

Promotion Report

**Enhancement of technical skill to contribute
company profit and ensure product quality**

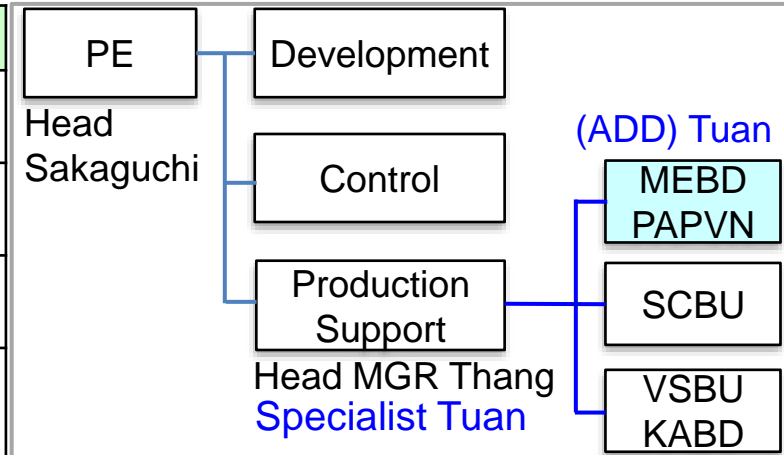
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Joined in	: 18 th Jul 2011
Current Position	: Supervisor
New Position	: Specialist
Department	: Production Engineering

1. Job History & Organization:

Time	Career History
2011	Join in PE-PBX team as new model transfer leader
2017	Promote to Supervisor of PBX team
2019	Transfer to Projector project leader (PE)
Mar/2023 (~ now)	Add PAPVN & IQC equipment control (challenge myself)



2. Job Description:

- ❖ Control equipment, investment & expense for new project of Projector
- ❖ Make schedule, prepare equipment & install line for new model of Projector
- ❖ Resolve trouble & improve production process of Projector/PAPVN together production side
- ❖ **Additional control: Support manager to control technical matter of all Production Support team**

3. My Main Achievements (2020 ~ 2022)

① New Model Transfer



**LCD Model
6 Series**



**DLP Model
8 Series**

Successfully to transfer **6 Steps** of PJ without PCG supporter due to Covid

② Optical In-house Project

- ❖ Improve concept suitable for PSNV base on PCG video
- ❖ Remote setup equipment
(No supporter come)



DLP Optical

Finished to setup equipment
on schedule for mass production

③ Other Activities

- ❖ Muda Buster 5 theme(Time & Cost)
- ❖ PSNV **QCC 1st Prize** (PJ Team)



Save Time: 688H/Year

Save Cost: 20KUSD

- ❑ PSNV current model sale down, **difficult to expand current businesses**
- ❑ MEBD also **sale down, fixed cost ratio UP** → Need to improve fixed cost to maintain profit

PSNV Situation

Mil USD



MEBD Situation

Mil USD

54.6

100.0%



PE Mission: Improve fixed cost to maintain profit

Our Strong Points

- ❑ Self-design capability & in-house processing
- ❑ Good quality management system

Direction

- ❑ Expand in-house (self-design) to reduce investment cost
- ❑ Prevent quality lost cost by improving process design

My Mission:

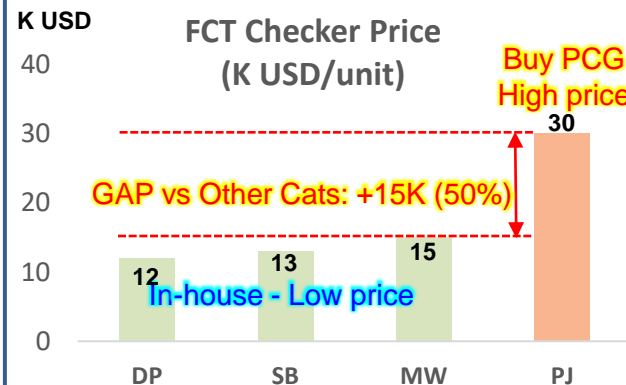
Strengthen the improvement activities at MEBD for fixed cost reduction

❖ Study checker status of Projector (PJ) new model

Investment of PJ Equipment

PSNV FCT Checker Situation

Pending Issue & Improvement



Issue ①

❖ Projector FCT Checker

- High investment cost
- Depend on PCG schedule

Activity ①

In-house FCT Checker for Projector

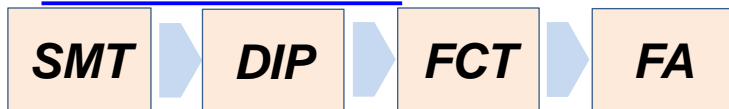
■ Target: Cost: Δ 50%

❖ Review process design of Projector line concept

Projector Process Situation

Pending Issue & Improvement

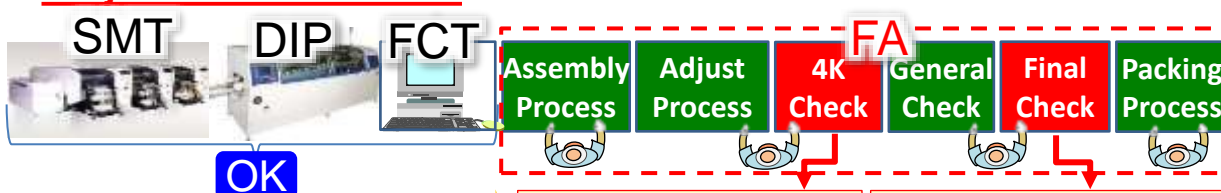
❖ PSNV Standard Line



❖ Standard Process Design

- Traceability
- Inspection by software
- Maximum auto judgment

❖ Projector Line Situation



OK

What is **risk** in process?

Risk1: Manual Process (No software)

Risk2: Manual Inspection (Judgment by EYES)

Issue ②

❖ Projector FA Process

- Not good process design
- Risk of quality issue

Activity ②











Enhance Automatic Inspection in Projector FA Process

■ Target: Zero manual inspection

Improvement Schedule

4/10

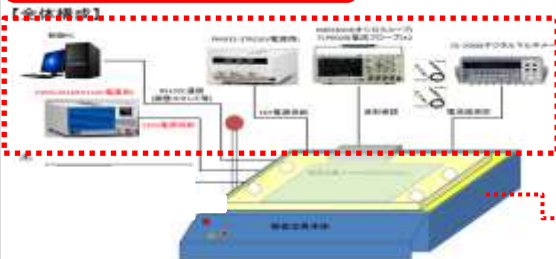
- ❑ Setup plan to carry out the improvement activities
- ❑ Combine PE design team and concern department together to achieve target

	Items	Main Activity Plan:  Actual: 	PIC	FY2023 Schedule								Target
				Aug 23	Sep 23	Oct 23	Nov 23	Dec 23	Jan 24	Feb 24	Mar 24	
Activity 1	In-house FCT Checker for Projector	Design and Make In-house FCT Checker Hardware	★PE Tuan PE Dong PE Thien	 								Reduce FCT checker investment cost: 50% ~△30k\$
		Make In-house FCT Checker Software			 							
Activity 2	Enhance Automatic Inspection in Projector FA Process	Make Software for Automatic Inspection and Verify	★PE Tuan FA Quyen FE Phuong				 					Zero manual inspection in the process
		Improve Software and Method for Automatic Judgment							 			


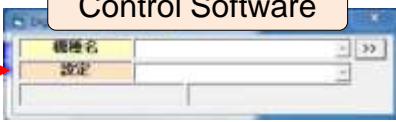
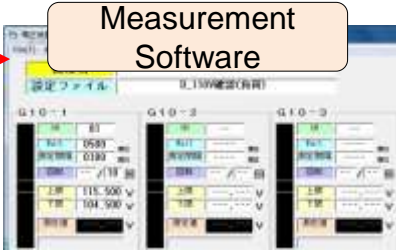

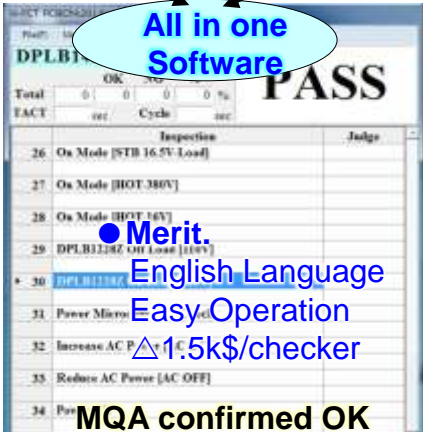
- ### **■ Action ①**

Schedule:
Apply REZ12
Oct/2023

Target : $\Delta 28k\$$

Item	Improvement Activities	Result
<p>■ Action ① Design and make in-house FCT checker hardware</p> <p>Schedule: Apply REZ12 Oct/2023</p> <p>Target : $\Delta 28k\\$</p>	<div> <div> <p>Current Situation</p>  <p>Buy from PCG</p> <p>Equipment (16k\$)</p> <p>Fixture (12k\$)</p> <p>❖ Problem Points</p> <ul style="list-style-type: none"> ❑ High cost: 28k\$/unit ❑ Depend on PCG schedule <p>Why buy PCG: Lack information, spec complicate & no experience with PCB</p> <p>■ My thinking: If continue buy PCG, cannot skill up & still depend on PCG</p> </div> <div> <p>Solution</p> <p>■ Study to design and process in-house FCT fixture</p> <div> <div> <p>DP, Dect PCB Network Product → Experience</p> <p>PJ PCB Display Product → No Experience</p> </div> <div> <p>Difficult point</p> <p>Information Specification</p> <p>PCB many new function</p> </div> <div> <p>How to do</p> <p>➢ Discuss MEBD to clear circuit diagram & spec</p> <p>➢ Study PCB design & add relays board for easy signal switching</p> </div> </div> <p>MQA Approved</p> <p>❖ In-house Fixture</p> <ul style="list-style-type: none"> ❑ Common part BU/BD ❑ Cost save: $\Delta 9k\\$/unit$ <p>■ Share all measuring equipment with new fixture design concept</p> <div> <div> <p>Current Checker</p> <p>Fixture (Buy PCG)</p> </div> <div> <p>DMM</p> <p>DC Power</p> <p>Electronic Load</p> <p>Generator</p> <p>All-Shared</p> </div> <div> <p>New Checker</p> <p>New Design Concept</p> <p>AC Power (5k\$)</p> <p>Fixture (In-house)</p> </div> </div> <p>❖ Share Equipment</p> <ul style="list-style-type: none"> ❑ Easy to service ❑ Cost save: $\Delta 11k\\$ </div> </div>	<p>Started REZ12 MP: (on schedule)</p> <p>Cost Saving $\Delta 40k\\$ (2 checker)</p>

- ❑ Software that was bought from PCG is **complicate and difficult for service**
- ❑ Make the in-house software follow PSNV style to **reduce cost and easy to service**

Item	Improvement Activities	Result
<p>■Action ② Make in-house FCT checker software</p> <p>Schedule: Apply REZ12 Oct/2023</p> <p>Target : △2k\$</p>	<p>Current Situation ➤ Buy software from PCG (2k\$/checker)</p> <div>    </div> <p>❖ Why buy PCG?</p> <ul style="list-style-type: none"> ❑ Specification is not clear ❑ Command is complicate ❑ Equipment is different style with PSNV 	<p>Started REZ12 MP: (on schedule)</p> <p>Cost Saving △3k\$ (2 checker)</p>
	<p>My policy: Need to unify software follow PSNV style to easy service</p> <p>Solution ➤ Study to make in-house software follow PSNV style</p> <div> <p>Difficult point</p> <p>Specification is not clear ➤ Discuss FE/MEBD for standardization inspection items & judgment standard</p> <p>Command is complicate, not compatible ➤ Confirm PCB characteristic & request PE-Design to make new program to connect with PCB</p> <p>Equipment is different style ➤ Study equipment spec to set communication for remote control</p> </div> <div>   <p>● Merit. English Language Easy Operation △1.5k\$/checker</p> <p>MQA confirmed OK</p> </div>	

- ❑ 4K Check process of FA Projector have no software → High risky of SKIP process
- ❑ Study to make program for automatic inspection to prevent skip process

Item	Improvement Activities	Result
<p>■Action ① Make software for automatic inspection and verify</p> <p><u>Schedule</u> Apply all model Dec/2023</p> <p>Target: Skip Process Zero</p>	<p>Projector Process → Assembly Process → Adjust Process → 4K Check → General Check → Final Check → Packing Process</p> <p>Current Situation</p> <p>Read WI ● Improvement Point</p> <p>4K Check Process</p> <p>Manual select items</p> <p>Scan serial to verify</p> <p>❖ No Software</p> <p>❑ Risky skip process</p> <p>❑ Time: 4min/unit</p> <p>Original from PCG, but this system is not match with PSNV standard line</p> <p>■ My thinking: If keep this situation → High risk for quality issue</p> <p>Solution</p> <p>Confirm 4K specification → Study necessary command → Make checker software → Verify and approval</p> <p>➢ Inspection items</p> <p>➢ Judgment standard</p> <p>➢ Command list</p> <p>4K Check Process</p> <p>Auto Inspection</p> <p>Auto Verify</p> <p>Same PSNV Style</p> <p>MQA Approved</p> <p>❖ Use Software</p> <p>❑ Auto operation</p> <p>❑ No skip process</p> <p>❑ Time: 3min/unit (△1min/unit)</p>	<p>Applied: 42/42 model Dec/2023 (on schedule)</p> <p>Skip Process: Zero (Jan ~ Feb)</p> <p>Others Time saving △18kmin/Year</p>

- | Item | Improvement Activities | Result |
|--|--|--------|
| <p>■Action ②</p> <p>Improve software and method for automatic judgment</p> <p><u>Schedule:</u>
Apply all model
Mar/2024</p> <p><u>Target :</u>
Wrong Judgement
Zero</p> | <div> <div> <div>Projector Process</div> <div>Assembly Process</div> <div>Adjust Process</div> <div>4K Check</div> <div>General Check</div> <div>Final Check</div> <div>Packing Process</div> </div> <div> <div>Current Situation</div> <div> <div>● Setting by hand and check by eyes</div> <div> <div>Final Check Process</div> <div>Manual Check</div> </div> <div> <div>Voltage Setting
Select by hand</div> <div>Ping Check
Judgment by Eyes</div> <div>Image Check
Judgment by Eyes</div> </div> <div> <div>Original from PCG, they think current method is enough for quality</div> <div> <div>■ My thinking: PSNV should be maximum auto → Cannot accept to continue</div> <div>Solution</div> </div> </div> </div> <div> <div> <div>Final Check Process</div> <div>Auto Check</div> </div> <div> <div>Voltage Auto Setting</div> <div>Ping Auto Judgment</div> <div>Image Check</div> </div> <div> <div> <div>➢ Study equipment to set remote function</div> <div>➢ Create new tool F-Ping to link software</div> </div> <div> <div>Not digital value → Cannot auto judgment</div> <div>PE ↔ FA New idea</div> </div> </div> </div> <div> <div> <div>❖ Current Method</div> <div>❑ Risky mis-judgment</div> <div>❑ Time: 6min/unit</div> </div> <div> <div>❖ Improved Method</div> <div>❑ No mis-judgment</div> <div>❑ Time: 5.5min/unit (△0.5min/unit)</div> </div> </div> <div> <div> <div>Applied: 25/42 model
Feb/2024
(on schedule)</div> <div>Wrong Judgement: Zero</div> <div>Others Time saving: △9kmin/Year</div> </div> <div> <div>Add display</div> <div>Adding clear judge guideline (easy for operator)</div> </div> </div> </div></div> | |

Activity 1❖ In-house FCT Checker for Projector

- ❑ Design and Make In-house FCT Checker Hardware

TargetSave cost: $\Delta 28k\$$ ResultSuccessful in-house
Save cost: $\Delta 40k\$$ Judge

- ❑ Make In-house Checker Software

Save cost: $\Delta 2k\$$ Successful in-house
Save cost: $\Delta 3k\$$ **Activity 2**❖ Enhance Automatic Inspection in Projector FA Process

- ❑ Make Software for Automatic Inspection and Verify

TargetSkip Process
ZeroResultSkip Process: Zero
100% autoJudge

- ❑ Improve Software and Method for Auto Judgment

Wrong Judgment
ZeroWrong Judgement: Zero
But not yet 100%
auto Judgment**Non stop improvement**

❖ Achieved target to reduce the investment cost and ensure the quality

❖ Follow up: Study the suitable method for auto judgment of image check with R&D side

1. Future Activities

Items	Action Plan Plan: ← — — →	Schedule FY2024			
		1Q	2Q	3Q	4Q
Consider to Sale Projector FCT checker for PCG	Join DR0 together MEBD/PCG to start the equipment & discuss PCG for PSNV style		← — — →		
	Proceed the equipment sale for Projector VMZ82 new model			← — — →	
In-house Optical equipment for Projector LCD model	Study the specification and equipment type in PCG & consider capability for in-house project			← — — — — →	
Systemize PAPVN checker follow PSNV standard	Make the master table of PAPVN checker for good management	← — — →			

2. Development Plan (People)

For my team:

- ✓ Rotation job between PJ and PAPVN member
→ Skill up technical & Good preparation to transfer PAPVN product to PSNV
- ✓ Enhance management skill for potential staff
→ Target to promote one Supervisor

For myself:

- ✓ Skill up accounting knowledge
→ Understand clearly about financial situation to contribute company's development
- ✓ Change mindset:
→ Be more decisive in handling problems

Thank you for your listening!