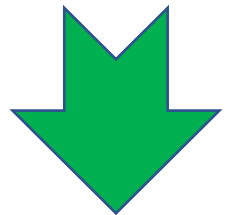




## Straight Six



Interesting point of debate



## Straight Six



Interesting point of debate

*“Our team could generate the Failure Modes – many by numbers ( See the next sheet ). Hope it is a good sign & approach. Please explain !*




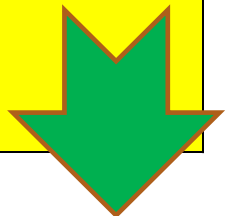
During our Video conferencing on Process FMEA ( Latest version ), one question was asked by Mr. Praveen from Pondicherry .

# Straight Six

: AIAG - VDA version ( 1st edition 2019 )

From ONE product characteristics ( External diameter ), many Failure modes are identified. Is it a good sign ?

III. FUNCTION ANALYSIS			IV. FAILURE ANALYSIS		
1. Product & / or Process function that the process item creates ( Product In-plant, Ship to plant, End user - When known )	2. Function or outcome of the process step & Characteristics description ( <u>Product characteristics</u> - Quantitative value is optional )	3. Function or task of the work element and <u>Process characteristics</u>	1. Failure <u>Effects</u> (FE) ( In - plant, ship - to - plant, process item, vehicle end user, when known )	Severity (S) of FE	2. Failure <u>Mode</u> (FM) of the process step
( A → ) D	E	F	G	H	I
<u>Input source</u> :	<u>Input source</u> :	<u>Input source</u> :	<u>Input source</u> :	<u>Input source</u> :	<u>Input source</u> :
<p><b><u>Product function:</u></b> To avoid contamination of motor due to entry of foreign material into motor</p> <p><b><u>Process function :</u></b> To close the cover port with plastic plugs tightly</p>	<p><b><u>Product characteristics :</u></b></p> <p>External diameter</p> <p>25 + 0.05 mm</p>	<p>1. Power supply voltage -230 VAC 2. Operator skill with WI - Level L 3. Speed - 2500 RPM Feed 5 mm / min ++++</p> 	<p><b><u>In plant :</u></b> XXXXXXXX</p>	6	a ) Diameter more than 25.05
					b ) Diameter less than 20
					c ) Surface scratch marks
					d ) Excess ovality
					e ) Excess taper
					f ) End chamfer excess
					g ) End chamfer not present



## Straight Six

Our views on an important debate point raised during our workshop

*No ! It is not a good sign and approach !*

*I personally have witnessed, many department heads ( even the plant heads ) believe that getting the Failure modes is the challenge. But as an FMEA practitioner, I do not believe so !! ( this is applicable for Design FMEA too )*

*Understanding & capturing all the Requirements ( see column ref. 'E' in the previous page ) is quite challenging ! It calls for clear understanding of the product & process.*

*That's why, we insist upon 'Reverse FMEA' approach ( contribution of GMI ) – while implementing the Process FMEA in various organizations. This technique will help the teams to clearly stipulate the Process requirements.*

*When many Failure modes are emerging from a single ( or few ) Process requirements ( External diameter 25, in this case ), it is obvious that there are many 'Requirements' **hidden** – which are implicit. Not a good sign, right ?*

*Its also clear in this case, that the requirements are more than one ( not just the diameter, but also, the surface roughness, Ovality +++ ). So, teams must be very careful on this. Reasons like this are making many of us to believe that FMEA is a DOCUMENT, but not a wonderful technique for product / process improvements !!*



**AVM**

*“When AVM is the Trainer, I don’t bother whether the learners are Experienced Engineers or not !*

*He will reach all & ensure the learning curve goes up, with out any pains !!*

**Mr. T Ramalingam**  
**HR,**  
**TVS Tyres, Madurai**



CONTACT  
INFORMATION

[support@sripadhmam.com](mailto:support@sripadhmam.com)

+91 99621 17222

[www.sripadhmam.com](http://www.sripadhmam.com)