



14th KAIZEN CONFERENCE

KAIZEN IDEA - SHEET

Activity Pillar	KK	JH	QM	PM	SHE	OTPM	DM	ET
Loss No./ Step	VA/VE							
Result Area		P	Q	C	D	S	M	

Sundram Fasteners Ltd.,
Autolec Division

Supervisor / Manager level
Kaizen

Plant: **Plant-3** Machine: **Horizontal milling machine**

Kaizen Theme: Process Design VAVE improvement for tool cost reduction
Idea: Carry out the finish milling operation using a cost effective process

Problem/Present status :
The total conversion cost of Injector lever is high. Out of which the tool cost per piece for the finish milling operation of the slot itself is high at Rs.14.34 per piece

Conventional horizontal milling machine
Special fixture to load one piece at a time
Custom designed special cutter with special inserts

Countermeasure :
Earlier slot is milled one component at a time in conventional milling machine using expensive custom designed PA145W insert. Also insert life is poor at 140 nos. per edge. Now 10 components are loaded at a time in a special fixture and the slot is finished by boring operation in CNC lathe using inexpensive standard boring tool. Life of boring tool using standard CNMG insert is 100 nos.per corner.

CNC lathe
Standard boring tool
Special fixture with hydraulic clamping to load 10 pieces at a time

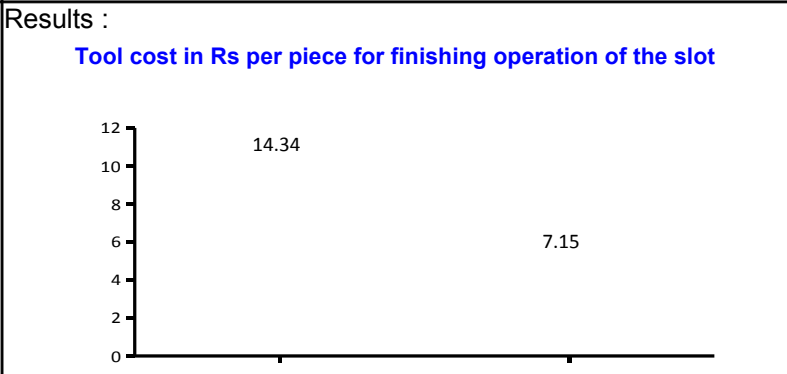
Bench mark	Rs. 14.34
Target	Rs. 7.17
Kaizen start	10.01.09
Kaizen Finish	26.05.09

Team members
M.Vijayaraghavalu - Prod Engg
M.Ramanujam - Quality
S.Kamalakkanan- Maintenance

Benefits:

S.No	Element	Before	After
1	Output/machine/Shift	130	220
2	No. of machines	4	2
3	Process capability	1.33	1.92
4	Noise level	110 dB	80 dB
5	Operator fatigue	More	Less

Analysis :
Insert tool cost high
Why?
Insert life is low & price is high for finish milling
Why?
Special insert with 3mm corner radius is required
Why?
Operation carried out in conventional milling machine



Scope & Plan for Horizontal Deployment : -

S.No	M/c No.	Target date	Responsibility	Status