



# Metrics Works Saltillo Formerly B.S.B. Mfg Audit Form

## Company Information

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## Audit Details

**AUDITOR TYPE:** MESH

**AUDITOR NAME:** Homero Bolaños

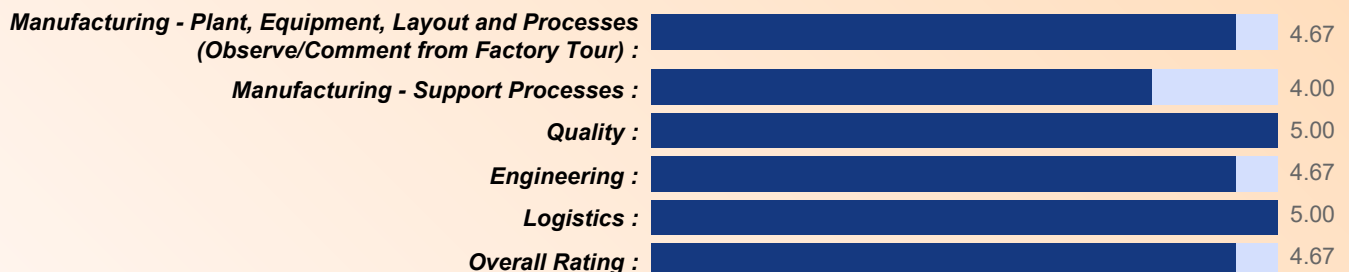
**AUDIT DATE:** 01/11/2024

**LAST YEAR SALES:** USD

**RATING:** 4.67

**STATUS:** Approved

## Audit Summary



**Score : 4.67** ★★★★★

7 documents attached

# Supplier Questions



## Manufacturing - Plant, Equipment, Layout and Processes (Observe/Comment from Factory Tour)

1.) At the time of the plant tour, was the manufacturing activity at a high medium or low level? 在拜访期间，供应商的设备开机率？

Rating: 4

**Notes:** In general the company has a medium level of activity on the product without appearing to have chaotic control, there are no excessive levels of WIP throughout the factory that could affect the flow between the product and the operator.

2.) Does product flow well from process to process? 生产现场的在制品库存流转是否通畅？

Rating: 5

**Notes:** There is a numerical identification in each batch that identifies the material in process for each shift. The planner has inventory control of each product at each station with the inventory that the operator makes at the end of his shift.

3.) Are work instructions and inspection instructions visible at every work station seen? Are the instructions consistent with the products being built during the assessment? 每个工序是否有操作指导书、检验指导书？是否指导书与作业匹配？

Rating: 5

**Notes:** The WI are visible in all workstations, include a clear description of the process to be carried out and explain in detail with photographs, drawings and illustrations the type of inspection and the critical characteristics to be reviewed. Each document is controlled with a rev control by the quality assurance team.

4.) Do work instructions include photographs and graphics in addition to verbal description? 指导书是否含图示说明？

Rating: 5

**Notes:** Each work instruction in the operator's native language has a brief description of the project, its operating requirements, the stepby- step operating sequence to manufacture the part, and visual aids of the process.

**5.) Describe the apparent physical condition of the production equipment. Does it appear in well-maintained condition? 表面上看，设备是否完好维护？**

**Rating: 4**

**Notes:** The equipment is clean and well maintained with some oil observed on the floor but it has its oil control tank to prevent spills. Each team has records of its preventive maintenance control on each shift.

**6.) Does the production process use modern equipment using current technology? 生产过程是否用到先进设备和工艺？**

**Rating: 4**

**Notes:** There is current equipment necessary for the process, its drivers are updated. There are only 2 machines that have been in existence for more than 20 years but they are not unique, they do not depend on a single machine, there is a backup if there is a failure in the machine. Suggestions: Matzura 1990, is the only old machine, OP 10

**7.) Describe the overall housekeeping condition of the plant. Also, observe the method of storing tools, jigs and fixtures. 工厂的模具、检具、工装等摆放整齐？**

**Rating: 5**

**Notes:** Exceptional. The facilities were clean and organized. There is a practical culture of cleanliness in each employee to keep materials, tools and inventory in their place. There is an implementation of 5s culture that works throughout the company, however it can still improve in the machining area and parts inspection areas.

**8.) Describe the level of organization in the storage of raw materials (or incoming components) and finished products. Is it stored neat and orderly in well identifiable locations? Is it stored in a fashion where the material will not be easily damaged? 工厂的进料库、成品库是否按规范摆放？**

**Rating: 5**

**Notes:** There are well marked areas for raw materials, protected from rain and wind. There is a FIFO system to receive and store the material with the label specified by the customer.

**9.) Does the company have a visible and formal in-process inspection and quality control procedures and checks at multiple stages of the production process? 关键工序是否有过程检测指导书、检验记录？**

**Rating: 4**

**Notes:** The operators collect the material to record their inspections, such as operation, sample size, dimensional registration, there is a good process, the process is limited to having

control for the customer without analyzing the data, there is no SPC system. or numerical system that analyzes the collected data.

**10.) Are working conditions of the factory fair (clean toilets, clean cafeteria, safety norms, no child labor)?**

**Rating:** 5

**Notes:** No issues are observed in terms of bathrooms, dining rooms, PPE. There are no children working in the facilities.



## **Manufacturing - Support Processes**

**1.) Does the company support lot traceability, maintaining lot testing data? 工厂是否能支持批次跟踪、保留批次检验记录?**

**Rating:** 5

**Notes:** The company has a traceability system (julian code) to track raw materials and (travel sheets) components in each process, machine, batch number and shift. The company's criteria is that the material has easy-to-obtain information such as part number, lot, quantity, shift, operation in which it was manufactured.

**2.) At what general percentage of capacity utilization is the plant operating currently 产能利用率?**

**Rating:** 3

**Notes:** The plant in general is operating in a range of 50% with 35% capacity of operational machines and the rest of machines that do not have an active project. Facilities have growth opportunities with their capacity utilization, but they do not evaluate the capacity used in their machines.

**Suggestions:** There is no evaluation of capabilities that are aligned to their projects.

**3.) If custom tooling is required, (e.g. plastic injection molding) does the company manufacture the tooling in house? 工厂自己制模还是外协?**

**Answer:** No

**Notes:** The supplier subcontracts a company to manufacture tooling. The company has a record of the tooling needed for machining.

**4.) What is the primary production planning tool the company uses? (e.g. MRP driven from the supplier's ERP system) 工厂用什么系统工具来管理生产?**

**Notes:** Excel

**Suggestions:** For the ERP system it could be more feasible to have a SAP system for better inventory control.

**5.) What is the company's on-time delivery performance over the past two years? 过去两年工厂的准时交货率?**

**Rating:** 4

**Notes:** Supplier has demonstrated greater than 95% OTD performance measured each month. The way to measure OTD is by purchase order versus delivery time, but in some cases many deliveries are measured by the quantity/percentage of OTD from highest to lowest. Adjusting the goal once the purchase order is completed.

**Suggestions:** It is recommended to establish a standard OTD calculation to avoid confusing the OTD ranges in the Kpis.



## Quality

**1.) When was last surveillance audit? 体系最后一次评审是什么时候**

**Notes:** April 2022

**Suggestions:** Company in the certification process

**2.) Does the company have a formal corrective action process to solve manufacturing, technical or quality problems? 工厂是否有纠正预防措施 或8D报告?**

**Rating:** 5

**Notes:** There is a procedure established by the Quality team according to the type of non-conformity. External is completed according to the customer format (8D, A5, 5 Whys, Ishikawa Diagram) a section is generated with the stakeholder team for realization, validation and followup with the team. Internal is defined with the team according to the non-confirmation criterion which quality tool is used.

**3.) Does the Company have a formal material receipt inspection process that measures/tests incoming material to technical requirements? Are regular records kept of this inspection process? 来料检验标准有没有? 记录有没有保存?**

**Rating:** 5

**Notes:** There is a quality inspection procedure at reception aligned with the FIFO system. The material is inspected by batch in the laboratory and a standard inspection process has been defined according to the AQL system (Reduced, Normal, Rigorous) approved by the customer.

**4.) Does the Company have a formal finished goods inspection process that measures/tests finished goods to defined performance requirements? Are regular records kept of this inspection process? 成品检验标准有没有? 记录有没有保存?**

**Rating:** 5

**Notes:** Finished product, a 100% inspection is carried out at each station with registration on the travel sheet. Records are maintained in the system and are easy to review in the future.

**5.) List the major pieces of test and measuring equipment. 主要检测设备清单?**

**Notes:** Go no Go, Dial Indicator, Fixture, Thread gage, Caliper, Radius Gage, Roughness Meter, CMM, Patron Block, Bore Gage, Micrometer, Dial Test Indicator, Balancer.

**6.) Please rate the company's formal calibration program for testing instruments and calibration devices? 检测设备校准有没有做?**

**Rating:** 5

**Notes:** There is a calibration system. All equipment has a label with its calibration records. All routing is through one person who is in charge of covering the calibration of each device.

**7.) How well does the company segregate non-conforming material (NCM). Note how it is done in the production area, in inspection areas, and in storage areas. 生产区、检验区、库存区有没有设置不合格品区?**

**Rating:** 5

**Notes:** There is a procedure for NCM material for each station that identifies the material depending on its rejection. There is a catalog with each type of defect that is clearly classified for the quality team's review and soon disposition.



## **Engineering**

**1.) Please rate the company's formal APQP or project management procedure for starting new projects in the plant. 工厂有没有新产品开发程序?**

**Rating:** 4

**Notes:** There is a standard APQP procedure for each Engineering project that is followed with the project team where the entire stakeholder team participates.

**Suggestions:** For MES Inc projects, there is no aligned control in the projects on the platform that are within the system.

**2.) Is the supplier prepared and able to provide whatever production samples and pre-production test reports required by the customer? 工厂是否能按客户要求提交样品或小批量检测报告?**

**Rating: 5**

**Notes:** Supplier can provide production samples according to customer's requirements. These samples are produced according to the established APQP phase.

**3.) Describe the engineering team's English skills (especially written skills). 工厂技术人员的英语能力?**

**Rating: 5**

**Notes:** The operations engineering and project manager team has English communication skills.

**4.) List the design tools the company uses. Highlight the tool that the company most frequently uses (i.e. CAD, CAM) 工厂用什么设计软件?**

**Notes:** MasterCAM & SolidWork



## **Logistics**

**1.) What is the typical lead time of the company's product? (Lead time is defined as the time between receiving a customer order and shipping the same order.) 工厂的交货周期**

**Notes:** Current leadtime is 4 or 5 weeks depending of the project

**2.) Please rate the export experience and support the company currently possess? Please List the customers where major export of the company's production is made in the comment section. 有没有出口经验? 出口给哪些客户?**

**Rating: 5**

**Notes:** Exworks - The company cannot export all the material it sells nationally; however, it exports material through MES, which is IMEX certified to export and move products abroad.

**3.) Please rate the suppliers packaging experience, particulalry in export packaging?**

**Rating: 5**

**Notes:** Supplier is able to create packaging for export according to customer requirements alligned with MES Inc for support to export material.



## Certificates

Does the company have any quality management systems or certifications in place? (Example ISO9001, QS9000, IATF 16949) 工厂有什么质量体系? - Yes

Do you have environmental certification in place (i.e. ISO14001 or equivalent) or plans to earn it? - No

IATF 16949 Expiration Date: 12/26/2024



## Factory Videos

1.) Please add a video of the whole inside of the factory (2+ mins)

**Suggestions:** MWS Introduction

2.) Please add a video of the outside of the factory (1+ mins)

**Suggestions:** MWS Introduction

