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| **SITE ASSESSMENT REPORT** | | |
| **Type of Visit: Site Assessment** | | |
| **Industry Sector:**  **Electronic systems** | **Products Manufactured:**  **Type of Solenoid coil, Tripping closing coil, relay coils, electromagnetic Coils** | **MSME Type:**  **Medium** |
| **No. of Employees:**  **40** | **Annual turnover:**  **12 cr** | **Participation in Government Schemes (if yes, name of the schemes):**  **Lean Management Scheme** |

| **SITE ASSESSMENT REPORT** | | | | | |
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| **Parameter** | **Description** | **Assessment Finding** | **Assessment Score** | **Points for consideration of jury**  **(to be filled by Assessors)** | **Remarks** |
| A-1 | Technology selection & continual Up gradation | ***36% (out of 125 machines 45 machines) of the machines are found to be PLC/CNC machines.*** | ***Level 2***  ***Score 2*** | ***Although, 36% of machines are process equipments or PLC/CNC controlled it was found some of the machines are manually operated. Also, on further verification, the suitability of technology with product design specifications was not effective and no formal reviews are done to know customer needs from time to time.*** |  |
| ***A-2*** | ***Process Capability Assessment & Enhancement*** | ***No concept of process capability or process performance assessment is done also no control charts are available and personnel not trained and no awareness of same. Although data captured for process rejections and customer complains consolidated data and trends including actions plans for improvement not evident*** | ***Level -1***  ***Score - 0*** |  |  |
| A-3 | Low Cost Automation | ***There is no emphasis or awareness on low cost automation. Although, Mr. Natawar – Coordinator is aware about low cost automation the awareness of the same is not evident among other team members about low cost automation and linked to productivity. Every Kaizen is treated as low cost automation. The Kaizens found primarily management initiative. Although, suggestion scheme evidence is available no kaizen has been evolved through this scheme. Focussed approach of team was not evident although kaizens indicate as a team but none of team members were aware of the same*** | ***Level – 1***  ***Score - 0*** |  |  |
| ***A-4*** | ***Waste Management*** | ***No awareness on waste & its effect on profitability or customer. (Pl see checklist A-4)*** | ***Level – 1***  ***Score - 0*** |  |  |
| ***A-5*** | ***Safe working environment*** | ***Safety Policy is in place. However no review of the same is not done after 2010. Lot of unsafe conditions witnessed. (Pl see exhibit)***. ***HIRA was evident however there was no awareness of significance determination including ranking given for severity and occurrences in the analysis done also arrival to significance. Further, no procedure evident for identification of hazard and significant. Near miss and incidents records evident (Pl see exhibit) However no corrective actions planned and revisit to HIRA not done including identifying controls for preventing recurrence*** | ***Level – 01***  ***Score - 00*** |  |  |
| B.1 | Process validation | ***No system to validate process is meeting specification and quality requirements. For identified special processes, such as moulding, shouldering, coating, enamelling and plating (outsourced) no evidence of process validation documentation but process parameters identified through work instructions/ process sheet. However implementation and adherence to process parameters was not effective as in case of moulding, first five pieces subjected to first pass inspection but was not effective as in case of Bobbin – Mould no. ECB91 dt 13.10.15 not meeting specifications but was approved. For part no: 507847 dated 3/11/15, m/c no: BML-416, Records of validation of tool trials for approval of moulds not in practice. In case of winding area, m/c:07 of dia 0.335 tension recorded as 1235 against requirement of 1400 but on verification found actual as 1690-1700 further found instrument used for checking not calibrated, Soldering – ECM – 169/A, no first piece inspection approval done as required also controlled process parameters not defined for carrying out process.*** | ***Level – 01***  ***Score - 00*** |  |  |
| B-2 | Supplier development | ***Supplier quality or reliability parameters were assessed***. ***Supplier performance is monitored on yearly basis for Quality, Cost and Delivery. Supplier audit has been done and verified records annually (Pl see exhibit). However, audit methodology was not appropriate irrespective of product and complexities of the process checklist criteria are same. No evidence of route cause & corrective actions received for observation raised and no hand folding done for improvement. Also in case of outsourced processes of plating, press parts component and grinding quality or reliability parameters not defined or assessed for performance as on going.*** | ***Level:02***  ***Score:02*** |  |  |
| ***C-1*** | ***Swachh workplace (5S)*** | ***Unclean work area with clutter all around (scrap material, tools etc.) pl see exhibit. No training provided and no red tagging done and no records of same.*** | ***Level:01***  ***Score:00*** |  |  |
| ***C-2*** | ***Daily works management*** | ***No awareness of DWM concept is available among the employees. No zones or leaders for zones identified. No targets identified for QCD although informally target for quality >2% , Delivery 100% Cost- no target*** | ***Level:01***  ***Score:00*** |  |  |
| ***C-3*** | ***Planned maintenance*** | ***Planned maintenance schedule available for all machines and adherence to schedule was evident. However the checklist indicate only ticks and no details of what work is being carried out (Pl see exhibit) also no preventive maintenance records are available for generator and utilities also in case of material handling equipments such as pallet truck (2no’s), box type trolley not as part of preventive maintenance.*** | ***Level:02***  ***Score:02*** |  |  |
| ***C-4*** | ***Process Control*** | ***Control plans are available for all products manufactured and linkages/references provided to work instructions, process sheets but implementation/adherence was not effective.*** | ***Level:02***  ***Score:02*** | ***Deviation observed at various places in implementation as in case of moulding required first five pieces to be subjected to first pass inspection but was not effective as in case of Bobbin – Mould no. ECB91 dt 13.10.15 not meeting specifications but was approved. For part no: 507847 dated 3/11/15, m/c no: BML-416, no process sheet available but products manufactured further no linkage of common instruction to drawing no’s also record of monitoring parameters of APG,DMC-416 machine, Part 507848 no changes in temperatures throughout day(Pl see exhibit).Records of validation of tool trials for approval of moulds not in practice. In case of winding area M/c – 7 of dia 0.335 tension recorded as 1235 against requirement of 1400 but on verification found between 1690-1700 further found the instrument used for checking not calibrated, Soldering – ECM – 169/A, no first piece inspection approval done as required also controlled process parameters not defined for carrying out process– Coil moulding area, m/c:ECM-41 pressure to be maintained as 10Kg/cm2 but pressure gauge not working during assessment*** |  |
| D-1 | Design capability | ***Not carrying out product designs are provided by customer although tools are designed no records and also not aware to evaluate design capability*** | ***Level:01***  ***Score:00*** |  |  |
| D-2 | Design process & methodologies | ***There is no design process. - Designs are from OEMs or standard available designs*** | ***Level:01***  ***Score:00*** |  |  |
| E-1 | Transportation and storage | ***No awareness on the appropriate conditions for transportation or storage of products based on the type of product*** | ***Level:01***  ***Score:00*** |  |  |
| ***E-2*** | ***Timely delivery*** | ***Timely delivery is followed in 70% of the products. (Pl see exhibit – Graph of OTD)*** | ***Level:04***  ***Score:04*** |  |  |
| E-3 | Customer Education for product usage Maintenance and service | ***No defined process for customer training or dedicated team for product demonstrations*** | ***Level:01***  ***Score:00*** |  |  |
| E-4 | Customer Servicing | ***No defined plan/process for customer servicing*** | ***Level:01***  ***Score:00*** |  |  |
| F-1 | Technology selection & continual up-gradation | ***Environmental aspects are not considered while selecting/developing technology or sourcing a process for the product***. | ***Level:01***  ***Score:00*** |  |  |
| ***F-2*** | ***Systems for abatement of effluent, emissions and wastes*** | ***No monitoring plan with frequency of checking or norms for emissions or no system defined to ensure monitoring and norms adherence on proactive basis is done.*** | ***Level:01***  ***Score:00*** |  |  |
| ***F-3*** | ***Systems for energy efficiency*** | ***No understanding of energy conservation & energy efficiency. No trainings done.*** ***Higher energy consumption areas not identified and no meters are installed except for Gujarat electricity board meter*** | ***Level:01***  ***Score:00*** |  |  |
| ***F-4*** | ***Systems for natural resource conservation*** | ***Personnel not trained. No focus on natural resource conservation. However some initiatives of government subsidies taken by installing wind mill at village Lamba, dist. Jamnagar and Solar Panel at Vadodara. The units generated are adjusted in the electricity bill and benefits are taken by the company in form of rebate. However no initiatives taken for in house reduction of electricity/ water consumption/paper consumption. Concept of 3R’s not in practice.*** | ***Level:01***  ***Score:00*** |  |  |
| G-1 | Installation of environmental protection and measuring equipment | ***Main focus on production plants with Plant & equipment for environmental protection not mapped. No system of measuring environmental discharges and compliance*** | ***Level:01***  ***Score:00*** |  |  |
| ***H-1*** | ***Planned maintenance of Environmental management systems*** | ***No system of planned maintenance of environmental management systems.- Equipment are repaired as and when breakdown occurs*** | ***Level:01***  ***Score:00*** |  |  |
| H-2 | Planned maintenance of energy control systems | ***No system of planned maintenance of energy control systems.- Equipment are repaired as and when breakdown occurs*** | ***Level:01***  ***Score:00*** |  |  |
| I-1 | Design compliance with regulatory requirements | ***No consideration of environmental aspects while developing and designing a product*** | ***Level:01***  ***Score:00*** |  |  |
| J-1 | Disposal after use | ***Not applicable for the type of products manufactured and was ignorant while choosing parameter*** | ***Level:01***  ***Score:00*** |  |  |
| K-1 | Plant layout | ***It was an old set up and machines and equipment are set up as per available space. Process flow is not defined in layout (Pl see in exhibit). Plant layout is not effective and no unilateral flow was evident*** | ***Level:01***  ***Score:00*** |  |  |
| K- 2 | Materials Management | ***No evidence of consumption pattern analysis at Store Supervisor level. Material Planning is done by top management based on sales order. No past data analysis, Trends or forecasting was evident in material planning major purchase decisions are made by Unit head. However, stores intimate purchase for the material required based on Sales order. Min stock level has been decided by management based on experience however it is being not maintained or found mismatching. Inventory Turnover ratio is calculated and found 5.7*** | ***Level:02***  ***Score:02*** |  |  |
| ***K-3*** | ***Material handling systems*** | ***Material handling is predominantly manual.  Not seen as activity that can improve productivity and quality, No training given*** | ***Level:01***  ***Score:00*** |  |  |
| L- 1 | People development plan | ***No system/process for creating people development plans or concept of defining competencies for skills development. Although skill mapping done and displayed at various locations basis of approval given not evident includes special processes and is ad-hoc*** | ***Level:01***  ***Score:00*** |  |  |
| L-2 | Employee involvement activity | ***No involvement of employees in decision making, improvement or change as all decisions are taken by top management and issued for compliance*** | ***Level:01***  ***Score:00*** |  |  |
| M-1 | Outsourced activities : Selection, control and improvement | ***No formal selection process in place to select vendors for outsourcing. Work outsourced without any evaluation of skills and resources***. | ***Level:01***  ***Score:00*** |  |  |
| N-1 | Trademark | ***Not choosed for assessment*** |  |  |  |
| N-2 | Industrial Design | ***Not choosed for assessment*** |  |  |  |
| N-3 | Copyright | ***Not choosed for assessment*** |  |  |  |
| N-4 | Patent | ***Not choosed for assessment*** |  |  |  |
| ***O-1*** | ***Outgoing (at customer end) quality performance level*** | ***Consolidate outgoing quality performance data not evident and not analysed*** | ***Level:01***  ***Score:00*** |  |  |
| ***O-2*** | ***In-house quality performance level (first pass)*** | ***It is less than 5% although consolidated data was not available*** | ***Level:02***  ***Score:02*** |  |  |
| O-3 | Field performance level  (based on customer defined targets for field performance) | ***No field performance reviews are done. Also customers have not defined the same*** | ***Level:01***  ***Score:00*** |  |  |
| P -1 | Total Employee Involvement (TEI) | ***Not choosed for assessment*** |  |  |  |
| ***P -2*** | ***Scrap (as a % of gross sales)*** | ***Not monitored*** | ***Level:01***  ***Score:00*** |  |  |
| P -3 | Process Capability (Cp/ Cpk) | ***Not choosed for assessment*** |  |  |  |
| P -4 | Overall Equipment Effectiveness | ***Not choosed for assessment*** |  |  |  |
| ***Q -1*** | ***Optimal use of natural resources*** | ***In case of electricity and water monitored through electricity bill and bore well reading. No trends maintained and no action taken for improvement. For remaining Natural resources, no data evident*** | ***Level:01***  ***Score:00*** |  |  |
| ***Q -2*** | ***Energy performance*** | ***Energy performance indicators are not fully defined*** | ***Level:01***  ***Score:00*** |  |  |
| ***Q -3*** | ***Environmental performance – air/effluent / solid wastes*** | ***Air monitoring & water quality monitoring is done but other parameters not done including disposal records not available.*** | ***Level:01***  ***Score:00*** |  |  |
| R -1 | Turnover growth | ***Not choosed for assessment*** |  |  |  |
| ***R -2*** | ***Operating profit/ % improvement (Measured as Gross Profit)*** | ***Operating profit growth of***  ***The EBITDA figures are for***  ***Year 2012 – 13 to year 2013-14 is 9%***  ***2013-14 is 45%. (Pl see exhibit)***  ***However, statement profit growth is of two units ie. ECS –Unit 1 and ECS –Unit 2 and ECS-Unit 1 is not part of assessment.***  ***The data for unit ECS 2 alone is not available to decide the growth*** | ***Level:01***  ***Score:00*** |  |  |
| R -3 | Safety Score | ***Not choosed for assessment*** |  |  |  |
| R -4 | Inventory turnover (ITR) | ***ITR is 5.7 pls see exhibit*** | ***Level:02***  ***Score:02*** |  |  |

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| **Visit Summary:**  ***Visited company has chosen 20 mandatory parameters and 21optionals put together 41 parameters were chosen for which assessment was carried out for 2 days on* 18th & 19th 2015*.The Site assessment plan is enclosed. Assessment was carried out by J.Ramesh &* Mr. Japan Trivedi**  **Production Management:**  ***36% (out of 125 machines 45 machines) of machines was found to be PLC/CNC. However it was found although it was PLC/CNC many machines are manually operated. Further found suitability of technology with product design specifications was not effective and no formal reviews are done to know customer needs from time to time (Pl see checklist & report: A1) to improve productivity. Low cost automation was demonstrated through Kaizens and was not effective. Every Kaizen is treated as low cost automation. It was found primarily management initiatives. No trainings or understanding of low cost automation (Pl see checklist & report:A3). Validations were not effectively done, system to carry out validations not defined. In case of identified special processes carried out such as moulding, shouldering, coating, enameling and plating (outsourced) no evidence of process validation done and also found deviation in meeting documented process parameters for each process (Pl see checklist & report: B1). Quality plan general control plan referred to work instruction/process parameters sheet detailing control limits exists but is not followed effectively(Pl see checklist & report: C4).Also control over outsourced process of Plating, press components and grinding was ineffective (Pl see checklist & report B2). Process capability studies initiated in few cases but ineffective (Pl see checklist & report: A2).Waste management & Swachh was found in effective including training of personnel (Pl see checklist & report: A4 & C1), Understanding of DWM concept was not evident although some of the data was available in ERP consolidation and visual management through trend charts was not evident also no evidence of review and capturing plans for improvements is recorded. DWM meetings of L-1(workers along with supervisors for review & action plans), L-2(Cross functional supervisors for review and analysis of variances), L-3(All process owners for reviewing resources & corrective actions) is not in practice and daily morning meeting done as per management but no minutes available except for MRM done by top management with process owners for improvements (Pl see checklist & report: C2). No zones are created and data zone wise of QCD/Environment /safety not evident. Safe working conditions was not witnessed (Pl see checklist & report: A5). Material handling is predominantly manual, overhead cranes manual operated, lift ,hand operated pallet (Pl see checklist & report: K3). Plant layout was evident. However the process flow was not indicated in the layout plan also since it was old set up and Machines/ equipments are laid out as per availability of space. Personnel were not trained (Pl see checklist & report: K1)***  **Maintenance Management*: Break down & planned preventive maintenance is carried out for only machines and does not cover environment pollution control equipments & energy control systems includes both breakdown and preventive maintenance(Pl see checklist & report:C3 ,H1& H2). Preventive maintenance checklist not reviewed based on data of break downs and supplier manuals to reduce break down hours. Repeated failures of machines witnessed No task related trainings or up gradation done for maintenance personnel further skill matrix and competency not defined for maintenance personnel (Pl see checklist & report: C3).***  **Quality Management: *No concept of process capability or process performance assessment is done also no control charts are available and personnel not trained and not having awareness (Pl see checklist & report: A2), Outgoing quality level data captured is not consolidated and no trend was evident to know percentage (Pl see checklist & report: O1), In-house quality level was found to be less than 5%. No analysis and planning corrective actions are done to prevent recurrence of in house rejections/rework (Pl see checklist & report: O2).Concept of validation & revalidation concept not in practice (Pl see checklist & report: B1) also deviations observed during first off for process parameters variations the same is not corrected leading to increase in rejection percentage (Pl see checklist & report: C4) also raw data of scarp generated not evident (Pl see checklist & report: P2).***  **Purchase & Stores Management:**  ***No evidence of consumption pattern analysis at Store Supervisor level. Material Planning is done by top management based on sales order. No past data analysis, Trends or forecasting was done during material planning, major purchase decisions are made by Unit head. However, stores intimate purchase for the material required based on sales order. Minimum stock level is decided by management based on experience, however implementation was not effective in meeting stock levels identified and found mismatching. Inventory turnover ratio is calculated and found 5.7 (Pl see checklist & report: K2).Suppliers are selected based on defined system and updated in approved supplier’s list and orders are placed on only approved suppliers. Supplier performance is monitored on yearly basis for Quality, Cost and Delivery. Supplier audit is done annually (Pl see exhibit). However, audit methodology was not appropriate irrespective of product and complexities of the process checklist criteria are same. No evidence of route cause & corrective actions received for observation raised and no hand folding done for improvement. Also in case of outsourced processes of plating, press parts component and grinding quality or reliability parameters not defined or assessed for performance as on-going (Pl see checklist & report: B2& M1).Scrap not monitored. Although few waste are monitored disposal records not maintained this includes hazardous waste(Pl see checklist & report: P2)***  **Environment Management & Natural Resource Management:**  ***Environmental aspects are not considered while selecting/developing technology or sourcing a process for the product. No awareness or training done on same (Pl see checklist & report: F1). No monitoring plan with frequency of checking or norms for emissions or no system defined to ensure monitoring and norms adherence on proactive basis is done. Ambient air monitoring & water quality monitoring is done but other parameters not done including disposal records not available. (Pl see checklist & report: F2& Q3). Ad-hoc low cost measures for natural resource conservation developed for paper re-use, water wastage prevention, LPG, raw materials etc and in case of electricity bills are maintained received from Gujarat electricity board but consolidation and trend monitoring for improvement not done. No trainings are done on natural resource conservation and awareness was low except forL1 team (Pl see checklist & report: F4).******No plan or system defined for planned maintenance of pollution control facilities also no records available for breakdown of pollution control equipments (Pl see checklist & report: H1).***  **Energy Management:**  ***No understanding of energy conservation & energy efficiency. No trainings done.*** ***Higher energy consumption areas not identified and no meters are installed except for Gujarat electricity board meter (Pl see checklist & report: F3). Energy performance indicators are not defined and*** ***no indictors identified for oil fuels, solid fuels, and gas fuels consumption and not monitored(Pl see checklist & report: Q2)***  **Human Resource Management:**  ***No system/process for creating people development plans or concept of defining competencies for skills development. People deployment takes place on perceived skills on ad-hoc basis. Although skill mapping done and displayed at various locations basis of approval given not evident includes special processes and is ad-hoc also no concept of understanding of coaching evident(Pl*** ***see checklist & report: L1). Team work involvement and sharing of information was more limited to Level-1(Managers). Zones are not created for better control of activities that includes productivity, cost, rejections/ rework, environmental issues, safety issues etc. evidences reflect only productivity and to some extent quality issues but predominately with managers or process owners of level-1.Although Kaizens are done and shown as team work ,team was not aware of kaizen and single person entry done and shown as team work(pl see exhibit & Checklist of A3). No involvement of employees in decision making, improvement or change as all decisions are taken by top management and issued for compliance (Pl*** ***see checklist & report: L2). The company has not defined criteria for measuring TEI and no data of same evident(Pl*** ***see checklist & report: P1)***  **Performance Management:**  ***Operating profit/ % improvement (Measured as Gross Profit):***  ***EBITDA and growth for***  ***Year 2012 – 13 to year 2013-14 is 9%***  ***2013-14 is 45%. (Pl see exhibit)***  ***However, statement profit growth is of two units ie. ECS –Unit 1 and ECS –Unit 2 and ECS-Unit 1 is not part of assessment.***  ***The data for unit ECS 2 alone is not available to decide the growth (Pl see checklist & report:R2)***  **Safety Management*: Safety policy is documented (Pl see exhibit no: 05). However no awareness/ training given on understanding of safety policy. Lot of unsafe conditions witnessed. (Pl see exhibit). HIRA was evident however there was no awareness of significance determination including ranking given for severity and occurrences in the analysis done also arrival to significance. Further, no procedure evident for identification of hazard and significant. Near miss and incidents records evident (Pl see exhibit) However no corrective actions planned and revisit to HIRA not done including identifying controls for preventing recurrence. Measurement of safety parameter such as man-hours lost , near misses, disability and fatality is not being done. Recording of near misses initiated recently but does not record route cause and corrective action. Base lines not identified including indicators (Pl see checklist & report:A5)*** |
| **List of Enclosures, if any:**  **1) Opening & closing meeting**  **2) Photos are enclosed in Microsoft presentation due to large file. The same could be copied on to desk top for better view** |