

# TWI KAIZEN PLAN

FROM: JEFF SMITH To: JOHN SHOOK 4/2004  
Plant Manager Vice President

### BACKGROUND

TRADITIONAL Mfg System  
500 People - 2 SHIFTS  
180 Types

TWI  
6250 pieces/WK

WEEK  
12000+ pieces weekly SALES POTENTIAL!  
6250 ACTUAL  
6 days

ENGINEERING Study

PROBLEMS  
- SAT Overtime  
- Premium SHIP  
- FG \$+Warehouse

### CURRENT SITUATION

From 1/04 to 4/04 TWI has produced an average of 1000 pieces daily against a standard of 1250 in a 6 day work week (STD-5 days).

80% Volume daily Premium SHIP SAT OT - FG \$↑

50-70% Mix daily

27 days 4 min VA

Multiple Prod Instruction • Lead Time = Long, Unknown  
Inventory Level large, variable • Human = low efficiency, input

### FUTURE STATE

By 5/15/04 TWI WILL PRODUCE 1250 pieces daily of the RIGHT Types of parts ON TIME.

100% ON-TIME  
No FG INV  
LT 1.5 days/VA  
Extra Capacity New product = 10 people

SCHEDULE: ONE Location  
1x1 Flow Production  
QUANTITY CONTROL - Fill Up System

Poke-Yoke: Abnormality Prevention  
Level Volume & Types STD. LOT PLAN.  
Root Cause Investigation & C/M

### KAIZEN TACTICS

TACTIC(S)	SHOP FLOOR INDICATOR	☹️ → 😊	LEAD TIME (DAYS)
① 1x1 FLOW Production & STANDARDIZED WORK	- Lead Time (days) - Productivity (Pcs/MHR)	pile → No WIP ↓ LT.	27 → 23 → 9 → 5
② JIKOKA - Prevent	- # scrap pieces	All parts big fit → Bad part ≠ fit	
③ Level by Volume & MIX TO ENABLE MAKING of STD Lot PLAN	- % Volume & Mix w/out buffer actually produced - Premium SHIP	Weekly Lots → Daily Seq. = CHAOS HOT SHEETS → 1. A, 6ct 15. 2, 3ct 50ct's	
④ STANDARD LOT PLAN for (A) & (20)	- % 50ct or 15 Lots done on-time without OT (COA, + C/O Time)	WHAT'S NEXT → Quantity Control	
⑤ FREQUENT Conveyance WD + PROBLEM ID + frequent external logistics	- Pace KB Circulation - Info Stagnation & Inventory store - # KB up 20 input - # KB @ racks - # KB @ w.t.c	schedule → 1 sold - 1 Produce every 1G'	
⑥ KAIZEN By Valid Experiment → Learn by DOING	- Is there a Plan? GOAL TACTICS = GOAL WHEN REVIEW? REACT	NO PLAN → ACTUAL Start Add / Actual Finish History Kaizen LT.	

### INDICATORS

Item	INITIAL	KAIZEN1	KAIZEN2
LEAD TIME (days)	27	23	5
pcs/mhr	6	9	14
# people	22	16	12
Scrap	50	0	0
Premium SHIP	DAILY OR 3xWK	0	0
FG \$	4 days 4M	< 2 days 2M	1/2 day
ON-TIME Delivery (Volume+Mix)	80% / 50%	100% / 90%	100%

### ACTION PLAN

Area	ACTIVITY	Metric	WHEN
P/C	SHIP / STAGE TALLY	ON TIME SHIP	0-2-4
	Establish Sequence	% Var	0-4
	Conveyance Cycle	Raw + DIV	0-4
	Assist Lot Plan - Multiples	Pitch	0-4
A/C	Supplier X-YZ Cycle	Leadtime	0-4
	1x1 Flow - 4'LT	Scrap%	0-4
	Poke-Yoke	Pcs/MHR	0-4
	Standardized Work → 38'	HRLY ✓	0-4
	Count SHEETS / Andon	Standard Lot PLAN - A&B	0-4
MACHINERY	Standard Lot PLAN = 3-6ct's	C/O TIME ↓ # STD	0-4
	↓ C/O TIME 20min	C/O Time	0-4
	↓ MCT 27 sec	KB Cycled	0-4
	ADD store Prod. KB AUTHORIZATION → Lot Cycle/Method	OA	0-4