**Managerial Accounting**
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**Lecture - 33**
**Standard Costing - Mix, Yield and Fixed Overhead Variances**

Dear students, in the last 2 sessions we are discussing Standard Costing and Variance Analysis. I hope, now the fundas are clear to you. In standard costing, the idea is to set up the standard cost. Compare the standard with the actual, we get deviation or the variance. Then that variance is analyzed and the corrective action is taken. So, this technique is very much useful for cost control, because prompt corrective action is possible.

You immediately come to know that, something is going wrong. Management can use management by exception. So, whatever is going wrong immediate corrective steps are taken. Now, this technique leads us to variance analysis. They have also seen how various variances can be analyzed. Usually, it is by elements of cost. So, we start with material variances, then we have analyze labor variances.

We have seen variable, overhead variances, fixed overhead variances and also sales variances. We had also discussed advantages and disadvantages of standard costing. In the last session, we had started with analyzing sub-variances. Now, what are these sub-variances? So now, the material cost variance, it is two major reasons are the changes in the prices and changes in the quantity used, or quantity consumed.

So, material cost variances, can be broken down into material price variance and material usage variance. But, this usage or the quantity consumed also can be further broken down into its sub-causes. What are it is sub-causes that was something, which we were discussing towards the end in our last session. So, just to remind you I would say that the quantity used also can be broken down into two variances. One is known as yield variance, the other is known as mixed variance.

Now, in yield variance what happens is a standard normal loss is generally defined. So, the technical specifications will say that if we put in 100 units let us say, there is a normal loss of 3 percent. Then, you expect that by putting an 100, you get output of 97.

Now, if the actual output is let us say less than 97, actual output is only 96. It will lead us to a situation, where your yield is not as per expectation.

So, when you put in 100, you expected yield of 96. Actual yield is less than that, which is only 90. You expected 97, actual yield is only 96. That will lead to a variance, which is known as yield variance. There is also a possibility of variance called as mixed variance. In mixed variance what happens is, it is not only one input always. So, though we are to put in 100 units, we might be putting two raw materials.

So, raw material a raw material b and there will be some standard prescription of the mixture. Typically, you know that in construction industry when the concrete is prepared you use cement and sand, in a particular mech. So, usually let us assume that 40 percent of cement and 60 percent of sand. Now, what contract is may do is. They may reduce the quantity of cement to 20 percent and put in 80 percent of sand. That will hamper the quality.

This phenomena of using a different mixture than the prescribe mixture, is known as mix variance. So, overall quantity variance can be broken down into yield variances and mix variances. In the last session, we had seen the formulas for them. So, I would not repeat the formulas. We were also doing a case. Let us continue with that case. Those who are seeing this video for the first time for benefit, we will start from the beginning. And then we will go to all material variances. Let us read this case carefully.

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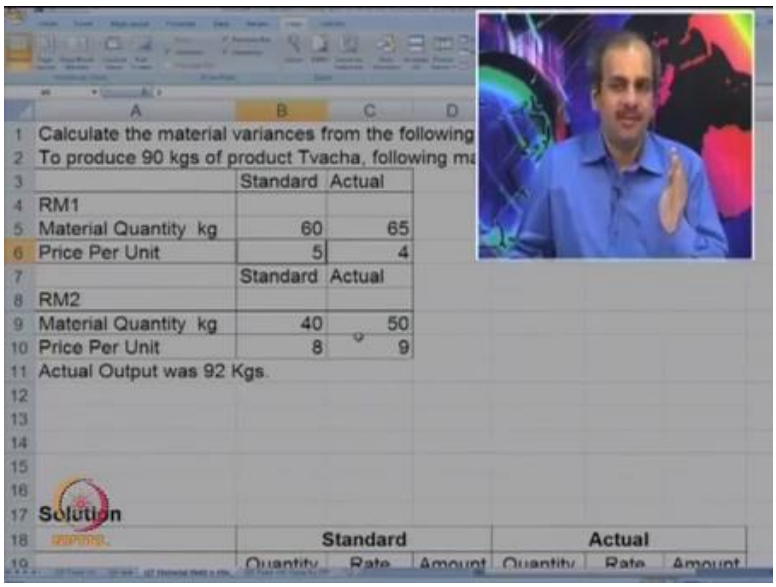

So, calculate the material variances using the following figures, to produce 90 kg's of product Tvacha, certain materials are consumed. So, both the standard and actual is given. As you can, see there are two raw materials which are prescribed RM 1. Material Quantity is as per standard 60, actual is 65, Prices Per at standard 5, at actual 4. There is another Raw Material RM 2, where in the standard quantity is 40 actual 50. Prices are 8 and 9. Actual output is given as 92.

And with this data, we are expected to calculate various material variances. Now, how to start? Just think over, those who have seen last video we have done half of the problem. So, you can immediately give the solution. But, I would like you to think and come out with the solution. So, I think most of you know that we usually make a table, list down the standard and actual. Now, we have the standard and actual. Both given, try to put it in the format of a table.

I think, it is visible you have quantity, rate amount. These are the headings which we are normally use. Please take a pen and pencil and try to make the table with standard and actual. So, actuals are given to you. For RM 1, it is 65 into 4. How much standard have you taken, have you taken 60 into 5. For RM 1 if yes, then there is a mistake.

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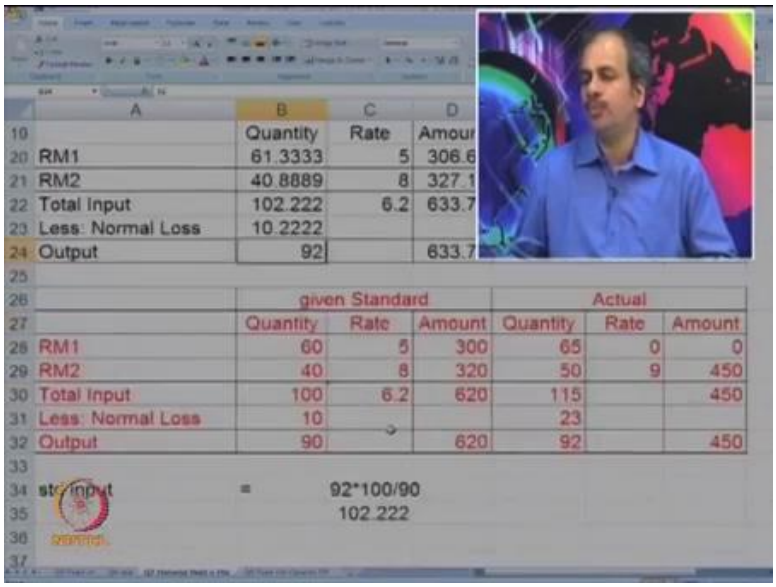


I will show you, what normally happens? Many times what happens is, we often make a table like this where in we take the given standard directly. So, 60 units kg's of RM 1. And in the standard also, we write 60 units of RM 1 at a rate 5, 300 and so on. You will

make a table like this. You can calculate all variances and all variances will wrong, got it. Now, the problem is in this table I will just specify. I think one of the variances is which is anyway wrong, but I am just trying to show you where one can go wrong.

Now, what happens is this is the table if we prepare, if we are lead to a wrong answer. Now, what we should do is, we make a table like this. Because, our actual output is 92, it is given in the problem that actual output is 92. We have to make a standard also for 92. We cannot make a standard for 90 and compare it with a output of 92. So, we take the actual output which is 92. And take that as standard output and work break how much input should be used, to make output of 92.

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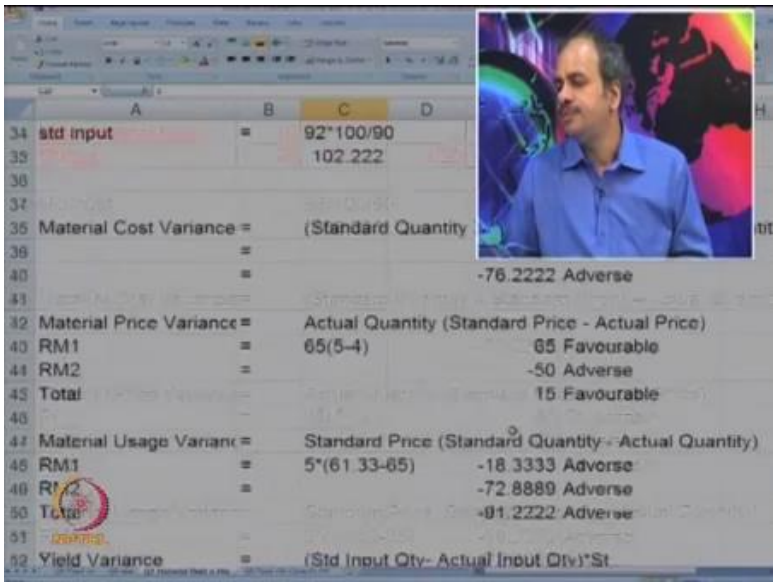


So, here it is calculated standard input is 92 into 100 upon 90. So, you where to use 100 kg's to make output of 90. So, to make output of 92 you are permitted to use 102.22. Now, this 102.22 is taken as input. And then based on 102.22 the quantities of RM 1 and RM 2 have been worked back. You know RM 1 must be used as 60 percent of the total input. And RM 2 must be used at 40 percent of the input. So, using that data, the calculations are done.

So, you get 306.67, 327.11, 633.78 will be the total. Now, this total standard cost is divided by 102 to get weighted average price at standard, which is 6.2 is it fine. It is a bit of repetition but often this is a area where students were mistakes. So, I am taking a little more time and elaborating it more. I hope, now it is more clear to you. So, do not use this

standards, we need to make a revised table as we have make now. Now, using this the calculations are very simple.

Now, the first thing we have to calculate is cost variance. In fact, if you look at the table carefully, immediately you can get a cost variance. You can see that, the cost must have been 633.78. Actually, it is 710. The difference is called as total material cost variance. So, you can see here. It is standard cost minus standard price. Let us make this smaller. So, that it is visible. So, standard minus actual, you get minus 76.22 or 76.22 adverse.

Now, material price variance. In price variances, we are comparing 5 and 4. This is compared and multiplied with the actual quantity, which is 65. So, you get 65 and minus 50 or 65 favorable and 50 adverse. So, total is 15 favorable for price variance. Then, we go to quantity variance. In quantity variances, we will compare the quantities, which is 61.33 and 65. So, 61.33 minus 65 into the standard price, which is 5. So, you can see it here.

So, we get minus 18.33 or 18.33 adverse. For RM 2, again it is similar. We have consumed, we should have consume 40.89. We have consumed 50. So, the difference of 9.11 multiplied by 8, so we get 72.88 adverse, total is 91.22. Is it very clear to all? In our last video, we are come up to 91.22. Now, we will try to subdivide or break the usage variance into it is subparts. So, now you this 91.22 itself can be because of two reasons, one is more or less yield.

So, we expected that by putting in 100, we must get 90. But, we have actually put in 115 to get 92. Or if you go by the standard table, we should have put in 102.22 to get 92. But, we have put in 115. So, there is a loss of units here, you can see. About 3 units or 2.8 units are consume more. Is it right, everyone is getting. That is nothing but a yield variance. So, the total input. Here we are not looking at RM 1 and 2.

We are looking at the total input, which is more than what should have been consumed. That leads us to yield variance. In mix variance, we see the proportion. So, we were suppose to use RM 1 and 2 in this way 60 to 40. But, we have consumed it in the ratio of 65 to 50. So, let us do first yield variance, which is very easy to calculate. In yield variance you can see, it is standard. Have a look at the formula carefully, because first time we are doing it.

We take standard input quantity minus actual input quantity, in total into standard price of standard input which is a weighted average price. So, you can go to the table.. So, the total quantity which odd to have been consumed was 102. We have consumed 115, that difference is calculated here. This is rough for just for rough calculation. Correct figures you have, we have actually picked in. I will just do it again.

So, we must have use this minus 115. This must be in bracket, to be multiplied by 6.2. So, we get 79.22. The figure is in minus. Is it right? Or should it be plus. You can go back and check. So, we odd to have used only 102.22, but we have used more for a particular input which is 92. So, you can see that our consumption is more than expected.

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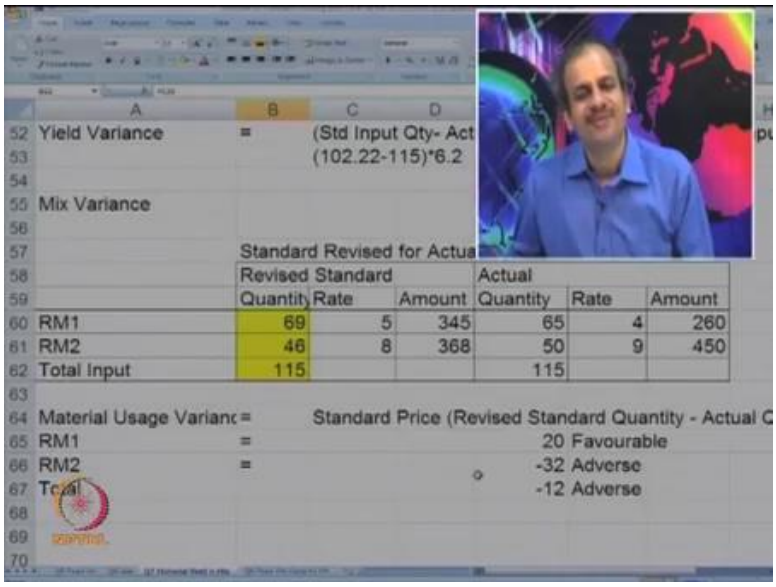


So, here actually there is a change required. It should be 102.22 minus 115. So, it gives us minus 79.22 and or you can say 79.22 adverse. Everyone is getting it. Now, let us look at mixed variance. Now, in mix variance what happens is (Refer Time: 15:53). We do not look at the quantity, we look at the mixture. We must have used it in the ratio of 60 to 40, we have used it in some other ratio. So, what we do is we calculate the revised standard for the actual input.

You know that the actual input is 115, which is 65 and 50. But, that 115 must have been used in the ratio of 60 to 40. So, now for 115 the ratio is calculated at 60 to 40. So, we calculate the standard which is revise for actual input. So, we get a revised standard like this, the quantity wise. You should have use 69 of RM 1 and 46 of RM 2, the standard

price does not change. Have a look at this table carefully. I will just show you the earlier table.

This was the table, which was based on the actual output. Now, here only for mixed variance we revise just this part. This is the only part which is revised. So, what we have actually calculated is we have recalculated. I will just focus on the part which is important. We have recalculated 115 as to 60 percent for RM 1 and 40 percent for RM 2. Now, material usage variance the formula is standard price which is outside the bracket.

We multiply by revised standard quantity and the actual quantity. You will see that for RM 1, we were permitted to use 69, we have used 65. So, 4 favorable, 4 into 5. So you get 20 favorable. For RM 2 we have consumed four more into 8, so 32 favorable. So, total 32 adverse, 20 favorable plus 20 minus 32 you get minus 12 or 12 adverse. Now, see whether it tallies. So, usage variance is 12 adverse and the yield variance is 79.22 adverse.

And you know that, the material usage variance is 91. So, we had 2 variances mix was 12 adverse, yield was 79 adverse, usage is 91 adverse. Are you getting me? So, we have successfully broken the total variance of 76 first into two parts. Because, of prices it was 15 favorable but because of quantities it was 91 adverse. You can go back in the table and see, that there was some benefit in getting it at a lesser prices, at least for RM 1.

That is why the price variance is favorable. Quantity variance is adverse. We have used 115 instead of 102. So, leading us to a negative usage variance, that usage variances now further subdivided into yield and mix. I hope, it is very clear to you all. So, this was a problem on further subdividing of material variances. Let us discuss one more problem on material variances. So, that the concept of yield and mix becomes more clear to you. Have a look at the case.

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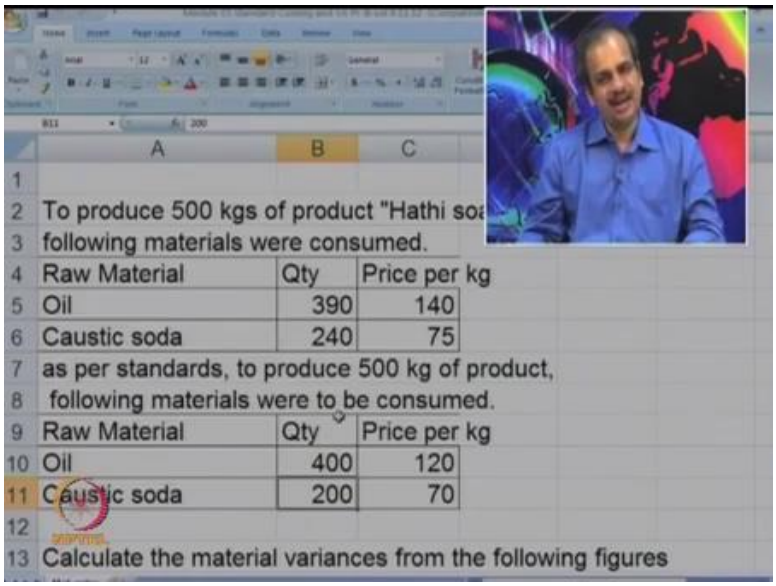


This is a simple case, where it is given that for production of 500 units of product Hathi soap. We require two raw materials, Oil plus Caustic soda. This is actual consumption of 390 and 240. As per the standard, the consumption should be 400 and 200. Prices are also given. We have to calculate material variances from the figures. Now, how to start? We have done one problem which was little complicated. So, I think you will find this very simple. So, let us first make a table showing standards and actuals.

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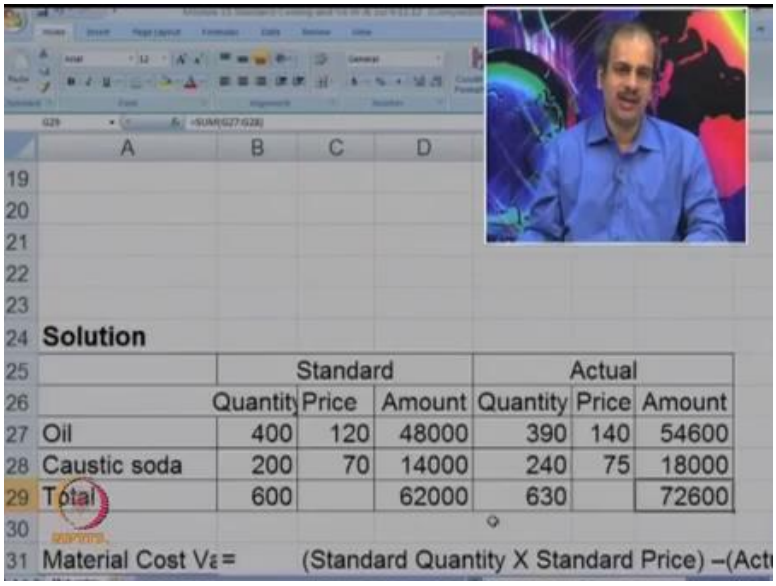

Now, in this case we do not have to recalculate. Because, the table is already ready as was given. So, you can see here that, we have simply taken the figures of standard and actual as given, because they are for the same output. So, standard was 400,200. Actual is 390 and 275. So, it is visible to you. Now, the first variance which we calculate is material cost variance. You know the formula now. It is standard minus actual cost. Now, standard cost is 62000 for the output of 500, where as the actual is 72600 for the same output. So, we can directly compare. So, we get standard minus actual separately we have to do for each product.

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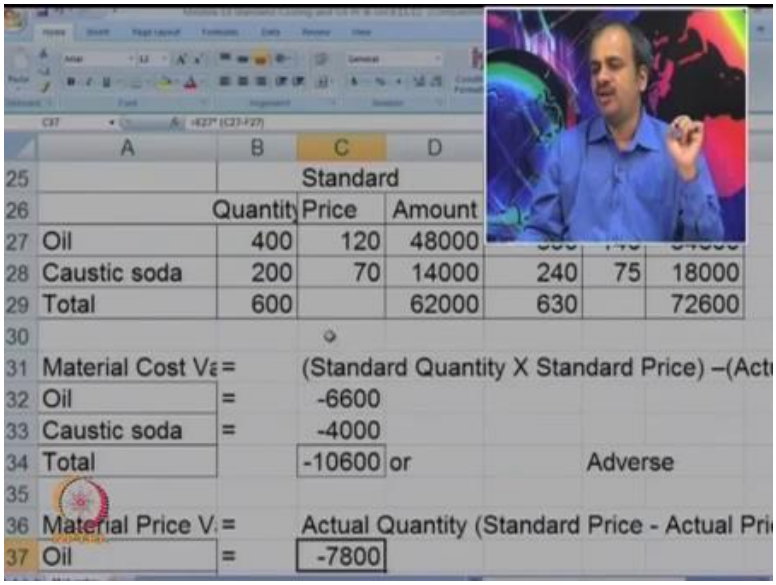


So, for oil if you look at us, we have compared 48 with 54600, you get 6600 minus. For caustic soda, it is 4000 minus. And total is 10600 minus. Of course, you can directly do total also. Because, material cost variance can be calculated in total or individually. But, for prices and for usage we have to do it for each raw material separately. So, 10600 minus or you can say 10600 adverse. Now, the next variance is price variance.

I hope you remember the formula. It is actual quantity into bracket standard price minus actual price. So, go to each raw material. Let us check oil. We have to compare 120 with 140. So, prices have increased by 20 rupees per kg. So, 20 per kg is a loss on actual input of 390. So, we have got 7800 minus.

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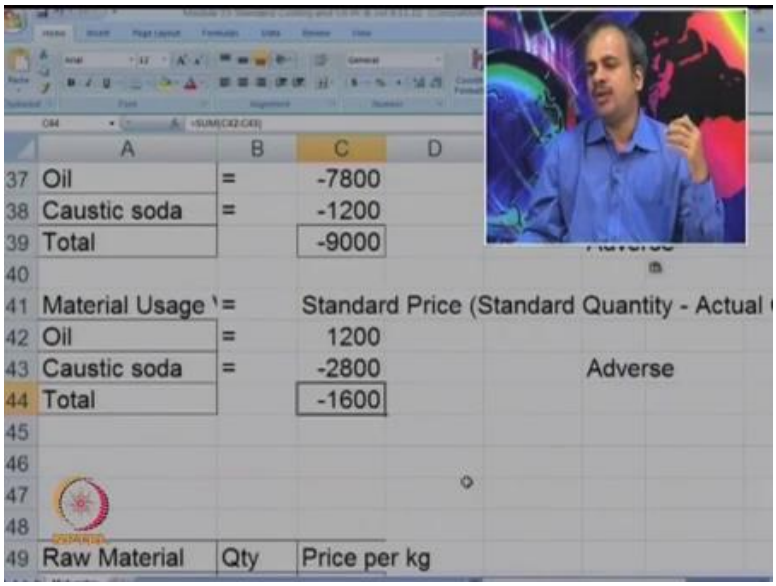


Same way you can do for Caustic soda. You can see for 70, the price has increases to 75. So, 5 rupees per kg on the actual input of 240. So, you get minus or 1200 adverse as you call it. So, all these variances are adverse variances. So, minus 7800 minus 1200 you get minus 9000. In other words, 9000 adverse is a price variance. Now, let us go to usage or the consumption variance.

Again have a look at the table. ((Refer Time: 22:45)) You will realize that for oil, when company was suppose to use 400 they have used 390. So, they have saved 10 kg's at a standard price of 120. That will be a usage variance. And for caustic soda you can see, they have consumed more. So, instead of 200 they have consumed 240. So, you can see it is standard price into standard quantity minus actual quantity. So, you get 1200 for oil, 2800 for caustic soda, so 1600 adverse.

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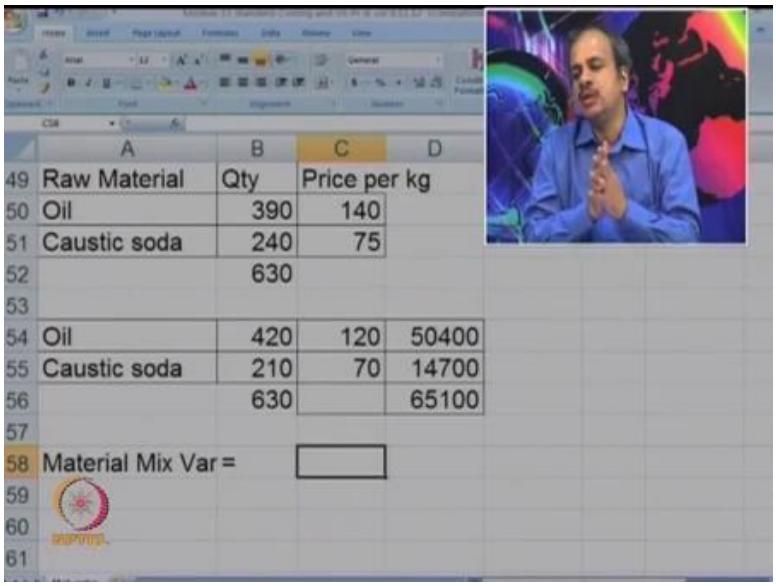


Now, this can be broken down into yield and mix variances. Let us first look at the mix variance. ((Refer Time: 23:32)) Now, for calculating mix variance we see that actual input is 630. We have put in it as 390 and 240 but we need to put in the ratio of 400 to 200. So, let us recalculate 630 in the proper ratio. Proper ratio is 2 is to 1. So, 630 has been recalculated as 420 and 210, 420 of oil and two 210 of caustic soda. We will use the standard prices. So, if you put in standard prices here you will realize that if the material would have been put in the proper makes.

The mix variance would have been 65, the cost would have been 65100 where as actual consumption you know is 390 and 240. So, now with this we can calculate the material mix variance. Do you remember the formula? I hope you are remembering it now. So, what we compare is essentially the standard price and the actual price. So, both I am sorry. Both are given at standard prices. What we are comparing is this 420 versus the usage of 390.

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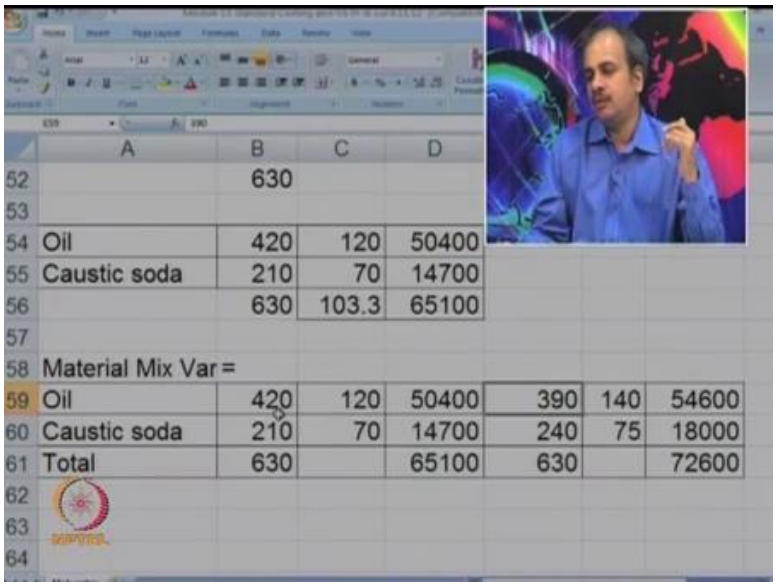


So, if you take for two raw materials oil and caustic soda, we do not need the whole table but just for comparison. So, we odd to have consumed by this formula. So, we have kept prices at standards. So, we must have consumed 420 but we have consumed 390 of oil. And that if we take at standard prices, we will get the mix variance. Now, for this mix as is given let us calculate the average price. The average price is 103. You will see that, 30 kg's of oil was used less at a standard price of 120. We will be able to calculate the mix variance.

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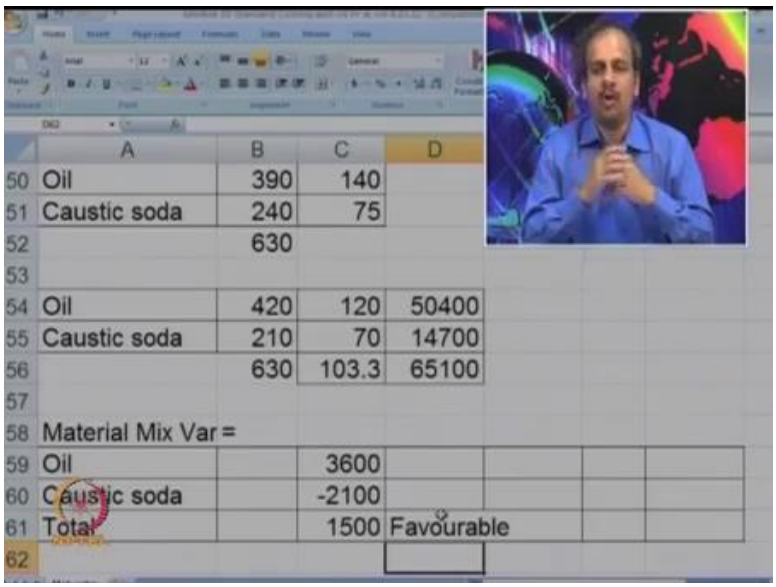

So, into bracket we need to take and will multiply this by the standard price, which is 120. So, you will get 3600 favorable in case of oil. And in case of caustic soda, the consumption in the proper mix should have been 210. We know that the actual consumption does not match with this, the actual consumption is 240. So, instead of 210 we have consumed 240. We will multiply this at a standard price of 70 for caustic soda. So, we get 2100 adverse.

If we sum this two, the total mix variance is 1500 positive or we can say it is 1500 favorable. Is it clear? I hope, now on the same lines you can do yield variance. And with this, we will go to another problem on that is fixed overhead variance. How do you define fixed overhead variance? Do you remember, what is a fixed overhead variance? Just think over.

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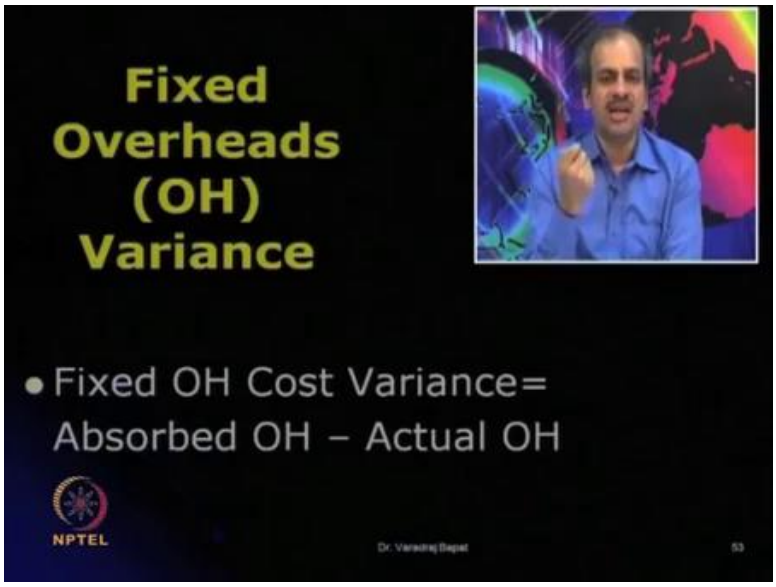


If you remember, the total fixed overhead variance can be calculated as absorbed overhead minus actual overhead. Now, naturally the question comes is what is absorbed overhead.

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So, absorbed overhead is actual quantity into standard overhead rate per unit. Just let us go back to the cost variance. Is it clear to all? So, what is done is we make a budget for the overhead. In the, from that budget we calculate how much overhead cost per unit will be incurred. That is a standard overhead rate. Now, on each unit we charge that particular rate. So, we get some amount of overhead which is absorbed.

So, we have actual units multiplied by standard overhead rate. So, we get the absorbed overheads. And these absorbed overheads are compared with actual overheads, which give us fixed overhead cost variance. Now, how do you further break this cost variance?

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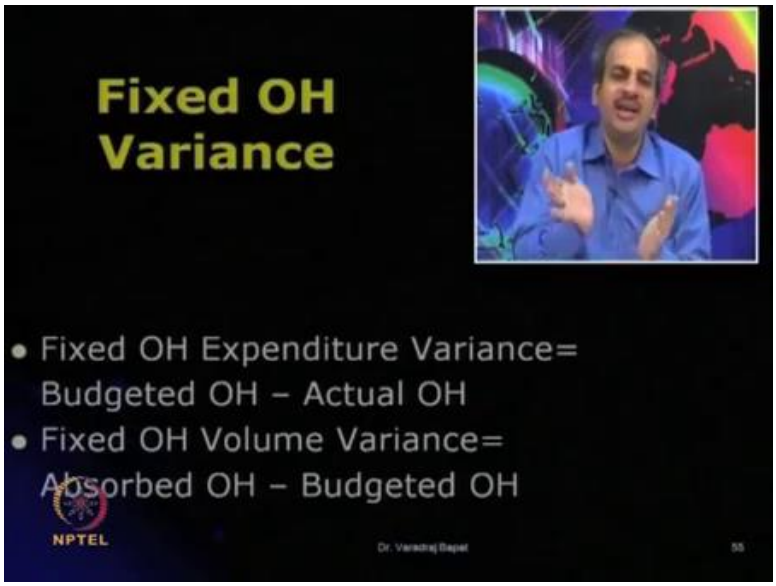


This cost variance can be broken down into expenditure variance and volume variance. Expenditure variance tries to tell us, what we budgeted for and what we are actually incurred. So, it is budgeted overhead minus actual overhead. Then, the other sub-portion is volume variance. It compares absorbed overhead vs budgeted overhead. In the last session, we had seen this fixed overhead variances. We have used another formulas, both the formulas correct.

We can, you can use those formulas or this formulas. I have just try to explain it in another way, to make it simple. So, here what you can see is there are three quantities values of overheads, we have. One is a budget which we initially made. Then, the actual amount which we incurred and we have some amount of overhead, which is absorbed based on the actual units at a standard rate.

Now, these three overhead variances are comparison of these three amounts. So, absorbed overhead minus actual overheads you get fixed overhead cost variance, budget minus actual you get expenditure variance and absorbed minus budget you get volume variance. So, if you observe carefully you will realize that volume variance is incurred, because there is a difference in the quantities. You had some estimated quantity at budget, actual quantity can be different.

That leads to volume variance. As you are aware, fixed overheads do not change with the quantity. But, the amount which we have absorbed keeps on changing. So, the fixed

overhead value remains same. Fixed overheads incurred remain same but with the more volume we absorb more heads. That leads to a difference. That is called as a volume variance. Now, what could be the causes of this volume variance?

Can you subdivide this volume variance? It is possible to subdivide it. The volume itself may change either, because of efficiency of the operations. So, if workers and machines work more efficiently within the same number of hours, they can produce more output. Or they might have worked itself for more hours. That is called as a capacity variance.

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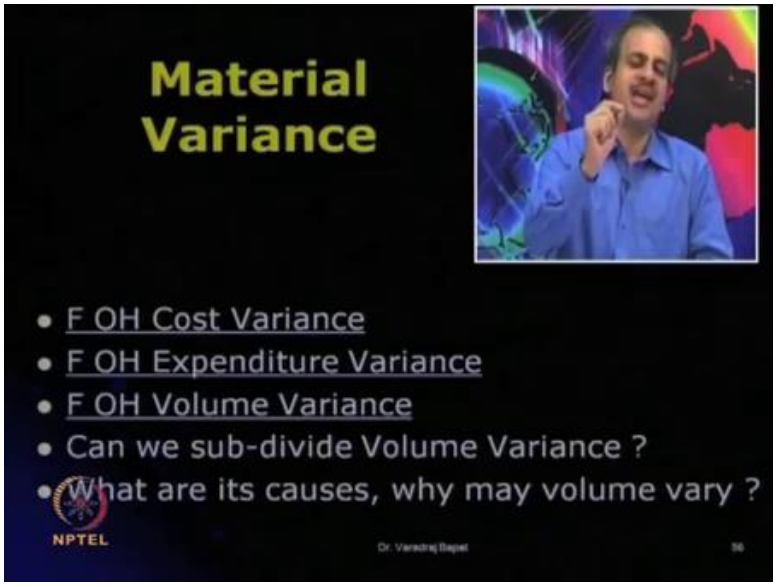


So, the cost can be divided into expenditure and volume. Now, the issue is can the volume be subdivided.

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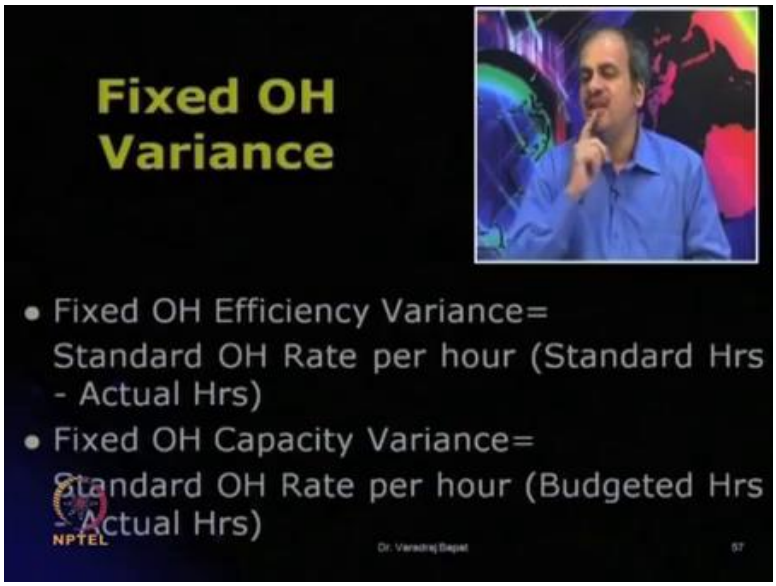


As we have just now seen, volume can be subdivided into efficiency and capacity. So, when we calculate these variances, we look at the number of hours which the worker should have worked and which they actually worked. So, again you will have three set of hours. One will be the budgeted hours, then the standard hours for the actual output and the actual hours for which the actual operations are done. So, we have two formulas now, fixed overhead efficiency variance.

If you remember, we have done labor efficiency variance. That formula and this formula is very much similar. In the bracket, we have compared standard hours with the actual hours. That needs to be compared, because we see how many hours should have been used and how many hours have actual been used. That gives the efficiency. So, if I was to do a particular work in 4 hours, I have done it in 3 hours. So, 4 hours is a standard 3 hours is actual.

So, I have saved 1 hour. That shows my efficiency. It is multiplied by standard overhead rate per hour. That gives me fixed overhead efficiency variance, as you can see here. In case of labor if you remember, in the bracket it was same. Fixed over, standard hours minus actual hours, we multiplied it by standard labor hour rate. Here, since we are calculating overhead variance. We multiplied by standard overhead rate. Otherwise, the philosophy is same.

The second variance which is calculated is fixed overhead capacity variance. In capacity variance within the bracket, we compare budgeted hours with the actual hours. Suppose, we are plan that we will work for 5 hours, we have worked just for 3 hours. That difference will be budget, hours minus actual hours. That is also multiplied by standard overhead rate. These gives us difference in the capacity. So, the plan was to operate for 8 hours a day.

If workers are hard working, they have put in 9 hours a day. It will be treated as a better utilization of capacity. But, not necessarily that output is good. How much is a output that linkage is done through efficiency. So, overall volume can be subdivided into efficiency and capacity. Now, let us try to do a case which will make it more clear to us.

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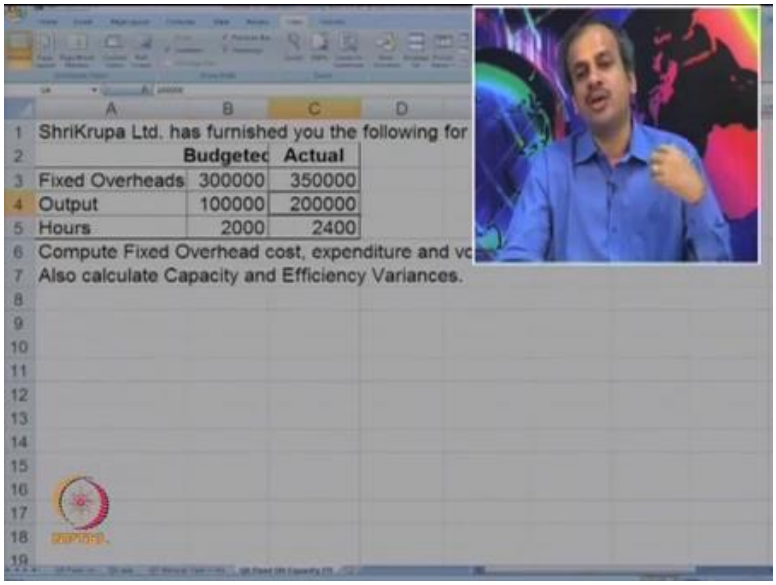


Now, read the case carefully ShriKrupa Limited has furnished the following data for a month of July. Fixed overhead cost was to be 300000, actual is 350000, output should be 200000, 100000. But, actual is 200000. So, it is very good actual output is more. Hours as per budget was 20000, actual is 2400. Now, using this data we have to calculate fixed overhead cost expenditure volume that is a first division. And we also break that town into volume into capacity and efficiency. Now, how to do it? Just think over, how it can be solved. Before going for capacity efficiency, let us try to do cost expenditure and volume which we had already done last time, if you remember it carefully. So, we felt or we estimated that overhead cost will be 300000, actual overhead cost is 350. That shows

that, there is some difference. And we need to also calculate what would have been the overhead cost, if we absorb it based on number of units produced. You can see that the actual output has been excellent. It would have been 100000 but actually it is 200000.

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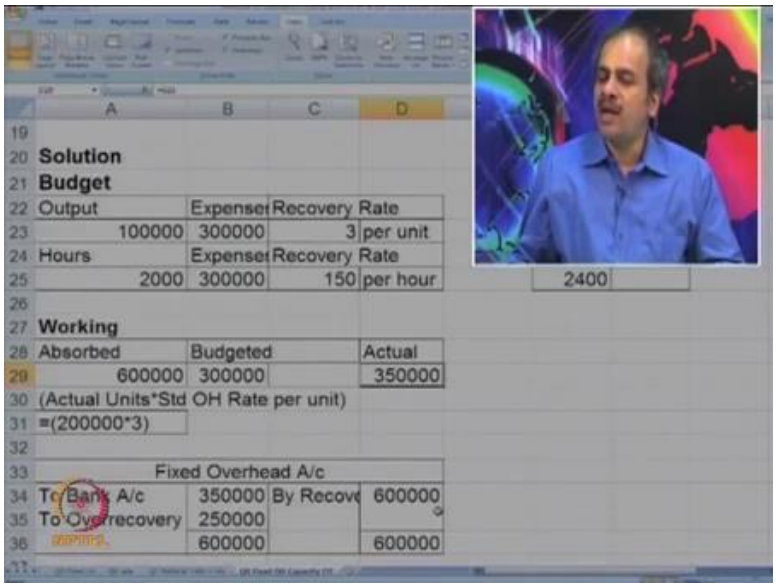


Now, let us make a table and calculate the overhead recovery rate or absorption rate and that table, we can use for calculating the absorbed overheads. If you look at the budget, the budgeted overhead expenses was 300000, the budgeted output is 100000. I will just take you here. So, budgeted overhead is 300000, budgeted output is 100000. So, if we divide 300000 by 100000, we get a rate of 3 per unit. Is it clear to all?

Same way, we can divide 300000 by 2000 to get rate per hour. So, 300000 upon 2000, you will get 150. So, in the first stage that calculation is done. You can see it here. So, we get a recovery rate of 3 per unit. And when we divide by hours, we get a recovery of 150 per hour. Recovery rate is same as absorption rate. For comparison, the actuals are put in but basically this rates are to be calculated only on the basis of budgets.

Now, let us start with the actual calculation. ((Refer Time: 37:19)) You already know that budget and actual, there is a difference. Let us also calculate, how much would be the absorbed overheads. So, you can see budgeted overhead is 300000, actual overhead is 350 already given. Absorbed overheads are 600000, because our actual output is 200000 and rate per unit is 3. So, when we complete 1 unit, we charge 3 rupees per unit or we recover 3 rupees per unit.

So, on 200000 which is here we take 3 per unit. So, 600000 are absorbed or recovered. So, we have three figures now. Absorbed is 600000, budget was 300000. Actual is 350. Now, if you compare these three figures, I mean two each we get the first level of overheads. It is also shown by way of a ledger account.

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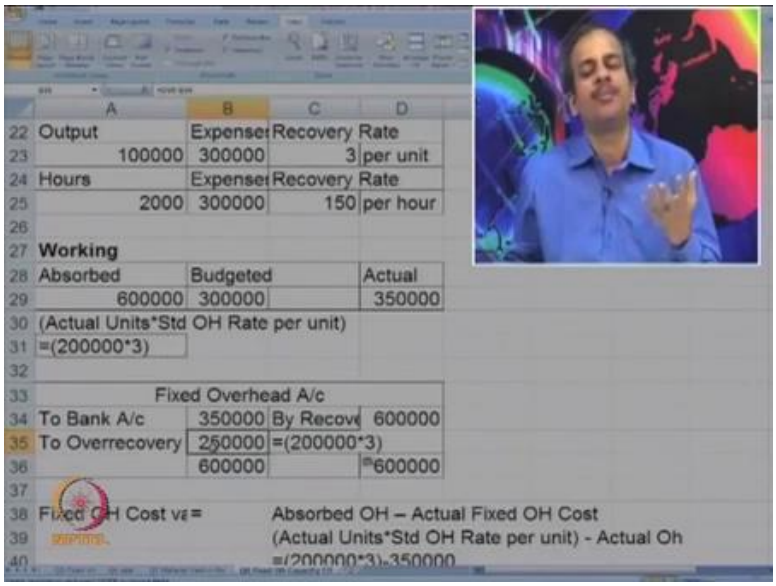


If some of your more comfortable by a system of ledger account, you can see that the overhead incurred is 350000. So, if you make a fixed overhead cost account, overheads incurred. So, it says to bank account 350000 which has been picked up from here, overhead which is recovered. So, it is charge to production is 600000, because per unit we charge 3 rupees. So, on 200000 I will just copy it here. So, on 200000 if we charge 3 rupees, we recover 600000. So, for though 350 is incurred 600000 charge, it leads us to difference of 250, that 250 is nothing but our cost variance.

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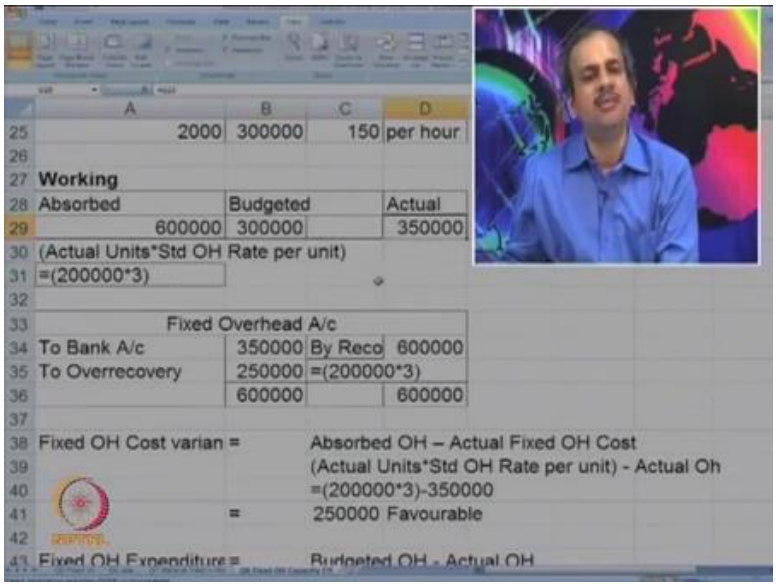


So, if you go to fixed overhead cost variance calculation, which is the first variance which we are calculating. It is a difference between absorbed overhead minus actual overhead. Absorbed overhead is nothing but actual units into standard rate minus actual. So, it is 200000 into 3 minus 350. So, you get 250000 favorable. By way of a ledger account also, you can see there is a over recovery.

So, we were able to recover 600000 but incurred only 350. So, it leads us to variance 250 favorable. Now, how to subdivide it? First let us look at expenditure variance, because we budgeted that we will explain 300000, but we have spent 350. This difference is nothing but expenditure variance.

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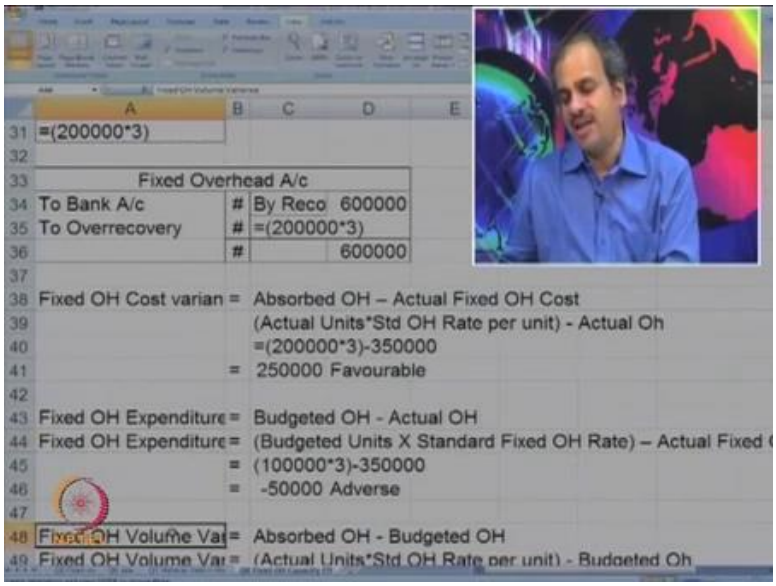


So, fixed overhead expenditure variance the formula is budgeted overhead minus actual overhead. Is it visible now? So, budgeted overhead is nothing but budgeted units into standard rate minus actual overheads, so 100000 into 3 minus 350. So, we get minus 50000 or you can say 50000 adverse. This is the fixed overhead expenditure variance. Now, the other part is fixed overhead volume variance.

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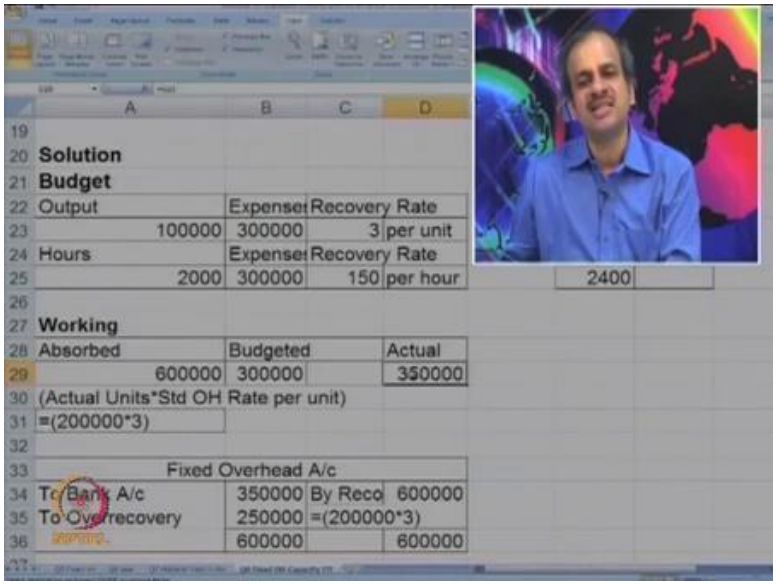


So, in volume we will compare. See we have these three basic figures. We have absorbed budget and actual. So, in cost we have compared absorbed versus actual. In expenditure

variance, we calculate we compare budget versus actual. In volume, we compare absorbed versus actual.

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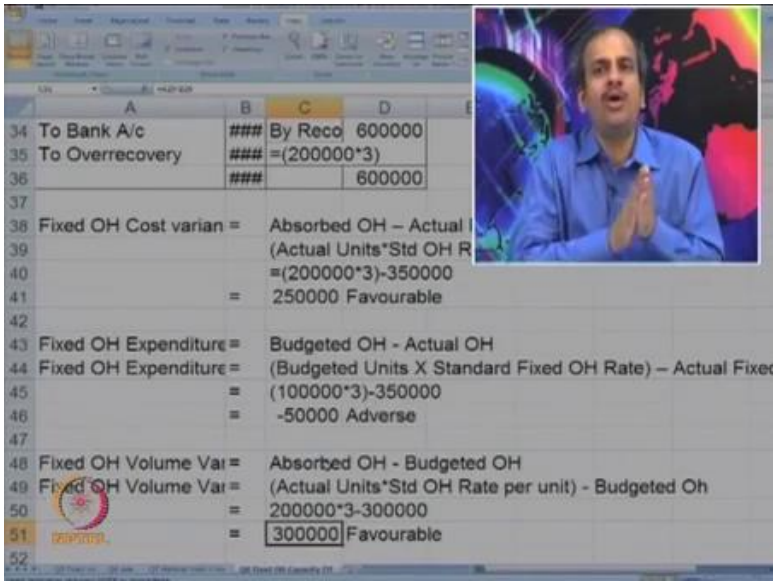


So, fixed overhead volume variance is absorbed overhead minus actual overhead. So, you get 600000, which is absorbed minus 300000. So, it is 300000 favorable. Is it clear to you all? So, this was the first break up. 250 favorable has two components, 50000 adverse, because of expenditure and 300000 favorable because of volume. Now, this 300000 favorable because of volume, we would like to subdivide what are its causes. So, what are its causes? Let us go back to the original problem. Then I think it will be more visible, ((Refer Time: 41:38))

So, what are its causes? You can see that, the actual output which was to be 100000 has doubled. It has become 200000. That is why, there is a enough of over recovery and that is the volume variance. One of its causes could be efficiency or the other causes could be capacity. You can see that the budget was to work for 2000 hours. But, the actual work is done for 2400 hours. So, better utilization of capacity more work, that is a capacity variance. And if we see the output from the efficiency view point, that will be an efficiency variance.

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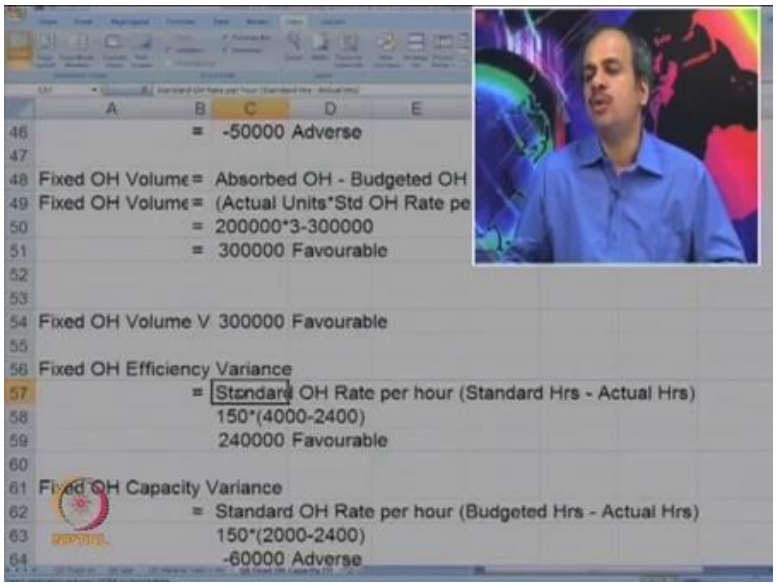


So, let us try to calculate efficiency and capacity variances. So, the first variance we look at is fixed overhead efficiency variance. It is calculated as difference between standard hours minus actual hours into the standard rate. Now, the question is what is standard hours.

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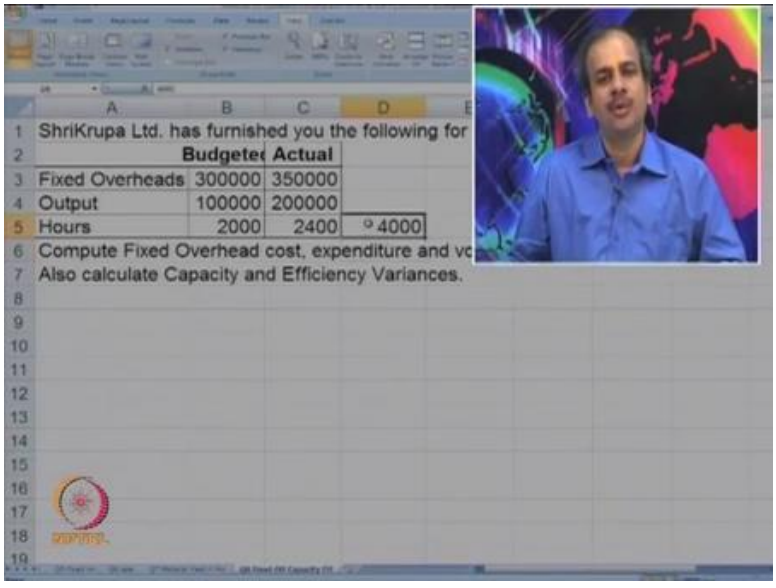


It is no where given in the problem. You can see here, we were given budgeted hours. We were also given actual hours. So, how to get standard hours? Can you think off? If you look at the output, which is 100000 and the hours expected were 2000. The output

has doubled from 100000 to 200000. So, the standard hours will also double. So, you were to use 2000 hours, now you can use 4000 hours.

That is why the standard hours are 4000. It is not given in the problem, I am just writing for your understanding. Now, let us go down. So, here we have tried to calculate the efficiency variance. It is 150, which is the standard rate into 4000 minus 2000. This 4000 is calculated based on the normal efficiency. So far I will just calculate it here.

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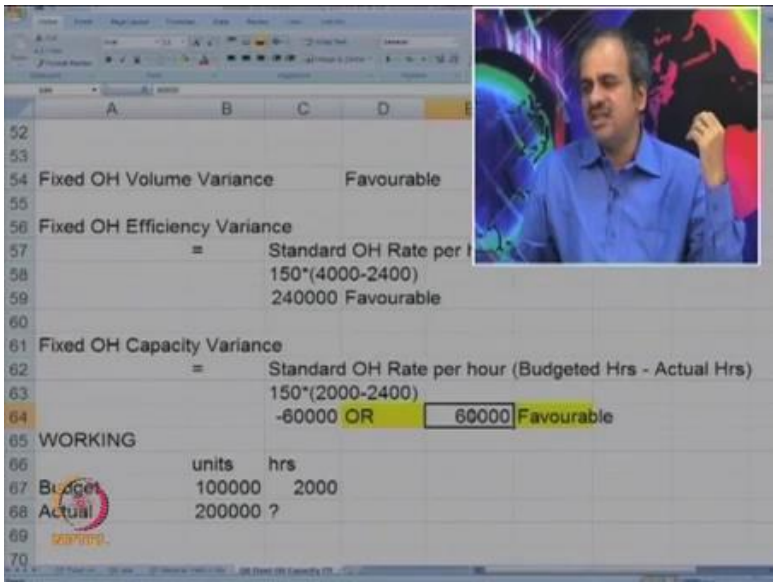


If you look at the units versus hours ratio, you will realize that company had budgeted for 100000 units from 2000 hours. Actually, they have produced more. They have produced 2000 units. So, how many hours will they use? This is budget, this is actual. Since, the output has doubled the hours will also be doubled. So, hours will be 4000. ((Refer Time: 44:33)) So, here we have used them as 4000 minus 2000. So, 240000 favorable is a efficiency variance.

Now, look at the capacity variance. It is standard hour, overhead rate per hour which is 150 and we compare budgeted hours with actual hours. So, we had planned to work for 2000 hours, we have worked more. We have worked for 2400 hours. So, that gives us 2000 minus 2400, 60000 minus. You can see here, 60000 minus 240000 favorable total is 300000. Why is it so? Because, what happens is all other variances which we have calculated, there a negative figure indicates adverse. Are you getting me? ((Refer Time: 45:40))

So, minus 50000 was 50000 adverse. But, here what happens is 240000 plus is 240 favorable. But, a minus 60 is not negative, if you work more. Instead of working for 2000 hours, if you have worked 2400 hours it is a positive sign. That is why though it is a negative 60000, it shows 60000 favorable. That is how, this 60 favorable plus 240 favorable we get 300000 favorable. Are you getting me? Slightly complicated, because all other cost variances what happens is a negative figure is adverse and a positive figure is favorable.

But, in case of fixed overhead capacity variance a positive figure is favorable. This is an exception. If you remember all the sale variances where also like this, because if you do more sale, it is good, but if you incur more cost it is not good. So, if you incur more cost a negative figure is an adverse figure adverse variance. But, if you work more which is a capacity variance it is a favorable variance. So, I will just rewrite it. So, that it is made more clear to you.

So, keep in mind that this 60000 negative 60 is not 60 adverse. In fact, it shows 60 favorable. So, now this 60 favorable plus 240 favorable, the total is 300000 favorable correct. So, we have broken down the total variance now. What we have done below is a working. So, now you can see that this 60 plus 240, 300000 is a volume variance. 300000 favorable 50000 adverse, 250 is the cost variance. So, this is the total break up of all the variances.

I hope it is very clear to you all. Let us go ahead now. Now, we have discussed variety of variances. In the last session, we have also discussed advantages and disadvantages of standard costing. I will just take a brief recap and then will stop here for standard costing. Standard costing is a very good technique for cost control. So, in this technique what we do is, we define the standard. We compare with actuals, the differences is the deviation or variance. Then, that variance is analyzed for causes.

We calculate a variety of variances. So, we go for material variances. In material variance, you have material cost variance. It is subdivided into price and usage. The usage is further subdivided into yield and mix. That yield and mix we have done today. The other variances were done in the earlier some. So, material cost variance broken down into price and usage. Usage is further divided into yield and mix.

Second are labor. Labor cost is divided into three variances. Do you remember? What are they? Similar to material, just think over. In material, you have price usage. In labor, you have got labor rate variance and labor time variance or labor efficiency variance. And we also have a labor ideal time variance. So, labor cost is divided into labor similar to material, what will have in labor, labor rate, then labor efficiency and labor ideal time.

Then, we came to overhead variances. So, in overhead variances you have got variable overhead variance. There again, you have got variable overhead cost, efficiency volume, fixed overhead variances. They can be broken into fixed overhead. They are slightly different than others. Because, fixed overheads remains constant. So, fixed overhead variances can be broken down into fixed overhead expenditure and capacity.

Capacity can be further subdivided into sorry. Fixed overhead cost is divided into expenditure and volume. Volume can be divided into capacity and efficiency. Sometimes, capacity is further subdivided into a variance called as calendar variance. That we have not gone into. So for, your volume is subdivided into efficiency and capacity. We are also discussed sales variances, if you remember.

In sales variance, we have total sale variance known as sales value variance. It is broken down into price and quantity or volume. So, this is how various variances are subdivided into its parts. Now, the advantage of this is you can take corrective action parts. Then, the administrators or managers focus their time only on something, which is going wrong. So, that the time is saved. These are the advantages of standard costing.

While setting up of the standard also detailed studies done, that helps us to improve the efficiency. The disadvantage of standard costing is not all processes or not all the businesses mechanized. In a mechanized or standardize productions, standard costing is very much useful. But, if the nature of industry is highly customized say a professional work doctors work a consultant, it becomes difficult to standardize the cost.

So, standard costing is not useful for a variety of industries. It is only used where the systems are standardized. A slight variant of standard costing is budgetary control, which we have already discussed in budgetary control. A budget is calculated and then that budget is used for comparison. Just as standard, there we have a budget. And then we record actual. We compare budget and actual, we get deviations. And those deviations are analyzed and their efforts are made to correct them.

So, budgetary control actually derives a lot of basics from standard costing. Budgetary control has a wide application. Unlike standard costing, it is not only limited to certain areas it can be used for variety of areas. So, it can be used in industry, government, service industry and so on. So, today we have discussed in detail standard costing, which is a very, very useful control tool. In the next sessions, we will go for the next topic.

Thank you so much.