

Resource Utilization-Production study-Loss time analysis



Key Points

- Resources utilisation calculated
- Reason wise loss contribution
- Suggestion for improvement in loss areas
- Template for work content measurement in advance

Client's Challenge

- Work content measurement
- Resource utilisation
- Estimate time for welding & fitting activity in advance

PMI's Approach

- Identification of operations to be studied
- Recording Loss time observation in Loss capturing sheet using Production Study
- Video Shooting of repetitive processes
- Loss time & VA/NVA analysis & Work content calculation
- Standardisation of work content for template preparation
- Listing of improvements

Results

- Calculated resource requirement
- Suggested for elimination of NVA activities (about 40%)
- Prepared template for current/new product's work content calculation for fabrication & fitting in advance

MASTER TEMPLATE FOR MMA WELDING

OPERATION	WELDING				UNIT	QUANTITY
	WELDING	WELDING	WELDING	WELDING		
Length of welding line	1	1	1	1	1	1
No. of lines required in 1.0mm electrode	1	1	1	1	1	1
No. of lines required in 1.6mm electrode	1	1	1	1	1	1
No. of lines required in 2.0mm electrode	1	1	1	1	1	1
Welding work content (min)	1	1	1	1	1	1
Min. Manday	1	1	1	1	1	1
Max. Manday	1	1	1	1	1	1
Total Time (min)	2	2	2	2	2	2

MASTER TEMPLATE FOR FITTER

Sr. No.	Input parameters	Input			
		HEAVY (≥10kg)	MEDIUM (5-10 kg)	SMALL PARTS (1-5 kg)	Small (Over & below) (1-5 kg)
1	Number of similar child parts (Nos.)	1	1	1	1
2	Number of dimension involved to perform assembly of one child part (Nos.)	4	4	4	N/A
Total project (cycle) timing required in Min =		37.50	18.70	6.14	1.98
Hrs. =		0.63	0.31	0.10	0.03
Total Work content in Min =		75.03	37.41	6.14	1.98
Hrs. =		1.25	0.62	0.10	0.03
Mandays to complete Project =		1	1	1	1
Shifts reqd. to complete the Project =		0.17	0.04	0.01	0.00
Enter Manpower to complete Project in a shift =		1	2	2	2
Total timing for a project in Min =		64.32			
Total work content for a project in Min =		120.53			
Mandays required to complete a project =		1			
Total nos of shifts required to complete a project =		0.07			
Input mandays to reduce shift =		4			

Note: Enter values in Input column



*Data shown here has been modified to protect client confidentiality