



Case Studies



International
Labour
Organization

Factory Improvement Programme

Maintenance and Equipment Management Better Use of Machines at Vinadataxa

Vinadataxa is a state-owned printing company based in the outskirts of Hanoi that acts as a printer as well as a paper trading company supplying other printing companies in Vietnam. It was established in 2003 by merging two components under the Vietnam News Agency to form an independent State Owned Enterprise (SOE). At that time the company still suffered from a lack of skilled workers, low capacity, a lack of market knowledge and poor competitiveness.



The factory prints newspapers, magazines, books, calendars and other items. Because of newspaper printing, two shifts per day are required. In 2005, the company went through some significant changes resulting from a multi-million dollar investment programme. The changes included new equipment, new processes, new skills requirements and a reduction in the workforce from 180 to 150. There was also a shift in the company's focus; rather than being dependent on the business from the Vietnam News Agency, 80% of its work now comes from commercial contracts.

INITIAL SITUATION

The company has been considering the implementation of ISO 9001:2000, however management decided to postpone the implementation as they view the Factory Improvement Programme (FIP) as being an important stepping stone towards achieving ISO accreditation. Key objectives are to boost productivity and improve quality in order to attract customers.

Senior management identified controlling and improving quality and productivity as priority issues. They recognised that although the factory had established an internal control system, most policies and procedures were not produced in detail for each individual topic / process nor followed closely.

The Director indicated that all FIP modules had been of value to the company. Module 1, Workplace Cooperation had helped management and workers develop a new viewpoint and improve relations. An example is that, in the past, management would meet with the Trade Union every three months and only discuss problems and workers conditions. After Module 1, the two groups meet more frequently and the meetings have a much broader scope.

The quality and cleaner production modules gave the director a new vision which has allowed the Factory Improvement Team to set a strategy for quality and to implement environmental protection activities to improve the working environment.

The factory operates two shifts. But despite this the factory was only operating at around 60% capacity.

There was no measure for tracking production progress and discipline was weak on checking working progress due to the low production levels and low capacity utilisation.

There was a need to reduce processing time and reduce the number of machines that are either under utilised or not used at all.

It was also identified that because there was a relatively low machine utilisation and weak discipline in terms of control systems, there was little incentive to undertake regular, planned machine maintenance. There seemed to be a view that, since the machines were not working all the time then there was little requirement to service them.

However, this kind of intermittent servicing actually achieves little benefit for the good running of the machines, but can and does add to the problem of defects which then had an impact on outputs and the achievement of productivity targets - which the company had consistently been missing.

RECOMMENDATIONS BY THE FIP TEAM

FIP experts recommended that the Factory Improvement Team should:

- Identify and resolve the issue of high temperatures that was affecting some of the electrical motors. Temperatures were often in excess of 100°C, well above optimal levels;
- Move some of the machines with high pollution output to safer places;
- Ensure that the printing machines have been set up accurately before mass printing commences;
- Prepare a checklist of what has to be done (and what the parameters should be) when setting up the print machine parameters;
- Devise and implement a system of regular, planned maintenance that matches the machine manufacturers' recommendations and improves productivity and resource utilisation.

ACTIONS TAKEN BY FACTORY

The Factory Improvement Team, composed of workers and management, assessed the

recommendations against the systems that were in operation, together with the layout of equipment and their constituent parts. The team then implemented a relatively dramatic programme of change that has had a positive impact on quality, productivity and the working environment.

The company implemented a cleaner production programme and established a fume extraction system to remove hazardous gases resulting from the production processes. They are now extracted in an environmentally sensitive manner so that workers are no longer exposed to hazards.

They asked the suppliers of all the new equipment installed during the last two years to translate the technical documents into Vietnamese so that the workers can understand, allowing a maintenance programme to be more easily implemented.

With regard to the older equipment, the factory made its own arrangements to have all the technical documentation translated into Vietnamese.

A clear programme of planned maintenance has been developed and implemented. The plan details very specifically all the actions to be taken on a daily, weekly and monthly basis.

One machine running at high temperatures is an air-compressor that not only generates heat, impacting on air temperature control in the workshop, but also noise. This equipment has been moved outside the workshop. This reduced air-conditioning requirements and the noise pollution no longer affects the workers.

Now that the workers can read and understand the technical documents the company has become stricter in ensuring quality. The factory has implemented a system whereby before an order is undertaken, a sample detailing all the set up parameters must be produced which must then be signed and approved by both the customer and the shift leader.

IMPACT OF CHANGES

The impacts of the changes that the company has implemented are clear in terms of the improvements to the working environment; reducing the workers exposure to hazardous gases, reducing the noise pollution, developing a better understanding of the equipment and how to use it and maintain it.

The company is experiencing rapid growth – **output for 2007 will be double that of 2006**. This is being achieved through a greater level of commercial activity while employing fewer staff. They are also being asked to bid for more competitive contracts

which they are winning and delivering more effectively. The start date for a recent contract was delayed by two weeks, yet the company managed to deliver 1.6 million books to the original deadline.

Management is convinced that this growth would not have been possible without their having taking part in FIP. The programme has played a significant role in improving not only their product quality but also the way in which the company goes about its business. In management's view, without the support of FIP, the level of improvement – and growth – would not have been possible.