



**TUBULAR STEEL INC.**



# **Supplier Quality Manual**

## **SQM Rev 3, 2019**

This manual contains the Quality Assurance Requirements for all suppliers of Tubular Steel Inc.

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### **Supplier Declaration**

***As supplier to Tubular Steel Inc or any of its subsidiaries and affiliates (“TSI”) we hereby declare that we will adhere to and comply with the following principles:***

1. **Compliance with laws and regulations** -We will, as suppliers to TSI always comply with all applicable laws and regulations of the country where we conduct our business.
2. **Health, Safety and Environmental standards.**-We are, as suppliers to TSI, familiar with and will recognize and adhere to TSI’s environmental requirements which are based on national laws and Regulations.
3. **Improper payments**-We will, as suppliers to TSI, not directly or indirectly offer, promise, accept or receive bribes, facilitation payments or other undue advantages in the purpose to obtain advantages in business.
4. **Hospitality and gifts**-We will, as suppliers to TSI, recognize and follow TSI’s regulations for hospitality, gifts and expenses. Hospitality and gifts may under no circumstances be offered or received under or in connection with contract bidding, evaluation or award.
5. **Discrimination**-We do not accept any illegal discrimination due to background like ethnic, age, gender or religion. Further, we will treat all persons with dignity and respect and they shall not be unreasonably interfered with in the conduct of their duties and responsibilities.
6. **Conflict of interest**-We will, as suppliers to TSI, not take part in or influence or attempt to influence in any decision which can give rise to any actual or perceived conflict of interest.
7. **Business Partners**-We will, as suppliers to TSI, only retain suppliers, subcontractors and other business partners that live up to the ethical standards reflected in this declaration and TSI’s Code of Conduct or other similar code of conduct that sets standards equal to TSI’s Code of Conduct and which is found satisfactory to TSI.

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## 1.0 Foreword

This manual has been created to assist our suppliers in understanding the purchasing expectations and quality requirements for products supplied to the TSI. The manual is also a tool to assist TSI in complying with the ISO 9001:2015 and IATF 16949:2016 and to select, develop, control, monitor our suppliers.

In order for TSI to maintain compliance to the ISO9001 and IATF 16949 requirements, suppliers to TSI must achieve certification by an accredited certification body to a current version of the ISO 9001 Quality Management System (at minimum), or be able to demonstrate assessment and approval by an OEM or by a second party audit made by TSI following the customer specific requirements to use suppliers without Quality Management system certification.

Automotive market expectations for Quality, Cost, Service, Technology and Delivery require supreme business efficiency and resourcefulness for profitable growth and long term survival. TSI plans to maintain its business strength by working closely with its supply base to make sure that requirements and expectations are clearly understood and that its suppliers share and act with a common sense of urgency that our customers demand. Supplier performance will be closely monitored and supplier status will be results based.

When circumstances dictate the requirements of this manual may be modified to comply with the requirements for the supply of architectural, construction, retail and other non-automotive products. Additionally suppliers of architectural and construction parts and products may be excused from the ISO 9001 accreditation requirement.

Through implementation and adherence to the standards stated herein, TSI is looking forward to a long and mutually beneficial relationship with our suppliers.

This manual is intended to communicate the TSI Supplier Quality & Logistics requirements to all supplier and Effective “**January 2<sup>nd</sup>, 2019**” this release replaces all previous editions. The supplier must comply with all purchase order terms and conditions. If there is a discrepancy between the purchase order terms and conditions and this supplier manual, the purchase order terms and conditions will prevail.



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**2.0 Revision Listing - Revision History**

Rev. Level	Rev. Date	Notes
1	January 06, 2015	Released SQM Rev1, 2015
2	December 21, 2017	Adapted to IATF 16949:2016 and customer requirements SQM Rev2, 2018
3	January 02, 2019	Released SQM Rev3, 2019; Page 8 - 6.0, ISO/TS 16949:2009 changed to IATF 16949:2016, "Note" for service supplier added; Page 9 – 6.0, "Second party audits" added; Page 10 - 7.0b), "printed on ORANGE paper" removed; Page 23 – 9.1, "TS 16949:2009" removed;

**3.0 Introduction**

The TSI Supplier Quality Manual describes requirements that must be followed by all TSI’s supply base. This manual is provided to serve as a guide for all suppliers that provide products TSI facilities. Compliance with this manual shall ensure that both TSI and all our suppliers are compliant with governmental regulations as well as TSI standard policies and procedures.

**4.0 Supplier Quality Policy**

It is TSI’ policy to purchase materials, components and services from companies (and their sub suppliers) that have a Quality Management System that conforms to one of the following standards: ISO 9001:2015 Quality Management System (Warehouse Distributors / Service Providers), IATF 16949: 2016 Quality System or passing a second party audit made by TSI for Automotive Suppliers.

All purchased products by TSI Contribute to the ultimate quality and reliability of our end products to our customers. Therefore, TSI shall develop close working relationships with Suppliers on quality matters and ongoing continual improvements. Supplier quality performances shall be monitored as stated in supplier rating section of this document for compliance to the above mentioned quality standards and to determine supplier long term relationship.

TSI procurement operates without prejudice regarding suppliers and builds relationships based on quality products and services, competitive pricing, technical foresight, proactive product service support, and effective follow-through. We welcome the opportunity to develop relationships with businesses who share our vision and standards for quality products and services.

## 5.0 Scope

This manual applies to all TSI approved, External Production suppliers globally. Compliance to the requirements within this manual as well as to the general terms and conditions of the purchase order is mandatory. This Supplier Manual is incorporated as part of the terms and conditions for purposes of Supplier's supply to TSI. It is the supplier's responsibility to check at regular intervals for updates to this manual at TSI –Quality Dept. Any updates and changes to this Manual will be communicated through subsequent Supplier Communication. It is your responsibility to contact your assigned Buyer for a copy of most recent manual. This Global External Production Supplier Requirements Manual will describe and define the requirements and expectations of TSI. It is intended to provide knowledge to our suppliers about our requirements, policies and procedures so they can learn how to collaborate with us to meet our business goals.

Our aim is to create a favorable business environment for both TSI and our suppliers that strive for customer satisfaction in an environment that supports continuously improving costs, quality, efficiencies, productivity and ultimately, profits.

This document along with ISO 9001:2015 and IATF 16949:2016 standards, TSI plant specific requirement, Purchase Order and other TSI requirements ("Customer Specific Requirements") define the fundamental quality system requirements for organizations supplying and / or service parts to TSI. The requirements of this document are documented in the organizations quality system. The purpose of this document is to advise suppliers to TSI of specific requirements so that a quality system can be established Maintained and continuously improved for ongoing supply of quality assured product to TSI.

It is the responsibility of the Supplier for the quality of their products and services to meet the requirements stated in this document and not to delegate this responsibility to their sub-suppliers.

## 6.0 Supplier Quality Registration Requirements & Second Party Audits Customer

### Approval Guidelines

TSI is certified to IATF 16949:2016 and applicable Customer Specific Requirements as they apply to automotive production and relevant service part organizations.

**The TSI Certification Requirement of all approved production supplier manufacturing locations is, first, compliance to ISO 9001 through second party audits; Secondly, through 3<sup>rd</sup> party Certification to ISO 9001; Thirdly, certification to ISO 9001 with compliance to IATF 16949 through second party audits; Lastly, certification to IATF 16949 through third-party audits.**

### IMPORTANT NOTE:

Registration to ISO 9001 is only acceptable for those suppliers that do not meet the applicability requirements of IATF 16949 as described below or as an interim step to achieving IATF 16949 certification. Suppliers are also required to submit renewed certificates for each manufacturing location at time of renewal.

Note: Suppliers of services are not required to complete a Supplier Quality System Assessment.



## Second Party Audits

Suppliers will be audited (on-site second party audit or self-audit assessment) to the most current version of the Supplier Quality System Assessment (except service suppliers).

Second party audits will be scheduled at supplier locations based on risk level.

### Second party audits frequency:

- Low risk suppliers – \*As required;
- Medium risk suppliers – Bi-annually or \*As-required;
- High risk suppliers – Annually;

\*As required – example – new product launch or required by TSI Management;

**Frequency of completing a supplier self-audit assessment:** \*As required;

Supplier will be notified prior to audit when an audit is required. Number of audit days shall follow IATF rules.

Current risk thinking factors shall include but not limited to the followings:

- Suppliers Not ISO 9001 Certified;
- ISO Certified but not IATF Certified
- IATF Certified
- Supplier performance
- Product Safety / Regulatory Requirements

## Supplier Selection

TSI initially selects a candidate as a potential new supplier based on its positive perception of the supplier's capability in meeting TSI's requirements and expectations. In addition to competitive pricing, one of the key elements that form this positive perception is the potential new supplier's quality management system (QMS) certification to the IATF 16949 automotive standard by an accredited third-party certification body. However, whereas supplier IATF 16949 certification is strongly preferred, it is **not mandatory at this time for TSI**. The **minimum QMS requirement** that TSI has for its potential new and current suppliers is that they are **compliance to ISO 9001 through second-party audits**.

Despite certification to IATF 16949 not being a current TSI requirement, the ultimate objective of supplier certification to IATF 16949 is expected. Prioritizing suppliers in attaining this ultimate objective is based on risk analysis. Suppliers that are eligible and yet choose, without a sufficient reason, not to seek IATF 16949 certification may result in being placed in new business hold.

It is the supplier's responsibility to submit new and re-registration QMS certificates to TSI prior to the expiry of a current certificate.

## Supplier Assessment

Each candidate identified as a potential new supplier will be required to complete a Supplier Evaluation Risk Assessment. This is a potential new supplier self-audit that assists TSI in decision making during the supplier award process. Based on factors such as TSI customer requirements, importance of the product to be supplied, and supplier quality performance with its current customers, TSI may elect to perform an on-site audit at a potential new supplier. If TSI is considering awarding a new job to an existing supplier,

TSI may elect to perform an on-site audit at the supplier for manufacturing/service facilities that already provide product to TSI. However, existing supplier manufacturing/service facilities that do not yet provide product to TSI or that do already provide product to TSI but in a significantly different product/service group will be treated as a potential new supplier. A potential new or existing supplier self or TSI on-site audit may result in corrective action items. Depending on the risk involved, these corrective action items may need to be addressed prior to approving the supplier or awarding the contract. This applies even if the assessment final score is unsatisfactory.

If a potential new supplier scores satisfactorily on the Supplier Evaluation Risk Assessment, and addresses all items that are deemed necessary for completion prior to approval, the Supplier Evaluation Risk Assessment will be approved and the new supplier will be added to TSI's Approved Supplier List. It is important to note, however, that being placed on TSI's Approved Supplier List does not guarantee that the new supplier will be sourced for a product or service. It only signifies that the new supplier has proven itself satisfactory for sourcing from a quality management system standpoint.

## 7.0 Advanced Product Quality Planning (APQP)

It is essential that the Supplier engage in advanced product quality planning activities in order to provide a foundation for consistent manufacture of quality products on-time. The Supplier shall be active in the following quality planning areas where Applicable:

- Program timeline development
- Feasibility Reviews
- Special Product and Process Characteristics reviews
- Gauge / Fixture Requirements
- Statistical Process Control Methods
- Problem Prevention / Solving Activities
- Early Production Containment Plan (Pre-Launch)

**Note: This list is not limited to APQP process.**

### a) Prototype Requirements

Unless otherwise noted by a TSI representative, by the SQA or the Buyer a 6pcs full dimensional layout and material certificate of a Prototype order is mandatory to be delivered either with the parts or by email.

The boxes have to be identified with the appropriate label as specified by TSI representative, SQA or the Buyer.

For further details please contact your TSI representative for the specific requirements.

### b) Pre-Launch Production Trial Run

All suppliers are required to perform a Run@Rate prior to PPAP, to verify that the supplier's actual production process is able to meet program volumes at an acceptable quality level. TSI Supplier development will coordinate the Run@Rate with the supplier in accordance with TSI Run at Rate

Procedures. The supplier's process must be able to produce 120% of the quoted volume using production tools and equipment and within the actual manufacturing site and process.

It is the responsibility of the supplier to enter the completed Run@Rate documents as per standard process requirements.

Suppliers are required to assure that Run@Rate is conducted for all sub-suppliers and provide supporting documentation to TSI upon request. TSI Supplier Development reserves the right to be onsite for the R@R to witness and monitor the execution. Suppliers to affix label as specified by TSI representative, SQA or the Buyer on each container/box of any new part number, new ECN, and/or new suffix for all preproduction and the first three shipments after PPAP.

### c) Launch Support:

During any program launch at a TSI production facility, selected suppliers may be required to provide on-site representation. The supplier's launch support representative(s) must be knowledgeable, capable and empowered to make decisions. Suppliers will be selected based on past quality performance and or complexity of components or assemblies being supplied.

## 8.0 Production Part Approval Process

The AIAG PPAP manual defines the requirements for the part submissions. PPAP Level 3 is the default level to be utilized for all submissions, unless otherwise advised by the TSI individual Quality Team. For multiple cavity tooling, each cavity shall be treated as an individual "PPAP" sample and data is to be collated from each cavity. Material certificates shall be traced to part number and specified material as identified on drawing. The supplier shall submit a minimum of 6 "PPAP" sample parts. All Laboratory data shall be less than one year old.

### a) When to Submit PPAP

**Advance written approval** from the receiving plant and the appropriate buyer is required when a supplier **changes location, product or process.**

A level 3 PPAP is required unless specifically waived by TSI representative or SQA.

PPAP approval is mandatory in the following instances:

- Initial Submission (New part, new project)
- Engineering change (change product)
- Sub-supplier change
- Process changes
- Additional or change of manufacturing location
- Tooling (replacement, repairs or inactive for more than one year)
- Correction discrepancy- significant improvement or significant corrective action implementation.
- Annual Validation
- Other: Prototype (on specific requests)

Production deliveries shall not commence until formal authority has been received from TSI Quality Department confirming PPAP approval.

### PPAP Submissions Over 1 Year Old:

Whenever TSI is required to submit PPAP to their customer, all external production Supplier PPAP documentation must be no more than one year old. At that time, all PPAP's over one year old is to be updated upon request by the receiving TSI location, regardless of the supplier's business relationship (i.e. customer directed) with TSI customers.

### **b) Regulations (IMDS)**

Product material content, recyclability, weight and other information is to be reported via IMDS as specified below. Product containing substances of concern that are restricted and/or prohibited must comply with current legal and customer requirements. Life cycle assessment (LCA) data may also be required for specific programs.

Important Note: PPAP approval will not be granted if IMDS submission is missing and or is being rejected upon review.

### **c) Significant Characteristics**

A process capability study (Ppk & Cpk) study is to be performed and Ppk must be  $> 1.67$  and Cpk must be  $> 1.33$ . This is required for each safety, critical and / or special characteristic as identified on the drawing and or related specifications. For identified attribute characteristics a go / no go capability study must be performed. The critical characteristic is identified on the drawing as "C" in a Diamond. The special characteristic is identified on the drawing as "S" in a triangle. The attribute characteristic is identified as "A" in an Octagon.

## **9.0 Control Plan, PFMEA, PFD**

A control plan is a document that outlines the Supplier's method of assuring and controlling the quality of a part. Control plans shall be prepared and maintained for all new products, changed products or processes and all control items. Control plans are required for pre-production and production stage and are to be part of the PPAP submission. Control Plans shall identify annual validation as well as what will be submitted as part of the annual validation. A Process FMEA (PFMEA) with a supporting Process Flow Diagram (PFD) is also a must requirement as part of the PPAP submission. Please only use the latest templates of the AIAG core tools manuals.

## **10.0 Statistical Process Control**

When identified statistical process control shall be carried out on significant characteristics for product supplied to TSI. For reference on SPC please follow and or use the AIAG SPC manual.

## 11.0 MSA Studies (GR&R)

Suppliers shall perform MSA (GR&R) studies on specified significant characteristics. For reference please follow the AIAG MSA manual

## 12.0 Corrective & Preventative Action

Suppliers to TSI are required to have a documented procedure for Corrective and preventive action (example 8D). In the event of a non-conformance a Supplier Non Conformance Report (SCAR) will be issued against the supplier. If a SCAR is issued against a supplier following are the response time requirements:

- **Within 24 hours TSI requires following information in response:**
  - Acknowledgement that the complaint has been received
  - Quantity of parts in house and in transit to the complaint issuing TSI facility
  - RMA#, ship to address incl. shipping account for the return of suspect(s) part
  - Immediate containment actions (identification and procedure)
    - Within the 3<sup>rd</sup> business day of the complaint Tubular Steel requires:
      - Open 8D describing steps taken so far
      - Potential root cause(s), every possible root cause has to be identified
      - Timing for elimination of possible root causes
        - Within the 7<sup>th</sup> business day of the complaint Tubular Steel requires:
          - Identified root cause
          - Corrective action for the root cause
          - Verification plan for the corrective action assigned

If above information is provided on the 7<sup>th</sup> business and is deemed acceptable the response time will be evaluated as “on time”. If information is late, incomplete or not acceptable the response time will be evaluated as “late”. After the 7<sup>th</sup> business day any open SCAR updates are to be made through email on a weekly basis until it is accepted and closed.

## 13.0 Controlled Shipping Levels (CSL I & II)

In the event of an issued Problem Resolution Report that requires containment, the supplier is automatically placed on CS I. Parts in house, in transit and at supplier site are to be contained under CS I. Supplier is to update the TSI on sorted quantity and defect quantity until clean point is established. Supplier stays on CS I until corrective action has been verified and exit approval has been granted.

All defective product identified in containment (Controlled Shipping) that is instituted by TSI at TSI expense, or that is performed in a TSI facility regardless of who is responsible for the expense, will be reflected in the Supplier’s scorecard.

The performing of CS II 3<sup>rd</sup> party containment at a TSI facility should not be mandated unless containment implemented off-site or at the supplier’s manufacturing facility has proven to be ineffective.

## 14.0 Supplier Performance Rating

Supplier Performance rating is utilized by TSI to maintain and improve the suppliers performance and quality of the scheduled part(s) as well as to provide a reliable, fair and consistent source of information by which all production suppliers are rated equally. These ratings shall be an aid for management to determine the future potential of the suppliers as an ongoing partnership. Suppliers shall monitor their rating and achieve highest possible rating. Minimum requirements must be met or an action plan shall be developed to identify improvements.

## 15.0 Cost Recovery Policy

Suppliers / sub-contractors are liable for all costs incurred by when **the cause is the Supplier** responsibility as listed below (list is not exhaustive).

Followings are an outline of steps Tubular Steel Inc (TSI ) may take to recover costs (Supplier Chargeback) we incur due to nonconforming materials from our suppliers. It is solely at Tubular Steel Inc (TSI ) 's discretion whether or not we will pursue these actions. Alternative chargeback steps will be taken if prearrangements are made with Tubular Steel Inc (TSI ) .

- a) Nonconforming supplier parts are identified through Tubular Steel Inc (TSI ) receiving inspection, on-line rejects, customer returns, alerts or supplier recalls.
- b) Suppliers shall be notified of nonconforming products through the SCAR process or request for failure analysis.
- c) An account shall be initiated by accounting to collect all costs incurred by Tubular Steel Inc (TSI ) as a result of the nonconforming product.

Costs incurred may include but are not limited to the following items plus any associated costs (freight, logistics etc. ) at TSI or at TSI customers **caused by TSI supplier**:

- Containment Costs - Sorting of suspect material in house, customer location, third party warehouse (3rd party if required by Customer)
- Count of parts discrepancy supplied
- Delivery Penalties
- Disposition of scrap (supplier responsibility)
- Overtime to avoid production shutdown (downtime) or potential shutdown as a result of defective/suspect material or delivery issue.
- Premium freight including air charter to the final customer/OEM, if the situation demands, resulted from Supplier defective/ suspect material or delivery issue.
- Recall of Material Costs
- Replacement of Material Costs
- Return for Rework Costs
- Rework , Repair, Replacement of parts
- Travel Expense for customer support
- Warranty costs

- d) A letter or email shall be sent to the supplier summarizing the costs incurred and Tubular Steel Inc (TSI ) 's intent to recover such costs.
- e) A detailed report of the costs is available for review and verification by the supplier.
- f) There will be a charge of \$250.00 (flat rate) to cover Administrative costs for issuance and management of SCAR and or any minor supplier issues as deemed necessary by TSI with accurate and fair system in place . **The administrative cost multiplies by the number of recurrence on the same issue. For example, First time occurrence of a non-conformance administrative charge shall be \$250 while another recurrence of same issue shall be \$250 times 2 or \$500.**

Supplier shall agree to the following:

The supplier has 5 working days to respond for questions or review.

**Note:** The preferred method of cost recovery is debit of the suppliers account, unless an alternative agreement is reached through review with supplier. The charge back will be initiated after the 10 working days or completion of the review process.

### **Supplier Responsibility –**

It is the supplier's responsibility to provide parts/processes that conform to all specifications and reliability requirements and accept liability for all escapes caused by their quality discrepancies.

### **Tubular Steel Inc (TSI) Responsibility –**

It is Tubular Steel Inc. (TSI) responsibility to notify the supplier of all nonconforming materials in a timely manner and to provide an accurate and fair system to collect data for costs incurred. Tubular Steel Inc. (TSI ) also agrees to hold the defective materials for supplier review (where applicable as defect escaped to TSI customer might be assembled to higher drawing revision and hence required to be scrapped / destroyed at customer premises due to effective non-conformance material control and customer confidentiality.

## **16.0 Deviations**

A deviation constitutes permission to supply materials or components that do not fully comply with the drawing, specifications or master sample. Materials or components will not be delivered if they do not meet print requirements, unless a deviation is approved by TSI individual plant. In order to obtain deviation approval a written request must be submitted in writing to Supplier Quality representative or to the Buyer.

## **17.0 Traceability, FIFO**

All suppliers must implement a record retention policy for all records and documents pertaining to business conducted with TSI. The Supplier shall ensure they have the ability to trace history, application or location of an item and similar items by means of recorded information. Supplier shall also have the ability to trace the operational, computational and recording steps of measurement or evaluation of an item, process or service. The supplier shall also ensure a working FIFO system for parts

received parts in production & work in progress as well as finished goods including safety stock coverage.

### 18.0 Labeling

TSI requires the use of AIAG automotive part identification & tracking. Compliance to TSI labeling requirements will be continuously monitored by the receiving branch. Suppliers are responsible for ensuring that product & shipment is identified and labels are properly attached to each container, box and skid used to ship products.

Two labels are required on each applicable container or box of product in adjacent corners. Only one part number can be packaged per container. It is the supplier's responsibility to remove old labels and debris from TSI returnable prior to reuse of container and applying new product identification label.

Non-Compliance will be communicated through Corrective and Preventative action. If there are multiple containers per skid a Master Label is required to identify total skid quantity.

Standard 4 x 6 labels shall have the following minimum information:

- TSI part number
- Part description
- Container Quantity
- Supplier Identification Name and Number
- Purchase Order Number
- Manufacturing Date and Heat/Lot Number

### 19.0 Handling, Storage, Packaging, Preservation

All suppliers have full responsibility for ensuring that appropriate measures are introduced and maintained to preserve product quality during process handling, packaging, preservation and subsequent delivery. All containers shall be free from any foreign debris not pertaining to the product being supplied.

Suppliers are responsible for the supply process to guarantee uninterrupted part flow. Packaging shall take into consideration transportation method and shelf-life criteria.

#### a) Logistics & Delivery

TSI requires 100% on time delivery to the correct location at the correct date and time as specified by the delivery date as shown on the purchase order or material release schedule provided by the TSI branch specific. It is the Supplier responsibility to notify the TSI receiving plant Purchasing/Materials Manager if the release schedule cannot be met prior to the scheduled delivery date.



## 20.0 Product Safety & Regulations

Suppliers to TSI shall take due care regarding product safety. Means to minimize and to eliminate any potential risks to employees, users and the environment shall be promoted within the Supplier's organization.

## 21.0 Service Parts

Upon receipt of a release, Seller shall sell to Purchaser all goods necessary for Purchaser to fulfill Purchasers and its Customers service and replacement parts requirements. Service part orders must be fulfilled for 15 years after termination of the program has been formerly communicated to your respective representative, if required. It is the responsibility of the Seller to produce all items and or components at production price as per the last released print which has been PPAP approved.

## 22.0 Supplier Communication to TSI

Listed below are TSI expectations that all suppliers shall meet or exceed the following requirements:

- Contingency Planning Strategies are in place for all manufacturing facilities that ship to TSI.
- Upon completion of a program, the supplier will ensure tooling is properly stored to prevent damage and is readily available for service requirements.
- Suppliers must acknowledge that achievement of ZERO DEFECTS is a fundamental objective for Quality as well as a 100% on time Delivery performance along with competitive pricing.
- All suppliers are expected to be compliant with our environmental directives, our customers and applicable legal requirements including Product Material Content and Recyclability Reporting (PMCR-IMDS).
- Notify TSI for change in process, machine and supplier provided tooling.

## 23.0 Materials Management Operations Guideline (MMOG/LE)

In meeting this challenge, the Global MMOG/LE tool has become the de-facto standard for evaluating supply chain processes in the automotive industry; it is widely used for internal assessments, organization benchmarking and improving supply chain performance.

### a) Continuous Supply Chain Improvement

The Global Materials Management Operations Guidelines/Logistics Evaluation (Global MMOG/LE) tool contains almost 200 logistics assessment criteria which allow an organization's processes to be benchmarked against industry best practice.

- The capability and performance of existing logistics organisations are evaluated using Global MMOG/LE (with simple 'A', 'B' or 'C' ratings) and logistics system plans that meet customer or internal requirements are supported.
- Evaluations assist vehicle manufacturers and suppliers to reduce costs, waste, and workloads by streamlining and improving operating procedures.
- Global MMOG/LE also makes it much easier to explain supply chain operations to external customers and demonstrate improvement to internal management.

The tool is aligned with the common goals of ISO 9001 & IATF 16949 and contains number and terminology consistent with this widely implemented global standard.

The MMOG/LE Guideline is the recommended business practice for continued evaluation of the supply chain. This guideline is intended as a continuous improvement tool and consistency of materials definitions for our supply chain partners. Supplier can obtain current information and training information from AIAG. [www.aiag.org/Index.cfm](http://www.aiag.org/Index.cfm)

**b) Supplier Packing Slips & Invoices**

The Supplier ASN is required to be clearly identified to the physical receipt/ASN/invoice match. Packing slip/ASN number is required for shipping documents. It is the Suppliers responsibility to ensure this number is fully traceable to the Invoice sent to the TSI Receiving.

Each line item on the invoice is required to provide, the following information:

- TSI Part Number
- Description
- Supplier Part Number
- PO Number
- Quantity shipped

Each Shipment documents is required to provide the following:

- Supplier Manufacturing Plant
- TSI Plant 1
- TSI Plant 2
- Shipment date
- Freight Carrier
- Pro Number or Trailer Number
- Total number of Pallets/Skids
- Total number of Cartons
- Net Weight
- Gross Weight

**c) Supplier Raw/Fab Authorization & Balance Out**

It is the Suppliers responsibility to obtain part specific raw/fab authorization from the TSI receiving, Materials Manager prior to Start of production (SOP). Once a part has begun to balance out for End of Production (EOP), the Supplier is required to minimize lead time and minimum run quantities and produce only to the quantities authorized by the TSI Receiving Plant. It is the Suppliers responsibility to obtain written approval from the receiving branch prior to producing minimum run quantities or standard pack containers/skids.

In addition to the above requirements all Unionized Suppliers are required to build a three month bank prior to their Union contract renewal date. The supplier shall notify their respective receiving plant of the contract renewal date and advise that the bank is in place to protect future releases in case the contract renewal is halted for any reason.

## 24.0 Customs & importing requirement to Canada & USA

Importing requirements into U.S & Canada.

### a) Import Documentation Requirements

Basic Invoice Requirements

- Date of Shipment
- Name and address of Shipper
- Name and address of Consignee
- Name and address of the 'sold to' party (i.e. the entity billed for the goods)
- Detailed description of the product in English including:
  - TSI part numbers with description
  - Sufficient description of each item (just "automotive parts" is **not acceptable**)
  - Quantity
  - Unit Price
  - Total price per line
  - Total cost and/or value of the shipment\*
  - Type of Currency
  - TSI Purchase Order Number
  - Country of Origin (this is the country of manufacture).
  - Terms of Delivery for the Shipment expressed in INCOTERMS (ex-works, FOB,CIF etc.)
  - Name of the Customs broker responsible to TSI for the cargo.

Important Note:

***TSI shall not be the importer of record for any chemicals.***

\* Please note that all items require proper valuation for Customs purposes. Even if the shipment contains no-charge items, samples, returnable containers, or returned goods, etc. we MUST still declare a fair market value for Customs. In this case the amount declared (or line value) should be also be marked with the phrase "Value for Customs Purposes Only".

### b) NAFTA Guidelines

Before goods are claimed to qualify for NAFTA, their origin must be correctly determined as that of U.S., Canadian or Mexican origin. Goods for which NAFTA is being declared must be accompanied by a NAFTA Certificate of Origin or have a blanket NAFTA Certificate of Origin on file with the broker. NAFTA Certificates should only be completed by someone with proper training including knowledge of tariff classification, tariff shifts, and bills of material analysis, regional value calculations and automotive tracing requirements.

### c) Country of Origin Marking

Section 304 of the Tariff Act of 1930, as amended (19 U.S.C. 1304) provides that, unless exempted, every article of foreign origin imported into the U.S. & Canada shall be marked in a conspicuous place as legibly, indelibly, and permanently as the nature of the article (or container) will permit, in such a

manner as to indicate to the ultimate purchaser in the U.S. or Canada the English name of the country of origin of the article.

## 25.0 Conflict Minerals Policy

### a) The Conflict Minerals Disclosure Rule

On August 22, 2012, the U.S. Securities and Exchange Commission (SEC) adopted a final rule (the “Rule”) under Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the “Dodd-Frank Act”) requiring publicly traded companies subject to Securities Exchange Act of 1934 reporting requirements, to report annually on the use and source of ‘conflict minerals’ in their products. Conflict minerals are defined in the Rule as Gold, as well as, Tin, Tantalum and Tungsten (and their derivatives Cassiterite, Columbite-Tantalite and Wolframite), which originate in the Democratic Republic of Congo or an adjoining country specified in the Rule (collectively the “Covered Countries”). The Rule was implemented to increase supply chain transparency with the aim of ending ongoing violent conflict in the Covered Countries that the U.S. Congress determined is being partially financed by revenues generated from the mining and transport of conflict minerals.

### b) Our Objectives and Actions

Strengthening our due diligence program and processes to identify the source of the minerals used in our products in accordance with the OECD Guidance.

### c) Our Expectations of Suppliers

TSI is committed to sourcing components and materials from companies that share our values and commitment to human rights, ethics and environmental responsibility. We require our direct suppliers to: (i) support our efforts to comply with the Rule by taking appropriate due diligence measures to determine the origin of minerals used in products supplied to TSI; (ii) Increase awareness of the Rule’s reporting requirements among their suppliers; and (iii) Obtaining information from their suppliers with respect to the origin of minerals used in products ultimately supplied to TSI .

## 26.0 Supplier Requirements Specific to Steel Mill /Coil material Supplier ONLY

We at TSI understand the specific mill/ coil commodity requirements for our processes, manufactured parts and our customer specific requirements, hence would require our mill/ coil supplier to be compliant of the followings specific requirements. These requirements shall be followed in addition to all other requirements in supplier quality manual.

### 1. MATERIAL CERTIFICATES:

- 1.1. Material Certificates must be sent electronically prior to every shipment (ASN) as well as a paper copy attached to the shipping documents;
- 1.2. Must include certificates for each heat number;
- 1.3. Material to be certified to ASTM A1008/A1008M (cold rolled) or A1011/A1011M (hot rolled) unless otherwise stated on the Purchase Order;

- 1.4. Certificates for all HSLA and other materials of which specification depicts physical-mechanical properties (such as Yield/Tensile strength, elongation, etc.) must contain test results attesting to the conformance of the material to such specifications.
- 1.5. Must include the Steel Grade (i.e. "C1008 HRPO") on all material certificates;
- 1.6. **TSI requires original Mill Certificates of a heat number.** It is the supplier's responsibility to obtain, keep it on record, provide or forward such certifications to TSI when requested, on the same business day the request is made. If such certifications are not obtained in a timely manner after the request, TSI, reserves the right to reject the material with supplier nonconformance report (SNCR) demanding corrective action or at its option but at the supplier's cost, will obtain independent lab certification.
- 1.7. Mill-certifications, as well as independent laboratory certifications, when requested, must be accompanied by the certifying laboratory current and valid ISO/TEC 17025:2005 accreditation, including lab-scope In the event certifying organization is not registered to ISO/TS 16949:2009 or IATF16949, or the lab-scope (as a minimum), if the certifying organization is registered to ISO/TS 16949:2009 or IATF 16949. "Lab-scope" is a document listing the tests and standards the laboratory has been judged, by a third party, competent to perform.

## 2. TAGS:

2.1. Individual coils must be identified by one tag;

2.2. Every tag must identify:

- ✓ TSI Coil ID (Typically "COIL-xxx" where "xxx" is a three digit number)
- ✓ Supplier's name;
- ✓ Heat Number;
- ✓ Slit size;
- ✓ Gauge;
- ✓ Weight
- ✓ Steel Grade;
- ✓ Purchase Order Number

2.3. As a minimum the following data must be bar-coded on the labels:

- ✓ TSI Coil ID
- ✓ Heat Number
- ✓ Weight
- ✓ P.O. Number
- ✓ Supplier's name
- ✓ (Preferred label configuration is attached)

## 3. COIL SIZES

- 3.1. Minimum coil Outside Diameter not to be less than 48";
- 3.2. Maximum coil Outside Diameter not to exceed 72" on slit widths up to 4.847";
- 3.3. Maximum coil Outside Diameter not to exceed 68" on slit widths over 4.847";
- 3.4. Coil Inside Diameter not to exceed 20.5";
- 3.5. Minimum Coil inside Diameter is 19.5";
- 3.6. Maximum skid weight not to exceed 8,000 lbs.

3.7. Slit width tolerance: Specified slit width  $\pm .006''$

## 4. COILS

- 4.1. All edge cuts must be identified on the coils by clear, unambiguous marking, such as "Edge";
- 4.2. Cross-welds or any material discontinuity are not accepted in the coils;
- 4.3. Material must be damage and rust free.

## 5. PACKAGING INSTRUCTIONS

- 5.1. At least 2" Spacers must be placed between coils and there must be at least a 2" gap between the skid and the bottom coil (cross woods must be at least 2" thick); Spacers must be wrapped and paper must be placed on Skids to prevent rust caused from moisture in the wood.
- 5.2. A minimum of three cross straps and one around the Outside Diameter of each coil must be used;
- 5.3. Additional strapping around all coils and skids, as necessary to ensure safe handling, is required;
- 5.4. All loads to be tarped and skids to be loaded forklift rear.
- 5.5. All tags to be secure on coils and must withstand shipping and unloading. TSI will not accept unidentified coils nor will make assumptions regarding coil identity;
- 5.6. If adhesive tape is used on the coil surface it must be the kind that is easily removable without leaving any material residue.
- 5.7. No foreign/loose material is acceptable within the coil.
- 5.8. In order to prevent deterioration/rusting due to retained wetness in wooden skids and spacers, skids and spacers are to be separated from the steel by waterproof paper or plastic sheets.

## 6. DELIVERIES

- 6.1. 100% On-Time delivery is expected; TSI will monitor and report to the supplier each delivery nonconformance through Delivery Nonconformance Reports.
- 6.2. TSI will debit the Supplier with all costs incurred by TSI as result of the Supplier not meeting promised/confirmed delivery date or quantity.
- 6.3. TSI will accept shipments over the ordered quantity of 15% maximum. Shipments over that limit as well as any shipments under the ordered quantity will be viewed as a delivery non-conformance.
- 6.4. Receiving hours are from 7:00am to 3:30pm Monday to Friday unless otherwise agreed by TSI in advance.

## 7. QUALITY

- 7.1. TSI's expectation is 100% conformance to specifications. Any deviation from specifications defined either in these "Requirements" or in applicable standards, will be handled as a "Quality Issue", unless:

The supplier has obtained written approval (commonly referred to as "EAPA") for the particular defect and at least to the existing magnitude from TSI prior to TSI receipt of the material (e.g.: The supplier obtained approval to ship 18ga material with material thickness as low as .041"; however, at receipt material thickness is found to be .040". The situation

would be viewed as a Quality issue). If a Quality issue arises, a Nonconformance Report is generated and issued to the Supplier;

- 7.2. Corrective Action may be requested depending on the severity of the Nonconformance;
- 7.3. If a Corrective Action Report is requested Suppliers are required to respond with initial corrective/containment action within 24 hours of the issue of the NCR. Permanent Corrective Action implementation is expected within 10 business days.
- 7.4. If a supplier attempts to deviate from Tubular Steel Requirements, a written request for APPROVAL is required prior to shipment of the coil.
- 7.5. TSI will debit the supplier for any cost TSI incurred as a result of a quality issue confirmed to originate prior to TSI's receiving of the material. A administrative fee of \$250.- will be added to all such cost recoveries.

## 8. COMPLAINT RESOLUTION

- 8.1. When a quality issue arises Tubular Steel Inc will open a Supplier Non-Conformance Report and send a copy to the supplier to the attention of the supplier's representative on record.
- 8.2. If the supplier has an issue, argument with the rejection the supplier must contact Tubular Steel Inc Purchasing or Quality within five business days. If no contact is made within this time period Tubular Steel Inc will assume the supplier's agreement with the issue and proceed accordingly.
- 8.3. Tubular Steel Inc will hold rejected material (in coil or rolled form) for a reasonable period of time but due to space limitations it cannot guarantee hold for more than five business days. If the supplier has not indicated a dispute with the rejection along with his desire to review the rejected material at Tubular Steel Inc's location, the material, at Tubular Steel Inc's option but at the supplier's expense, may be returned to the supplier (steel coils) or scrapped (manufactured parts). In such case Tubular Steel Inc will only keep a representative sample of the defect.

## 9. SUPPLIER QUALITY SYSTEM REQUIREMENTS

- 9.1. Tubular Steel Inc expects its suppliers to conform to one of the management standards listed below:
  - ISO 9001:2015
  - IATF 16949:2016The supplier must provide evidence of their system being in conformance to one of the above standards. Acceptable evidence is an up-to-date Certificate of Registration. A current Certificate of Registration is a condition for quoting any business and shipment of any product.
- 9.2. Any independent laboratory used for any reason/test(s) must have a current ISO/TEC 17025:2005 accreditation with the test(s) performed listed in their lab-scope. Lacking either the accreditation or the appropriate listing will result in TSI judging the data provided invalid and therefore unacceptable to base any decision on it.

## 27.0 References & Links

AIAG Measurement System Analysis (MSA)  
AIAG Production Part Approval Process (PPAP)  
AIAG Advanced Product Quality Planning and Control Plan (APQP)  
AIAG Statistical Process Control (SPC)

AIAG Potential Failure Mode and Effect Analysis (FMEA)

Copies of all AIAG and other related documents are available at

[www.aiag.org/Index.cfm](http://www.aiag.org/Index.cfm) or by phone (248) 358-3570.

Materials Management Operations Guideline Logistics Evaluation (MMOG/LE)

IMDS [www.mdsystem.com/imdsnt/startpage/index.jsp](http://www.mdsystem.com/imdsnt/startpage/index.jsp)

Global Automotive Declarable Substance List (GADSL) [www.gadsl.org](http://www.gadsl.org)

End of Life Vehicle (ELV) Directive 200/53/EC

<http://ec.europa.eu/environment/waste/index.htm>