |
| 6 | Jib crane |  |  | Radius |  | X | X |  | Angle of Rotation |
| 7 | Electric hoist |  |  | X |  | X | X |  |  |
| 8 | Manual hoist |  |  | X |  | X | X |  | X |
| 9 | Transfer car |  |  | Track gauge | Carrying capacity | X | X | X |  |

* + 1. **Belt Conveyors:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No.** | **Conveyor No.** | **Capacity (tph)** | **C/C distance(m) (Indicative)** | **Lift (m) (Indicative)** | **Remarks** |
| 1. |  |  |  |  |  |
| 2. |  |  |  |  |  |
| 3. |  |  |  |  |  |

* 1. **Hydraulic System**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| S. No. | Equipment description | Purpose | Area of operation | Quantity | Remarks |
|  |  |  |  |  |  |
| 1. |  |  |  |  |  |
| 2. |  |  |  |  |  |
| 3. |  |  |  |  |  |

* 1. **Lubrication System**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| S. No. | Equipment description | Purpose | Area of operation | Quantity | Remarks |
|  |  |  |  |  |  |
| 1. |  |  |  |  |  |
| 2. |  |  |  |  |  |

* 1. **Repair Shop**
     1. **Lathe Machine**

|  |  |  |
| --- | --- | --- |
| **Sl.no.** | **Description** | **Parameters** |
| 1 | Job dia. (Max.) |  |
| 2 | Distance between centers |  |

* + 1. **Milling Machine**

|  |  |  |
| --- | --- | --- |
| **Sl.no.** | **Description** | **Parameters** |
| 1 | X axis |  |
| 2 | Y axis |  |
| 3 | Z axis |  |

* + 1. **Shaping Machine**

|  |  |  |
| --- | --- | --- |
| **Sl.no.** | **Description** | **Parameters** |
| 1 | Length of stroke |  |

* + 1. **Vertical slotting machine**

|  |  |  |
| --- | --- | --- |
| **Sl.no.** | **Description** | **Parameters** |
| 1 | Diameter of worktable |  |
| 2 | Stroke length |  |

**Band Saw**

|  |  |  |
| --- | --- | --- |
| **Sl.no.** | **Description** | **Parameters** |
| 1 | Cutting capacity - round |  |

* + 1. **Pedestal Grinder**

|  |  |  |
| --- | --- | --- |
| **Sl.no.** | **Description** | **Parameters** |
| 1 | Size of grinding wheel |  |

* + 1. **Electric Hand Grinder**

|  |  |  |
| --- | --- | --- |
| **Sl.no.** | **Description** | **Parameters** |
| 1 | Size of wheel |  |

* + 1. **Vertical Drilling Machine**

|  |  |  |
| --- | --- | --- |
| **Sl.no.** | **Description** | **Parameters** |
| 1 | Max drilling capacity |  |
| 2 | Drilling length |  |

* + 1. **Parallel vice**

|  |  |  |
| --- | --- | --- |
| **Sl.no.** | **Description** | **Parameters** |
| 1 | Jaw size |  |
| 2 | Jaw opening |  |

* + 1. **Welding Transformer**

|  |  |  |
| --- | --- | --- |
| **Sl.no.** | **Description** | **Parameters** |
| 1 | Supply voltage |  |
| 2 | Frequency |  |
| 3 | Insulation Class |  |
| 4 | Welding current |  |
| 5 | Amp. & Voltmeter |  |

* 1. **Lab Equipment**
     1. **Tensile Testing Machine**

|  |  |  |
| --- | --- | --- |
| **Sl.no.** | **Description** | **Parameters** |
|  | Type |  |
|  | Test material |  |
|  | Quantity(nos) |  |
|  | Capacity (max) kN |  |
|  | Quantity(nos) |  |
|  | Measuring range(kN) |  |
|  | UTS Measuring range(MPa) |  |
|  | Electronic Extensometer  Gauge length(mm)  Travel(mm) |  |

* + 1. **Hardness Tester**

|  |  |  |
| --- | --- | --- |
| **Sl.no.** | **Description** | **Parameters** |
|  | Type |  |
|  | Test material |  |
|  | Quantity(nos) |  |
|  | Hardness scale |  |
|  | Capacity (max) kg |  |
|  | Accuracy |  |
|  | Specimen size  Height(mm)  Depth (mm) |  |

* + 1. **Portable Ultrasound Thickness Gauge**

|  |  |  |
| --- | --- | --- |
| **Sl.no.** | **Description** | **Parameters** |
|  | Type |  |
|  | Test material |  |
|  | Quantity(nos) |  |
|  | Measuring range (mm) |  |
|  | Accuracy |  |
|  | Operating temp( C) |  |

* + 1. **Bend Testing Machine**

|  |  |  |
| --- | --- | --- |
| **Sl.no.** | **Description** | **Parameters** |
|  | Type |  |
|  | Test material |  |
|  | Quantity(nos) |  |
|  | Capacity (kN) |  |
|  | Bending angle |  |

* + 1. **Ultrasonic Flaw Detector**

|  |  |  |
| --- | --- | --- |
| **Sl.no.** | **Description** | **Parameters** |
|  | Type |  |
|  | Test material |  |
|  | Quantity(nos) |  |
|  | Capacity (kN) |  |
|  | Measuring range (mm) |  |
|  | Measuring Accuracy(%) |  |

* + 1. **Universal Milling Machine**

|  |  |  |
| --- | --- | --- |
| **Sl.no.** | **Description** | **Parameters** |
|  | Type |  |
|  | Test material |  |
|  | Quantity(nos) |  |
|  | X axis (mm) |  |
|  | Y axis (mm) |  |
|  | Z axis (mm) |  |

* + 1. **Shear**

|  |  |  |
| --- | --- | --- |
| **Sl.no.** | **Description** | **Parameters** |
|  | Type |  |
|  | Test material |  |
|  | Quantity(nos) |  |
|  | Cutting capacity (txw)mm |  |

* + 1. **Tensile test sample Hydraulic punch press**

|  |  |  |
| --- | --- | --- |
| **Sl.no.** | **Description** | **Parameters** |
|  | Type |  |
|  | Test material |  |
|  | Quantity(nos) |  |
|  | Max pressure(t) |  |

* + 1. **Bench grinder**

|  |  |  |
| --- | --- | --- |
| **Sl.no.** | **Description** | **Parameters** |
|  | Type |  |
|  | Test material |  |
|  | Quantity(nos) |  |
|  | Grinding wheel dia(mm) |  |

* 1. **Mobile Equipment**
     1. **Fork lift**

| **Sl No.** | **Parameters** | **Brief Description** |
| --- | --- | --- |
|  | Type |  |
|  | Capacity (t) |  |
|  | Quantity (Nos.) |  |
|  | Location |  |

* + 1. **Goods cum Passenger Elevator**

| **Sl No.** | **Parameters** | **Brief Description** |
| --- | --- | --- |
|  | Capacity (t) |  |
|  | Quantity (Nos.) |  |
|  | Location |  |
|  | Total lift (m) |  |
|  | No. of stoppages / landings |  |
|  | Speed |  |

* + 1. **Dozer**

|  |  |  |
| --- | --- | --- |
| **Sl No.** | **Parameters** | **Brief description** |
|  | Quantity(Nos) |  |
|  | Material to be handled |  |
|  | Type |  |
|  | Capacity (kW) / blade |  |
|  | Transmission / drive  Blade lift / Blade tilt |  |
|  | Attachment |  |

* + 1. **Pay Loader**

| **Sl No.** | **Parameters** | **Brief Description** |
| --- | --- | --- |
|  | Type |  |
|  | Capacity (m3) |  |
|  | Quantity (Nos.) |  |
|  | Location |  |

* + 1. **Dumper**

|  |  |  |
| --- | --- | --- |
| **Sl No.** | **Parameters** | **Brief description** |
|  | Quantity(Nos) |  |
|  | Material to be handled |  |
|  | Type |  |
|  | Capacity (tonne) |  |

* + 1. **Backhoe loader**

|  |  |  |
| --- | --- | --- |
| **Sl No.** | **Parameters** | **Brief description** |
|  | Quantity(Nos) |  |
|  | Type |  |
|  | Loader bucket capacity(m³)  Backhoe bucket capacity(m³)  Operating mass(t) |  |
|  | Attachment |  |

* + 1. **Bobcat**

| **Sl No.** | **Parameters** | **Brief Description** |
| --- | --- | --- |
|  | Type |  |
|  | Capacity (m3) |  |
|  | Quantity (Nos.) |  |
|  | Location |  |

* 1. **Technological equipment/Machines**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| S. No. | Description | Purpose | Area of operation | Quantity | Capacity | Remarks |
| 1. |  |  |  |  |  |  |
| 2. |  |  |  |  |  |  |