



Atlantis Industry Waste Minimisation Clubs Case Study Safety Transport Mirrors

Background

Safety Transport Mirrors is a small enterprise, which has 92 employees. Their product range consists of rear view mirrors for cars like Toyota, Audi, BMW, VW and Nissan. Their motive behind joining the waste minimisation project was to help them implement an Environmental Management System. Safety Transport Mirrors total environmental costs per year are R190, 000.

The Process

Safety Transport Mirrors' plant is divided into two processes, Assembly and the Paint shop. In the assembly, they take raw materials from storage and send it to the assembly section to be assembled. It is then take assembled mirrors to control shipping where a final inspection is done. The mirrors are then dispatched to the containers marked and sent to different customers.

In the paint shop, raw material (shells) from the stock is supplied to the paint shop. The shells is prepared for primer by flattening and scraping flash lines on each shell. The shells are loaded onto a trolley, primed, baked for 45 minutes at 80 degrees Celsius and flattened to remove all defects. It will then be painted to the specified colour. Inspection takes place and all approved parts dispatched from the paint shop.



Identification of Waste Minimisation Options

With the help of BECO consultant and a student, they were various options identified for improvement. A total of 20 waste minimisation options were identified for the plant. The waste minimisation options are listed below with their implementation status:

Waste Minimisation Options Identified	Status
1. Use just in - time inventory management to reduce the amount of coatings that exceed their recommended shelf life	Investigated
2. Hand spray shells will small amount of solvent and then dry wipe with hand cloth	Implemented
3. Use of disposable liners for paint containers and spray gun cups	Unknown
4. Segregate waste by using a colour coded system	Implemented
5. Using of KanBan system to schedule jobs	Implemented
7. A better method of estimating the amount of paint, introducing a weighing scale	Implemented
8. Negotiate with suppliers to use returnable packaging	Investigated
9. Introducing HVLP spray gun system	Implemented
10. A combined dose measuring and mixing device	Investigated
11. Recovery of paint by using a recovery screen behind the object	Unknown
12. Use of high - solid or water based paint	Investigated
13. Re-use gun wash waste paint	Investigated
14. Re-cycling of plastic bags	Implemented
15. Re-cycling of Tins	Investigated
16. Recycling of shells	Investigated
17. Using a new polishing system whereby a high standard polish, less solvent	Implemented
18. Weighing of waste in each department and segregate	Implemented
19. Recycling of cardboards and plastic	Implemented
20. Awareness Training for staff employees	Implemented

Implementation of Waste Minimisation Options

Recyclable material is separated and revenue is generated from this material. Returnable boxes are returned to suppliers for re-use.

A high standard polish is used which results in less solvents use and lower amount of polish

Economic Benefits

The waste minimization activities described above resulted in the following achieved savings per year.

Item	Implemented Savings Per year	Payback
Plastics and cardboards recycled	30% of waste	Immediate
Polishing system Solvent Reduction	40% reduction in Solvent R 18,000	2 months Immediate

Other benefits

The company was certified with ISO 14001 in July 2002. the Waste Minimisation project assisted them in achieving ISO 14001

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