

## Chapter 20. Special Characteristics

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### 0) Introduction

There are only two closely-related clauses in this chapter. The reason why a whole chapter is devoted to there are generally not well understood and/or catered for. Some explanations and pointers are in order. Many NCs have been written on this clause alone.

#### 1) 8.2.3.1.2 Customer-designated special characteristics (IATF16949)

(Requirement-paraphrase)

The organization shall conform to customer requirements for designation, approval documentation, and control of special characteristics.

(Highlights of the clause)

- (Ref to old Standards). There had been a clause 7.2.1.1 of the same title in the older standard of ISO/TS16949.
- There is no change in requirement, except a word 'approval' is added before documentation. See clause description.
- In general, customer requirements on use of special characteristics shall be complied

(Compliance best practice)

#### **8.2.3.1.2 Customer-designated special characteristics**

1. *To comply with this clause, the symbols shall be reflected in all process documents e.g. drawings, FMEA, Control Plan, Inspection Plan, WI and relevant work stations, where applicable.*
2. *For use of harmonized approach on SC identification, please refer to 8.3.3.3 below*

#### 2) 8.3.3.3 Special Characteristics (IATF16949)

(Requirement-paraphrase)

The organization shall use a multidisciplinary approach to establish, document, and implement its process(es) to identify special characteristics, including those determined by the customer and the risk analysis performed by the organization, and shall include the following:

- a) documentation of all special characteristics in the product and/or manufacturing documents the drawings (as required), risk analysis (such as FMEA), control plans, and standardised work/operator instructions; special characteristics are identified with specific markings and are documented in the manufacturing documents which show the creation of, and controls required, for these special characteristics



- b) development of control and monitoring strategies for special characteristics of products and products and production processes;
- c) customer-specified approvals, when required;
- d) compliance with customer-specified definitions and symbols or the organization's equivalent symbols or notations, as defined in a symbol conversion table. The symbol conversion table shall be submitted to the customer, if required.

(Highlights of the clause)

- (Ref to old Standards). There had been a clause, 7.3.2.3 of the same title, in the old version of ISO/TS1694
- The previous requirements are retained in the new clause. Additional requirements are multidisciplinary approach to establish, document and implement the Special characteristics management process
- Special characteristics and the specific markings, may be provided by customer, or derived by the organization itself, from risk analysis etc.
- A harmonious approach to listing of SC is now allowed, with customer approvals
- The total requirements are given in a) to d) of the clause description

(Compliance best practice)

### 8.3.3.3 Special Characteristics

1. To comply with this clause, SC have to be seen as special markings on FMEA, and cascaded down to control plan, inspection report and WI as applicable. You need to use the SC correctly on these process documents. I have often seen the 'class' column on process documents are wrongly used. See **Exhibit 20-1**.
2. SC Indication on the work stations no longer is a must, as the work stations may not be dedicated. A press can be producing parts for many customers and for various industries, Indication on WI and/or inspection sheets should suffice.
3. You may want to make use of the harmonized approach permitted in this new standard. With this method. It will make things neater and easy to comply with.
4. When using this harmonized, or equivalent method, a conversion table shall be prepared, and submitted to customer, if applicable. See **Exhibit 20-2**.

## 3) SIs & FAQs

SI Nbr	IATF Clause	Description
6	8.3.3.3 Special characteristics	<p>The organization shall use a multidisciplinary approach to establish, document, and implement its process(es) to identify special characteristics, including those determined by the customer and the risk analysis performed by the organization, and shall include the following:</p> <p>a) documentation of all special characteristics in the <b>product and/or manufacturing documents drawings</b> (as required), <b>relevant</b> risk analysis (such as <b>Process FMEA</b>), control plans, and standard work/operator instructions; special characteristics are identified with specific markings and are <b>cascaded through each of these documents; documented in the manufacturing documents which show the creation of, or the controls required, for these special characteristics;</b></p> <p><b>Rationale for change:</b> Clarifies the documentation of special characteristics in the product and/or manufacturing drawings.</p>



#### 4) Supplementary Notes

Legend: HOC= Highlights of Clause, CBP= Compliance Best Practice, S&Q= SIs & FAQ, EXH= Exhibits

Clause	Section	Clarification Subjects
8.2.3.1.2 8.3.3.3	CBP	<b>SN20.1 What is special characteristics (SC)?</b>
8.3.3.3	CBP	<b>SN20.2 What is CC, how is it different from SC?</b>
8.3.3.3	CBP	<b>SN20.3 Who should be deciding on SC?</b>
8.3.3.3	CBP	<b>SN20.4 Can give examples of internally defined SC?</b>
8.3.3.3	CBP	<b>SN20.5 Do we need to get approval for harmonized approach to SC. The standard did not say so.</b>

##### **SN20.1 What is special characteristic?**

According to Clause 3.1. Terms and Definition: Special characteristics are product characteristics or manufacturing process parameters that can affect safety or compliance with regulations, fit, function, performance. Requirements, or subsequent processing of product.

##### **SN20.2 What is CC (critical characteristic)? How is it different from SC?**

Special Characteristics is a blanket term. Practitioners may break it further to suit their purpose. All sorts of classification are available: by nature (safety and quality), by criticality (A, B, C, D etc). They are all treated as Special Characteristics by IATF.

##### **SN20.3 Who should be deciding on SC?**

External SC are decided by customer. Internally SC are decided by own core team.

##### **SN20.4 Can give examples of internally defined SC?**

For some bulk materials, the width is important e.g. PVC or fabrics for seats. When too narrow, it is rejected because it does not meet customer specs. Too broad will result in rejects/waste. The second problem (too broad) is not a concern to customer. But to the organization, it is COPQ. Width for such processes are often designated as SC internally.

##### **SN20.5 Do we need to get approval for harmonized approach to SC? The standard did not say so.**

The standard states to submit the conversion table, if applicable. In practice, you need to get at least a no objection from the customer before implementing, otherwise there may be arguments later. If you are going to ask for no-objection, you might as well ask for approval. Their reply is an evidence of request and response of the customer.



**Exhibit 20.-1. Use of Classification Column in FMEA & Control Plan**

**Exhibit 20-1. Use of Classification Column in FMEA**

POTENTIAL FAILURE MODE AND EFFECTS ANALYSIS (PFMEA) OF \_\_\_\_\_ of \_\_\_\_\_

Item: \_\_\_\_\_ Process Responsibility: \_\_\_\_\_

Model Year(s)/Program(s): \_\_\_\_\_ Key Date: \_\_\_\_\_

Core Team: \_\_\_\_\_

Process Step / Function	Requirements	Potential Failure Mode	Potential Effect(s) of Failure	Severity	Classification	Potential Cause(s) of Failure	Occurrence	Current Process Controls	Current Process Controls	RPN	Recommended Action	Responsibility & Target Completion Date	Action Results					
													Actions Taken & Effective Date	Severity	Occurrence	Detection	RPN	

**PFMEA Form A**






Use this column correctly.  
See Remarks below

**Remarks given in this section explain on the Exhibit. Do not include them as part of the document**

- This column 'class' is for notations of special characteristics (SC), or critical characteristics (CC)
- Leave it empty if there is no SC or CC. Do not put NA, or (-). Otherwise the NA or (-) will be mistaken for SC or CC

Exhibit 20-2. SC Conversion Table

Harmonized SC Symbol Approach

OEM	Proton	Perodua	Honda	Nissan	BMW	Harmonized Symbol
Type of SC						UNION Metal
Quality Critical	⊕	A	(⊙)	OBD	(SC)	SC
Safety (if applicable)	?	?	?	?	?	?

**Remarks given in this section explain on the exhibit. Do not include them as part of the document.**

- Some organization are producing parts that many car plants can use e.g. carpets and floor mats.
- Different OEM tend to have their own SC symbols. It is not practical to identify each and every one of these symbols on process documents, or at the work stations.
- A harmonized approach is allowed by IATF. Customers are also receptive to this idea, but you need to get consent before implementing.
- Keep documentary records of customer acceptance.