WS WORK – TUDY

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WORK-FACTOR

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De Work-Factor Raad wil een platform bieden aan Work-Factor gebruikers, arbeidsanalisten, cost engineers en industrial engineers om problemen, oplossingen, ideeën en tips te bespreken. Daartoe zullen we regelmatig een WS Tip sturen aan “WF-leden” en geïnteresseerden. Mocht dit bericht niet op het juiste adres aankomen stuur het dan door naar geïnteresseerden en laat ons dat weten, svp.

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Het onderwerp van vorige WS Tips staat op de WF Website onder: WF en Management/Praktisch - Algemeen/WS Tips.

A practical example of the Theory Of Constraints

THE P&Q PROBLEM, Part 3

II. Let us ask the Controller:

Decision, so margin, must be based on available and <u>needed</u> capacity:

- Total necessary capacity for 100 **P**’s and 50 **Q**’s 8000 min.
- Highest load in machine **B** is 125%
  So, the overall load must be 75%
- Therefore total capacity needed $8000 * 0.75 = 6000$ min.
  So, man-machine tariff: $\frac{\$\,6000}{6000\,\text{min}} =$ 1 $/min.
- Cost price is: material + machine costs

Cost price of **P**:	45 + 55 * 1.00 =	$ 100.00
Margin:	90 - 100 =	-/- $ 10.00
Cost price of **Q**:	40 + 50 * 1.00 =	$ 90.00
Margin:	100 - 90 =	$ 10.00

So: Product **Q**.

Again! We want to be very sure and ask another business man.

III. Let us ask the Calculator:

Decision, so margin, must be based on normative cost price:

Man-machine tariff must be based on a budgeted or normative machine capacity of 83%, because of that total capacity.

So, man-machine tariff: $\frac{\$\,6000}{4 * 2{,}400\text{min}} * \frac{1}{0{,}83} =$ 0.75 $/min

Cost price of **P**:	45 + 55 * 0.75 =	$ 86.25
Margin:	90 - 86.25 =	$ 3.75
Cost price of **Q**:	40 + 50 * 0.75 =	$ 77.50
Margin:	100 - 77.50 =	$ 22.50

So: product **Q**.

Again! We want to be really sure and ask another business man.

IV. Let us ask the Administrator:

Decision, so margin, must be based on integral cost calculation:

Machine tariff must be based on <u>total available</u> machine capacity.

So, man-machine tariff: $\frac{\$\,6000}{4 * 2{,}400\text{min}} = 0.625$ \$/min.

Cost price of **P**:	45 + 55 * 0.625 =	$ 79.38
Margin:	90 - 79.38 =	$ 10.62

Cost price of **Q**:	40 + 50 * 0.625 =	$ 71.25
Margin:	100 - 71.25 =	$ 28.75

So: product **Q**.

Again! We want to be absolutely sure and ask another business man.

V. Let us ask the Business Engineer:

Decision must be based on the most profitable product being the highest margin per minute.

Added value or margin per minute

Product	**P**		**Q**
Selling price	$ 90		$ 100
Cost raw materials	$ 45		$ 40
Added value	$ 45		$ 60
"Labour" / Product	55 min		50 min
Added value/ Min	$ 0.82	+	$ 1.20

So: Product **Q**.

Now, we asked five experts and all say: start with product Q.

Therefore, start production of Q and than P, if capacity is available.

Question 3:
What is the profit with the schedule: Q, P?

Stop here and calculate the profit, then continue to check.

In the next WS Tip

Voor reacties naar

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