

Materials Costs Hit List - Things to do Next

(Do it NOW!)



1. Materials cost reduction

Materials cost is one of the largest costs in plastics processing but there are few formal attempts to manage this costs in many processors. Attempts generally involve simply reporting "variances to standard" without any real attempt to reduce the absolute usage. This "Hit List" gives some suggestions for actions to reduce the real total spend.

2. The materials team

- Set up a "Materials Team" (to include Sales, Design, Purchasing, Production and Accounts) to ensure that all materials are used cost-effectively. A 1% reduction in purchasing spend has the same effect on profit as a 10% increase in sales volume!
- Consider using an outsider (with no vested interests or history) to drive the programme.
- Provide the Materials Team with accounting information to allow them to do their job.
- Allow the Materials Team freedom of action to change anything and everything! This includes the product design, the raw materials and the manufacturing process. Nothing should be off-limits in materials cost reduction.
- Use Pareto analysis to look for targets.
- Compare competitive products, strip them down and look for every cost saving - each one may be small but the total can be amazing.
- Use value analysis for product assessment and cost reduction strategies. Value analysis needs open accounting information to be effective and to provide the focus for the cost reduction efforts.
- Start to set up the "measures of effective performance" for the team.

Set aggressive targets in materials reduction - 10% off the total materials bill should force them to think radically!

3. Accounting

- When materials represent between 45 and 80% of the cost there is a lot more to do than simply report the variances!
- Produce detailed breakdowns of all materials cost components. Identify the real cost of every finish, operation and special feature. Go for the big costs first and use Pareto (see Easy Guide 6).
- The Materials Team must justify every cost component or eliminate it!
- Is the discussion really about "Make or Buy"?

Accounting holds the key to materials cost reduction!

4. Sales

- Always develop the Product Design Brief with the customer - full information before design starts can be used to reduce product cost dramatically.
- Specify new product requirements in terms of functions and NOT in terms of materials.
- If a product feature adds cost or extra parts but justifies no extra margin then eliminate it.

Sales have a vital part to play in materials reduction - they have got to sell the result!

5. Design

- Provide a full Product Design Brief, including essential and desirable features, to designers and the Materials Team. Specification should be functional not materials based.
- All product designs must have a "materials design and usage review" before they are signed off.
- Always question the wall thickness!
- Look for ways to remove material by using good design principles - look at disposable razors to

see how stiffness can be created by good design.

- Ensure that the Pentamode Code is followed during development.
- Always question why they didn't use a "stock" part. The first PC's were put together by IBM from stock parts! This even included the operating system from Microsoft - the start of their fortune. This includes stock materials and finishes. The use of standard parts has a huge payback
- Always question why they didn't use a cheaper part. The worst that will happen is that they will justify why they used the more expensive part. The best is that you can save on the part cost.
- Train designers in Project Management and Design for Assembly.
- Ruthlessly prune out "over-designed" product features.

Designing materials out of the product is easiest at the design stage.

6. Production

- Create set-up sheets for all products, keep them up-to-date and use them.
- Use Taguchi methods to find the optimum set-up parameters and feed these into the set-up sheets.
- Use Statistical Process Control on every product to start to reduce materials content.
- Make changing process settings without written approval a dismissable offence. If you think this is harsh then think how the MD would react if a process operator let the air out of his car tyres "because I thought the car would run better". Fiddling with process controls costs more in terms of scrap and wasted materials than you would ever believe. Stop it NOW!
- Reduce set-up times to reduce Economic Batch Quantities and produce to order rather than for stock. Don't convert raw materials to products until you have to!
- Scrap (with the exception of a small amount at start-up) is generally the result of inadequate production control and is an opportunity for materials cost reduction. One of my favourite quotes is "*We don't have any scrap because anything that is not right is reground and the material is used again*". Scrap, even when recycled, has consumed time, power, effort and has created unnecessary costs in the business.

Production is where the material is actually used!

7. Purchasing

- Give purchasing the flexibility to get the best deal and get them involved with the Materials Team at the start to advise on the cost implications of every action.
- Clearly communicate delivery & quality standards to all suppliers.
- Consider blanket orders to reduce transaction costs.
- Look at e-commerce to reduce transaction costs.
- Consider frequent deliveries with no inspection and buffer stocks for strategic items only.
- Can you buy "consignment" stock?

Purchasing must control the contractual arrangements for all materials used!

8. Suppliers

- Drastically reduce the number of suppliers and consider "single sourcing". Involve those that remain in the Materials Team. Use Pareto analysis (see Easy Guide 6) when reducing your supplier base
- Jointly target cost reduction areas with your suppliers. If they don't want to do this with you then consider other suppliers.
- Start to develop your suppliers as part of your strengths.
- Get suppliers to package ready for production - think about KANBAN containers.
- Minimum stocks and no inspection on delivery - ship direct to shop floor.
- Future requirements discussed at global level.

Building supplier relationships to reduce cost needs perseverance and time.