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| **TIME SHEET** | | | | | | | |
|  | | | **Order No.:** | | | | **Details:** |
| **Project Name:**  Upgrade Project | | | | | **System Details:**  PF1, | | |
| **Representative:** | | | | | **Date on Site:**  23.12.2019 – 07.01.2020 | | |
| **Purpose of Visit:** Upgrade Project – Installation & Commissioning | | | | | | | |
| **DD.MM.YYYY** | **Days** | **Work Hrs** | | **Standby Hrs** | | **Description** | |
| 23.12.2019 | MON |  | | 9 | | IC PRO team mobilized to site to start Upgrade site work.  However, Field Ethernet cables laying by D’s contractor was in progress.  While waiting for Ethernet cable laying to be completed, Documentation (SAT, Electrical Drawing) review and modification as per the discussion with CUSTOMER was carried out | |
| 24.12.2019 | TUE |  | | 9 | | While waiting for Ethernet cable laying to be completed, Documentation (SAT, Electrical Drawing) review and modification as per the discussion with CUSTOMER was carried out | |
| 25.12.2019 | WED | 10 | |  | | Removal of old PLC and VFD’s.  Installation of new PLC and VFD’s.  Wiring of new systems as per the modified electrical schematics. | |
| 26.12.2019 | THUR | 10 | |  | | Installation of new remote IO module adaptors and main panel continuity test based on electrical schematics has been done for the modified systems. | |
| 27.12.2019 | FRI | 2 | | 7 | | Installation of new ETAP in SBV panel.  Standby Time: Network Cable Laying by CUSTOMER’s contractor. | |
| 28.12.2019 | SAT | 4 | | 5 | | Downloaded new Program file to replaced PLC and VFD’s. Version 32 Firmware has been updated in PLC.  Standby Time: Panel Power up, waiting for CUSTOMER authorized person to Turn-On power. | |
| 29.12.2019 | SUN | 5 | |  | | Configuration of new IO Modules.  Configuration/Testing of DeviceNet communication with PLC and encoder.  Not able to work half a day due to power ON of AHU system at clean room. | |

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| **DD.MM.YYYY** | **Days** | **Work Hrs** | **Standby Hrs** | **Description** |
| 30.12.2019 | MON |  |  | No work at site. |
| 31.12.2019 | TUE | 7 |  | Established DeviceNet communication, however it was noticed that the DeviceNet Bus-Off Fault appeared whenever the “Lifter Motor” was started.  Testing and analyzing of DeviceNet communication with PLC and encoder. |
| 01.01.2020 | WED | 5 | 4 | Testing and analyzing of DeviceNet communication with PLC and encoder. It was suspected that the existing DeviceNet cable system have some issue which is causing the Bus-Off Fault whenever the “Lifter Motor” started. It was discussed and agreed to lay a new DeviceNet cable temporarily and test it.  Standby Time: Since Clean room is cleaned with some chemicals, we were not allowed inside the room for testing. |
| 02.01.2020 | THUR | 10 |  | Laid new cable temporarily between PLC and RIO panel/encoder and found working properly without any issues. |
| 03.01.2020 | FRI | 10 |  | Analyzing of Existing DeviceNet communication cable between PLC and RIO which intern connected to encoder. Laid new cable temporarily between PLC and encoder and found working properly without any issues.  Isolation of Existing DeviceNet cable, tried with different combination of earthing and other diagnostic tests including verification of voltage levels, connection between Shied and Earthing, testing with dedicated 24V DC power supply unit etc. were carried-out.  After various testing; it was concluded that the DeviceNet Shield/Drain was connected to PE Earth somewhere along the cable / junction between PLC and RIO panel.  Meeting held with CUSTOMER and explained the findings and agreed to verify the earthing at possible junction which is above the ceiling which was not accessible from floor or lay a new cable. |
| 04.01.2020 | SAT | 10 | 4 | Standby Time: Scaffolding removal work under process  Analyzing of DeviceNet communication with the old cables and removed the ground done at the junction box (located above ceiling) between PLC panel and remote IO Panel and grounded the shield at PLC panel with end resistors at DeviceNet terminals and found communicating properly with encoders.  Functional Testing of PLC Logic as per the system operation. |

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| **DD.MM.YYYY** | **Days** | **Work Hrs** | **Standby Hrs** | | **Description** | |
| 04.01.2020 | SUN | 10 |  | | Functional Testing of PLC Logic as per the system operation. SAT for the upgraded system. | |
| 05.01.2020 | MON |  | 9 | | Standby Time: For AIQ Approval  While waiting; Network cable route marker has been done in main PLC panel, remote IO panel and SBV panel. | |
| 06.01.2020 | TUE | 5 | 4 | | Standby Time: Waiting for CUSTOMER to start AOQ  Full functionality test and support for AOQ as per CUSTOMER requirement. Completed the AOQ and all other required test, Document signing etc. | |
| **Total Days Worked at Site:** | | **15** | | |  | |
| **Comment(s):** | | | | | | |
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| **Name of IC Pro Representative:**  S Udhaya Kumar | | | | **Signature:** | | **Date:** |
| **Name of CUSTOMER Representative:** | | | | **Signature:** | | **Date:** |