SQPS-933

Veoneer Supplier Manual (VSM) **Production Trial Run Capacity Report Training**

Dennis Nielsen 25-JAN-2021

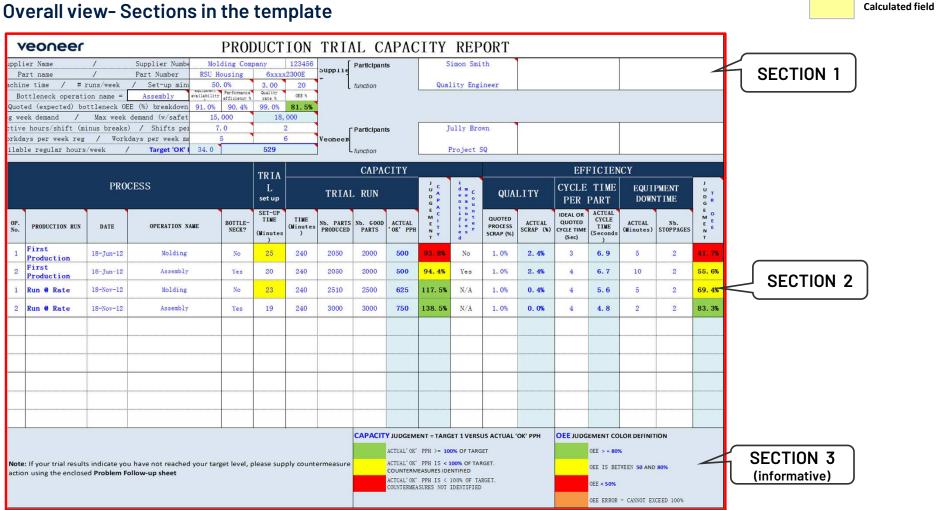
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Purpose

- 1. The primary purpose of the Production Trial Run Capacity report is to confirm the installed **capacity** during the different production trial runs.
- 2. The secondary purpose is to measure the **efficiency** of the Supplier process considering the following factors:
 - Equipment availability
 - Performance efficiency
 - Quality Rate

and confirm the agreed installed capacity during both <u>RFO</u> phase and <u>Contract</u> <u>Review</u>

3. This template will also allow to <u>track all issues identified</u> and the <u>progress</u> done during the different production trial runs. Issues will be tracked in the sheet "Problem follow-up sheet" and should be closed at Run @ Rate at the latest.



Section 1

% machine time Percent of machine/process time dedicated to this part. # runs/week
How many times
this part will be
run per week on
average.

Set-up minutes How many minutes to setup (changeover) to this part.

Reg week demand Regular weekly demand

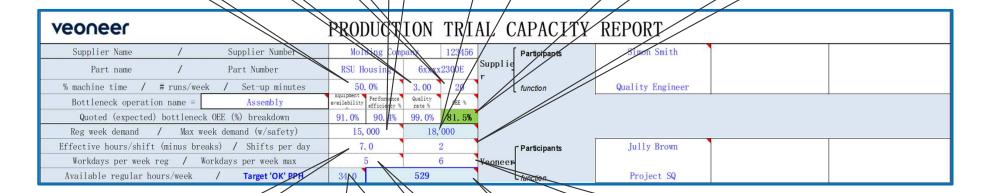
Max week demand (w/safety)
Maximum weekly demand to
cover temporary peak demands.
This information should match

This information should match what is agreed in the Cost Breakdown and Contract Review. Regular + 20%.

Bottleneck OEE (%):

See OEE color definition below. Lower OEE indicates higher potential to affect capacity, quality, or cost and should be investigated for potential improvements. Shifts per day

Regular number of shifts per day.



Effective hours/shift(minus breaks)

Example: if during a 8 hours shift, we have three breaks of 20 minutes, effective hours per shift will be: 8 hours - (60 min/60) = 7 hours Available regular hours/week

Available hours-week=regular shifts per week x effective hours per shift. (% machine time x effective hours per shift x regular workdays per week x # shifts per day)-(# runs per week x set-up hours per run). (E4xE8xE9xG8)-(G4xH4/60)

Example (.5x7x5x2)-(3x20/60) = 35-1 = 34

Workdays per week reg

Regular number of workdays per week.

Target 'OK' PPH Target OK PPH (Part per

Hour)=
Maximum weekly
capacity / available
regular hours per week
for this product. G7/E10.
Example 18000/34 = 529.

Workdays per week max

Maximum number of workdays per week to temporarily cover peak demands. This is for information only, is not used in calculations on this sheet.

Section 2

PRODUCTION RUN

Please state the type of Production Run:

- First Production Trial
- PPAP Production Trial
- Run @ Rate

BOTTLE-NECK?

Is this the bottleneck (slowest) operation as defined above?

SET-UP TIME (Minutes)

This is the time needed to put the process in conditions to start the production trial, yellow indicates setup for trial took longer than normal (compared to set-up minutes shown above).

ACTUAL 'OK' PPH

calculated field = (Number of good parts/time x 60). First row example: J16/H16*60 = 2000 Good parts/240 minutes x 60 minutes/hour = 500 PPH.

CAPACITY JUDGEMENT

Compares quoted (expected) OEE to trial run OEE, factors in lowest one for bottleneck operations. Also compares quoted set-up time to trial run set-up time, factors in highest one (see Adjusted target OK PPH in column Y). See bottom of sheet for color definition.

TR OEE JUDGEMENT

The Trial Run Overall Equipment Effectiveness measures how effectively the process was utilized during the trial run, which has an effect on capacity. OEE = Equipment availability x Performance efficiency x Quality rate during the trial run.

Calculated field

PROCESS TRIAL RUN						TRIA	CAPACITY				EFFICIENCY								
OP. No. PRODUCTION RUN DATE OPERATION NAME BOTTLE-NECK? TIME (Minutes NECK?) Nb. GOOD PARTS (NECK?) Nb. GOOD PARTS (NECK?)	PROCESS					Ţ	TRIAL		Z RUN	RUN		G P nau		QUALITY					
Production 18-Jun-12 Molding No 25 240 2050 2000 560 93.8% No 1.10 2 3 3 6.9 5 2 41. 2 First Production 18-Jun-12 Assembly Yes 20 240 2050 2000 560 94.4% Yes 1.0% 2.4% 4 6.7 10 2 55. 1 Run @ Rate 18-Nov-12 Molding No 28 240 2510 2500 625 117.5% N/A 1.0% 0.4% 4 5.6 5 2 69.	OP. No.	PRODUCTION RUN	DATE	OPERATION NAME		TIME \	(Minutes	Nb. PARTS PRODUCED	Nb. GOOD PARTS	ACTUAL 'OK' PPH	E	iun fr ie	PROCESS	ACTUAL SCRAP (%)	QUOTED CYCLE TIME	CYCLE TIME			E
2 Production 18-Jun-12 Assembly Yes 20 240 2500 2000 300 94.4% 128 10% 2.4% 4/ 6.7 10 2 55. 1 Run @ Rate 18-Nov-12 Molding No 23 240 2510 2500 625 117.5% N/A 1.0% 0.4% 4 5.6 5 2 69.	1		18-Jun-12	Molding	No	25	240	2050	2000	500	93.8%	No	1.0	2.4%	3	6.9	5	2	41.7%
	2		18-Jun-12	Assembly	Yes	20	240	2050	2000	500	94. 4%	y _o s/	1.0%	2.4%	4//	6. 7	10	2	55. 6%
2 Run @ Rate 18-Nov-12 Assembly Yes 19 240 3000 3000 750 138.5% X/A 1.0% 0.0% / 4 4.8 2 2 83.	1	Run @ Rate	18-Nov-12	Molding	No-	23	240	2510	2500	625	117.5%	N/A	1.0%	0.4%	/4/	5. 6	5	2	69. 4%
	2	Run @ Rate	18-Nov-12	A ss embly	Yes	19	240	3000	3000	750	138.5%	N/A	1.0%	0.0%/	$\sqrt{4}$	4.8	2	2	83. 3%

Counter measures identified

For any judgement less than 100%, countermeasures must be identified on Problem Follow-up Sheet.

QUOTED PROCESS SCRAP(%)

From Supplier Cost Breakdown. To be referred to in the contract review. For information only, not used in calculations.

ACTUAL SCRAP (%)

(Number of parts produced - Number of Good parts) / Number of parts produced.

IDEAL OR ONOTED CYCLE TIME

From supplier cost breakdown, to be referred to in the contract review. It refers to the ideal (best possible) cycle time per part. The cell will turn yellow if quoted (ideal) cycle is time longer than the actual cycle time, which should not happen.

ACTUAL CYCLE TIME (Seconds)

Cycle time Actual
per part (seconds) =
Time (min) x 60 /
Number Parts

ACTUAL (Minutes)

Total Equipment downtime during the Trial Run.

Nb. STOPPAGES

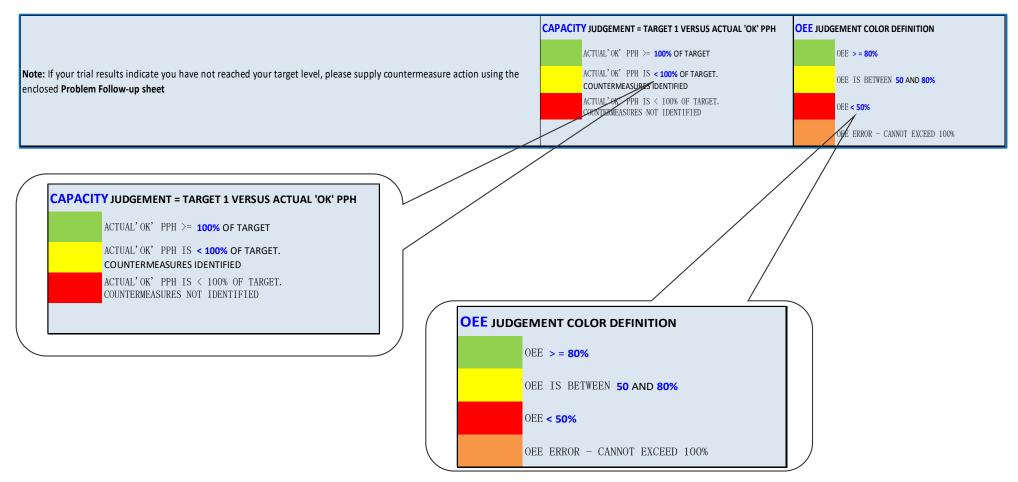
Number of stoppages during the Production Run. For information only.

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SQPS-933: Production Trial Run Capacity Report

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Section 3



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Production Trial Run Capacity Report

Formulas (1/2)

	CAPACITY	(TRIAL	RUN)
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■ Target "OK" PPH (Part Per Hour) =

■ Actual "OK" PPH (Part Per Hour) =

■ Capacity Judgement (%) =

■ EFFICIENCY (QUALITY)

■ Actual scrap (%) =

■ EFFICIENCY (CYCLE TIME)

■ Actual(sec) =

Regular capacity / available

Available Regular Hours per week for this product

Number of good parts

Time (min)

Actual "OK" PPT

Target "OK" PPT

Number of parts produced- Number of good parts

Number of parts produced

(Time (min) Equipment downtime (min) x 60

Number of parts produced

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Production Trial Run Capacity Report

Formulas (2/2)

■ EFFICIENCY

Actual TR (Trial Run) 0EE = Equipment availability x Performance efficiency x Quality Rate

Equipment availability(%) =

■ Performance efficiency (%) =

Quality rate (%) =

Time (min) - Equipment Downtime Actual (min)

Time (min)

Quoted Cycle time (sec)

Cycle time actual (sec)

Number of good parts

Number of parts produced

Problem follow up sheet

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Production Trial Run Capacity Report - Problem follow-up sheet -

Action No.	Production Run	Date	Process Name	Finding / Improvement potential	Root Cause	Corrective action	Responsible	Planned Correction Date (DD-MMM- YYYY)	PDCA	Final Completion Date (DD-MMM-YYYY)	Follow-up / Comments / References
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											

Thank You!

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