Controlling Fabric Usage

If you think that because you have invested in Computerised marker making (cad system) and have as a result of that solved all of your fabric utilisation problems, then "THINK AGAIN! because although these systems will certainly help to improve marker efficiency the way you manage your fabric usage will add considerably to these savings.

Fabric represents around 70% of the total product cost and is therefore the single most important component. It is essential to the success of the business that this is properly controlled. It is not just a matter of having good markers (although of course this is essential) but also to make sure that fabric is utilized to the maximum. The purpose of this article is to look to save anything from ½% up to 4% of fabric. Once you look at what the potential savings mean to the bottom line (profit) of the business you will understand the need for vigorous involvement to eliminate all of the areas of potential waste and work hard to save as much as you can.

1. Width control

Let's start with this aspect, I was once told that if you can save 1% in width then you will save 1% n length, this of course is not consistently true but it is a fact that on some markers a considerable difference in the marker length can be achieved if an additional 1cm can be gained on width. So it is essential that fabric is PROPERLY measured for width when it arrives, and of course the width that is measured is from selvedge to selvedge. At this time it is also necessary to split the newly arrived fabric into two more categories, shade and shrinkage, and if this is done correctly then we can choose specific groups and match them to lays so that all of the fabric used in one lay conforms to the same specifications.

2 Cut Planning

The system starts at the beginning of Cutting Room procedures, this first process is called "Cut Planning" It is the process of establishing the following: -
A: The best combinations of sizes and colours to produce all the garments in the order minimising the amount of labour required.
B: The best combination of sizes and colours to produce all the garments in the order to get the best possible fabric utilisation

These points are the start, and as you will have seen from my previous article on this subject vast savings are potentially possible if experience is used properly to work the best solution from a practical and fabric saving point of view. Marker Plans are sent to the "Marker Making" this function is outside the scope of this article however marker targets are essential to maximising fabric efficiency.

3 Fabric Requisitions

After marker making, the marker lengths are entered and fabric requirements are calculated for each marker, these requirements must include anticipated waste (end of rolls) and the laying up allowance which will vary according to the fabric type used in your organisation, once these figures are established multiply the number of plies by the

real marker length (adding all of the permissible allowances) to establish the fabric requirement for that lay, do this for all of the markers required in the order to establish the total amount of fabric required by the order.(this calculation must be done for the whole order, not for each marker separately) this will give you a weighted average over the whole order. This figure is divided by the number of garments that will be produced by all of the lays and give you an anticipated usage per garment.(Marked Fabric consumption per garment)

A comparison between "Costed fabric consumption" and "Marked fabric consumption" is made, showing potential profit or loss **before** fabric is issued. Management now have the ability to decide in advance what actions are necessary to maximise profit. If the usage required by the markers together with the wastage allowances is greater than the "Costed Fabric consumption" then the markers must be re-made to come within the costed consumption and if it is not possible to improve the markers then you can expect to make a loss on this order.

4 Fabric Issue
It is normally the case that fabric issue is not exactly what is required by the order (due to variations in piece lengths it may therefore be necessary to reduce the length of the final roll to enable the issue to be as close as possible to the requirement. Returns to stock must be eliminated by adopting these disciplines. Issues must be categorised by Width, Shade and Shrinkage as mentioned above.

5 Binding Requirements
It is important that garments that require binding in the same fabric have the quantity properly calculated, so that cutting too much does not create waste these calculations are not "rocket science" but to cut too much is wasteful and to cut too little will cause production losses and the lines may have to stop until more fabric of the right shade is found to make up for the undercutting

6 Laying up
When the user is satisfied with the Marked consumption "Laying up" sheets should be prepared. These are lists of the number of plies of each colour of fabric that should be laid onto each marker to complete the requirements of the order. The laying up sheet is a control document which must reflect exactly how each piece of fabric is used.

Training is essential to ensure that this is done correctly since it is the core of this fabric utilisation process. We should also measure the lay length once the table has been set up prior to the commencement of laying to ensure that the lay length is accurate and that laying up allowances are not excessive, this process should be signed off by someone in authority.

It is not economic for the Raw materials store to accept small lengths as "Returns to stock" (End Bits) as they stay on the shelves and are eventually sold to a "Jobber" at a very low cost. It is therefore necessary to use these end bits before completing the order. End bits should be allocated to "End bit markers" the maximum amount of garments

should be produced from the fabric issued. I do not agree with withholding fabric for "Panel replacement" where it is possible to cut complete garments from these pieces, only those pieces which are too small to make complete garments should be used for panel replacement.

The laying up sheet will contain the following information for every roll used.
1. Roll length
2. Number of plies layed
3. End bit or Remnant (piece too small to be layed)
4. Damaged length on that piece
5. Joins or splice lengths

All end bits must be layed up at the end of the order, so each "end bit" will produce a remnant piece which is included in the reconciliation.

7. Fabric Reconciliation

From the information on the laying up sheet you can calculate the actual length that was on the roll and compare it to the ticket length, you can then total each column to establish how the fabric was used. The information is summarised into a one line document which will give the following information:
1. Costed consumption
2. Marked Consumption
3. Actual consumption
4. Variance
5. Value of variance
6. Profit or loss occurring in the cutting room on this order
7. The amount of rejected fabric on the pieces received

This is the process to establish how you are using your most expensive part of the product you make, it is essential to control it carefully and thoroughly. The information collected as shown above should become part of a weekly management meeting who will review cutting room performance regularly.

Roger Thomas
Methods Apparel consultants